Journal of Infrastructure, Policy and Development 2024, 8(12), 7469.
https://doi.org/10.24294/jipd.v8i12.7469

Article

Future of Jordanian traditional media in light of AI: A qualitative study

Amjad Bader Al-Kadi

Public Relations and Advertising Department, Yarmouk University, Irbid 21110, Jordan; amjadalkadi1959@yahoo.com

CITATION

Al-Kadi AB. (2024). Future of Jordanian traditional media in light of AI: A qualitative study. Journal of Infrastructure, Policy and Development. 8(12): 7469. https://doi.org/10.24294/jipd.v8i12.7469

ARTICLE INFO

Received: 26 June 2024
Accepted: 08 August 2024
Available online: 4 November 2024

Abstract: The research aims to investigate the prospective implications of Artificial Intelligence (AI) on traditional media, and to elucidate the conceptualization of AI within the discourse of media professionals, governmental and private media stakeholders in Jordan, alongside media scholars and IT experts. Employing the focus group method, a specialized interview tool distinguished by its purpose, design, and procedures, two distinct cohorts were engaged: media practitioners and officials on one hand, and academics and experts on the other. The investigation revealed the absence of a universally agreed upon terminology concerning AI, attributable to its nascent nature and rapid evolution. Notably, AI, leveraging its diverse and highly proficient tools, demonstrates significant potential for transformative impacts across various facets of the media landscape. These encompass the facilitation of exceptional content production, the empowerment of journalists to express their creative capacities, and substantial reductions in time, labor, and procedural overheads in media product development. Concurrently, the integration of AI within media environments is anticipated to pose formidable challenges to existing institutional frameworks. Additionally, the imperative of curriculum development in academic institutions, both public and private, is underscored to acquaint students with AI methodologies.

Keywords: traditional media; AI; focus group; data generation; Jordan

1. Introduction

The media industry has witnessed significant advancements, with many media institutions shifting towards utilizing AI technologies in their operations (Sharadga et al., 2022). Despite the benefits AI offers, global apprehensions persist regarding the potential displacement of humans by machines, especially as AI has already assumed over 85 million human jobs (Habes et al., 2024). Traditional media has begun to recede in favor of AI technologies, which expedite tasks previously performed by humans with greater speed, less effort, and higher precision (Alkhawaldeh et al., 2024). These technologies excel in data gathering, evaluation, analysis, and rapid result attainment, rendering AI a formidable competitor to traditional media, potentially serving as its substitute in various domains. AI-driven media relies on the integration and restructuring of Fourth Industrial Revolution technologies within novel and innovative media functions, partially or entirely reliant on proficient AI techniques (M. I. Al Jwaniat et al., 2023).

In recent years, Jordanian media has witnessed a remarkable transformation due to developments in AI (Habes et al., 2021; Habes et al., 2024). AI technologies play a crucial role in improving media operations and content development. In journalism and digital media, AI is used to analyze big data related to audience trends and interests, helping to deliver personalized and interactive content that reflects users' interests. On television and radio, AI-powered tools are now able to analyze audience interactions across social media platforms and provide recommendations on the most

popular content. This data enhances understanding of consumer behavior and market trends (Bdoor and Habes, 2024). Moreover, AI is used to create visual and audio content such as videos and podcasts, contributing to improving quality and reducing the required human effort. In other media contexts, such as marketing and advertising, AI is used to analyze consumer behavior and target advertisements based on personal interests, increasing the effectiveness of advertising campaigns. All of these developments indicate that AI has become a key tool in improving the efficiency of Jordanian media and enhancing the media experience for the audience (Safori et al., 2024).

The advent of AI with its sophisticated tools and applications reflects a high level of modernity and quality, stemming from the tremendous technological advancements brought forth by the Fourth Industrial Revolution. AI has instigated notable transformations across various domains of life, garnering significant attention from the media realm specifically, due to its impact on diverse traditional media formats including print, visual, and auditory. Consequently, the integration of AI, along with its modern elements and tools, into the domain of traditional media and its utilization within the media work environment, results in considerable confusion among media institutions regarding how to navigate this unprecedented development. This confusion significantly affects their operational methodologies, necessitating a transition from old paradigms to new ones. As such, diverse perspectives from experienced individuals and specialists converge, as AI techniques hold the potential to reshape media structuring, requiring substantial resources across different levels to keep pace with these changes. Hence, the problem statement of this study revolves around "attempting to understand the future of traditional media in the Hashemite Kingdom of Jordan in the context of AI."

2. Literature review

According to a study Al, this study sought to ascertain the degree of awareness among Jordanian journalists working in digital newspapers regarding the use of (AI) techniques in journalism, as well as the primary uses, challenges, and reasons for utilizing AI, as reported by 59 journalists working in these digital newspapers (Jwaniat et al., 2023). A web-based survey was employed. The findings showed that: photo and video verification techniques are the most often used systems in journalistic practices, followed by breaking news tracking techniques; few journalists possess a sufficient understanding of the technologies; and the reality of utilizing AI techniques in journalism practices is weak. The results showed that among the most significant variables influencing the adoption of AI techniques in Jordanian digital newspapers are economic constraints and the lack of technology infrastructure in press institutions.

While the study of Al-Asheri's (2023) Aimed to analyze Arab and foreign media studies pertaining to the impact of AI on journalistic practices from 2018 to 2022. Employing a survey method, the study utilized second-level data analysis (Meta-Analysis) both quantitatively and qualitatively. It employed questionnaires to analyze the content of 155 Arab and foreign studies, investigating various impacts of AI on journalistic practices. The study yielded several findings, including the dominance in 2018 of studies emphasizing the efficiency and credibility of AI-based news content

by 28.6%, followed by studies addressing emerging activities and practices in journalism under AI technologies by 19%. In addition, it aime Almashawreh et al. (2024) study to identify the perspectives of communication managers in Egypt regarding the future of media and media professionals amid the AI revolution, particularly robot journalism. Employing a prospective method, the study gathered data from a purposive sample of 50 individuals, including journalists, media institution managers, and specialized technical experts in AI, through in-depth interviews and scenarios. The study concluded several findings, notably the real threat faced by human journalism due to the emergence of robot journalism, particularly in technologically advanced countries. It also highlighted the decline of traditional media and the crisis faced by traditional media outlets due to their failure to keep pace with new AI technologies.

I also discussed a stud Habit (2022) the future of the public relations industry amidst intense competition from rapidly evolving variables, including AI, creative media, and media integration. Adopting a descriptive prospective approach, the study employed questionnaires to analyze a sample of 55 Arabic and foreign studies published in 47 peer-reviewed scientific journals in the fields of public relations, communication sciences, and technology from 2015 to 2022. The study was grounded in technological determinism and unified theory, emphasizing technology adoption. The study revealed several outcomes, including the expected elevation in the significance and role of public relations within organizations in the near future (5–10 years), consequent to its increased contribution to investment facilitation. Additionally, it highlighted challenges faced by the public relations industry amidst media integration, such as misleading and false information, while also emphasizing the benefits of AI technologies in enhancing crisis management efficiency, rapid response to inquiries, and directing efforts towards creative work.

Di and Fang (2021) study Aimed to examine the impact of media utilization on public perceptions of AI. The study, employing a survey method, gathered data from a random sample of 738 individuals in China. Results highlighted that the positive benefits of AI outweighed associated risks significantly. Notably, newspaper use was negatively correlated with perceiving benefits and supporting policies, contrasting with television and WeChat use, which showed positive associations. Personal suitability for utilizing such technologies emerged as a significant factor influencing individuals' perceptions of anticipated positives and negatives of AI use. In addition, it aimed Pashevich (2018), study to explore how AI technologies can automate news writing, generate journalistic content, and streamline media organizational processes in Norway. The study, employing a survey method, utilized interviews to collect data from a sample of 11 individuals, including journalists, system developers, and scholars in automated journalism from Norway, Sweden, and Germany. Results indicated that automation is only suitable for specific types of journalistic tasks and newsrooms. The study also highlighted the ongoing ethical considerations surrounding algorithmic ethics and identified challenges faced by journalism due to the use of AI technologies, such as the disparity between computational thinking and human logic, making outcome prediction difficult.

2.1. Commentary on previous studies

Upon reviewing prior studies, several indicators can be discerned as follows:

- Methodological diversity characterizes previous studies, with reliance on both exploratory and descriptive survey methods.
- Varied research tools were employed, including surveys, in-depth interviews, and scenario analysis.
- Theoretical frameworks encompassed technological determinism, unified theory and technology adoption, and future foresight approaches. Each theory contributed to shaping the questions and hypotheses of the respective studies, thereby facilitating the attainment of their objectives and tailored solutions to specific research problems.
- Consistency across previous studies is observed in the anticipation of diverse ramifications of AI on the future of traditional media, leveraging its advanced technological capabilities.

2.2. Utilization of previous studies

Previous studies were instrumental in framing the current study's problem statement and formulating a comprehensive vision regarding its key inquiries, predicated on identified thematic axes. Additionally, a comparative analysis between the results of these studies and the current study was conducted to delineate similarities and disparities. This study stands out from prior research endeavors due to its utilization of the deep focus group methodology, which represents a specialized form of interviewing technique aimed at detailed and precise data collection, in contrast to the research tools employed in earlier studies.

2.3. Study quality

This study is categorized as a descriptive study, aiming to investigate a specific phenomenon or situation along with its characteristics and influencing factors. Consequently, the objective of this study is to attain a comprehensive understanding of the future of traditional media in the context of AI, necessitating adequate collection, classification, and analysis of relevant information and data to derive final conclusions.

3. Methodology

The focus group method was employed, which is one of the most commonly used research tools in qualitative research. Focus groups are information-gathering tools that entail a specific type of interview in terms of purpose, design, and procedure (Elareshi et al., 2024; Hadeed et al., 2024). They involve planned discussions among 7–12 individuals with shared interests and aim to obtain information related to a specific topic in a comfortable and secure environment (Krueger, 1998). For the purposes of this study, the focus group comprised individuals from media practitioners, officials, and parliamentarians, as well as academics, possessing extensive knowledge and experience in this field (Elareshi et al., 2023; Mansoori et al., 2023; Wang et al., 2023). To achieve the objectives of this study, the deep focus group methodology was employed. Deep focus groups are widely used within

qualitative research frameworks, particularly in studies seeking to understand phenomena such as AI and its impact on the future of traditional media (Al Olaimat et al., 2022). These groups are defined as specially constituted assemblies characterized by specific attributes in terms of size, composition, purpose, and procedures, meticulously structured to yield insights and perceptions regarding defined areas of interest within the discussion environment. Additionally, they aim to achieve a specific objective, typically centered on obtaining nuanced information from a designated number of individuals. Deep focus group sessions are facilitated in a conducive atmosphere, guided by a question guide. For the purposes of this study, focal groups were formed consisting of two groups. The current study encompasses participants from various sectors: media practitioners and officials from visual, auditory, and print media within Jordanian governmental and private spheres, as well as academics specializing in media studies and experts in information technology. The first group consisted of (journalists and media practitioners), while the second group consisted of (academics and experts).

The first group: It consisted of a group of media practitioners and communication professionals working in various government and private media institutions.

The second group: It was selected from a group of academics in the field of media from faculties and departments of media in Jordanian government and private universities. Additionally, experts were chosen from a number of professionals in the field of information technology, as they are a fundamental element in the process of electronic development and AI. They have greater knowledge of the mechanisms and aspects of using AI and how to adapt it to serve desired fields, and benefit from their expertise in optimizing the use of relevant technologies and software in the media field.

The interviews were conducted during the period from January 2024 to April 2024, where they were interviewed personally at their workplaces after coordination with them, in addition to interviewing 7 specialists and professionals practicing media work in Jordan.

The facilitator

The facilitator's role in planning the meeting involves delineating questions, determining the venue and time, and managing the group dynamics by posing questions during the session to ensure adherence to the designated topic. Additionally, follow-up questions are posed in response to group members' answers. It is incumbent upon the facilitator or their assistant to meticulously document all information and data either in writing or through audio recording.

Facilitators must possess several characteristics to effectively regulate the flow of discussion, including familiarity with relevant theories and methodologies pertaining to the topic under discussion. Furthermore, leadership qualities are essential, as evidenced by extensive experience in facilitating and efficiently managing group discussions, as well as the ability to create an encouraging environment conducive to constructive discourse within groups. Proximity in age to the participants of the discussion group is also crucial, affording them ample freedom of expression,

alongside proficient listening skills enabling the facilitator to elicit profound responses (Al-Sayyid, 2020).

4. Requirements

For the purposes of this study, the following prerequisites were considered:

4.1. Pre-session requirements

The facilitator made several arrangements prior to commencing the session, including:

- Determination of the session's duration, venue, and seating arrangements in a U-shape to foster visual communication between the facilitator and other group members.
- Provision of paperwork, such as participant registration forms and consent forms for participation, along with providing note-taking materials for group members.
- Equipment provision, including audio recording devices and filming equipment.
- Preparation for the session's topic by selecting a facilitator well-versed in the subject matter and knowledgeable about the discussion agenda outlined in the session guide, as well as their commitment to neutrality and self-regulation during the discussion.

4.2. Requirements during the session

This encompassed several arrangements:

- Introduction: The facilitator commenced the session by expressing gratitude to the participating group members, introducing themselves and their professional background, articulating the discussion's objectives and the rationale behind convening the session.
- Post-session outputs.
- A list of session participants and their signed consent forms for documenting the discussion proceedings.
- Several photographs and signed consent forms from participants for capturing images during the session.
- Audio or video recording of the session, along with manual documentation of the discussion.

4.3. Guide

Through the guide prepared by the researcher, a number of issues and topics raised during the two sessions were discussed, focusing on the future of traditional media in light of AI from the perspectives of academics and Jordanian media practitioners. The following **Figure 1** were discussed:

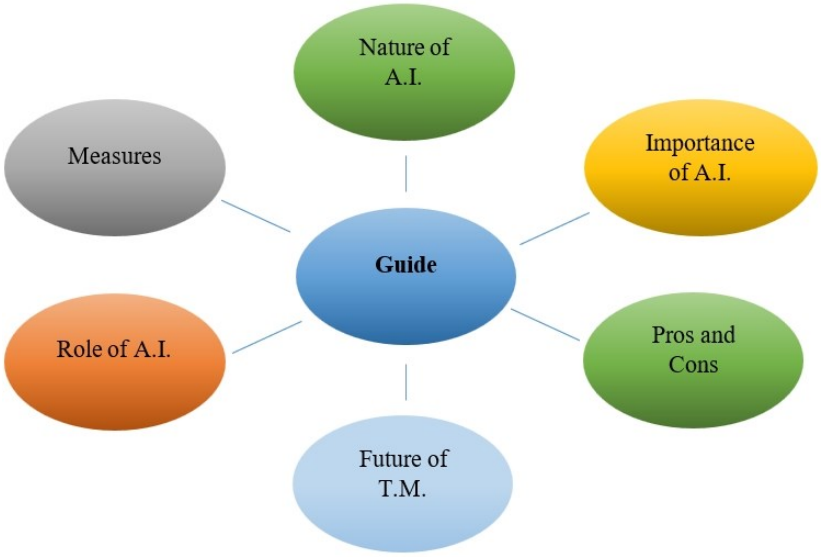

Figure 1. The future of media guide in the era of AI.

5. Discussion

Two focus group sessions were conducted to delve into the topic of the future of traditional media in the era of (AI). The first session comprised media practitioners and officials from Jordanian media, while the second session involved academics in media studies and IT experts. These sessions yielded the following results:

6. Primary axis: The nature of AI in the context of traditional media

Several conceptualizations of AI within the realm of traditional media were put forth by participants, including:

6.1. First axis: The nature of AI within the framework of traditional media

Several concepts have been adopted by participants regarding the concept of AI within the framework of traditional media, as follows:

- The first group (journalists and media professionals) defined AI within the framework of traditional media as a machine that interacts with humans, thinks, and responds to what is asked of it. It is described as a product of integrating a virtual and a real broadcaster together, interacting between them. Others explained that AI is software that is provided with data and news stories to prepare news reports and well-crafted journalistic pieces.
- Others see AI as reflecting machine intelligence, a program that goes through a series of actions, analyzes and studies them, then makes decisions. It is capable of preparing reports within data journalism and extracting numbers and statistics after processing a vast amount of data in a short time. Some defined it as advanced research operations seeking to present information in a way that suits journalists in terms of communication, accuracy, creativity, and sometimes imparting emotions to these results.

- Some viewed it as a computational process performed by software specialized in analyzing online content, summarizing what has been documented or archived, and providing a quick summary of everything being searched for. Additionally, some members of the group mentioned that AI is a tool and an assistant factor that serves journalists in preparing media materials and facilitates their work. It is noted that (journalists and media professionals) focused on AI in the context of traditional media as tools and software that go through a series of algorithms and procedures to classify, analyze, and process the largest amount of data, aiding journalists in preparing and producing media content.
- The second group (academics and experts) defined AI in the context of traditional media as the culmination of efforts to organize algorithmic techniques to meet the demands of media industry. They also characterized it as a set of algorithms performing tasks akin to journalistic work, including idea selection and articulation, utilizing various technological tools expressing AI in image, text, and presentation formats.
- From another perspective, AI was defined as algorithms performing journalistic work to produce texts, programs, or investigative reports.
- Additionally, one group member described it as a set of tools yielding programs utilized in creating quality media content, reflecting creativity in content modification such as editorial work, image and video editing, and montage. Furthermore, others explained that AI encompasses the Internet of Things, interlinking electronic devices from basic to complex, including high-definition mobile phones. It integrates information, data, and algorithms derived from mathematical equations and statistical sciences through computer-generated programs, thereby achieving AI levels simulating human intelligence.

The academics and experts focused on AI as a set of algorithms programmed to produce programs closely resembling various forms of journalistic work, thereby capable of accomplishing diverse media tasks such as preparation, presentation, and text production. They also highlighted the importance of deep knowledge within the media community regarding the intricacies of AI and its tools to facilitate seamless integration in various journalistic functions. Both groups concurred that AI in the context of traditional media consists of algorithms and procedures capable of analyzing, interpreting, and processing extensive data, facilitating the creation of distinctive media content with minimal time and effort. These definitions align with the procedural definition of AI in this study, which views it as encompassing modern techniques reliant on algorithms to examine and analyze acquired data, restructuring it according to specific mechanisms to attain exceptional media content efficiently.

6.2. The second axis: The significance of utilizing AI within the framework of traditional media and audience service

- Regarding the importance of AI within the framework of traditional media, the first group (media professionals and media officials) perceives the following: The importance of AI lies in optimizing time utilization among media stakeholders, fostering a balance between speed and creativity to devise cost-effective solutions in media production. Some emphasized that the significance of AI emanates from

empowering media institutions to convey their messages effectively, alongside its impact on audiences and its potential to induce societal change. Members of this group also recognize the importance of AI in advancing the media job market and elevating competitiveness among media institutions internationally, thereby enhancing the quality of media content to ensure their distinctiveness.

- Some elucidated that the importance of AI lies in providing ample space for journalists to showcase their creativity through the utilization of modern technologies. Others highlighted its significance in segmenting audiences into categories, allowing media institutions to tailor their messages to the preferences and requirements of each category individually.
- Furthermore, the importance of AI is underscored from the perspective of meeting the aspirations of media audiences, fostering increased interaction with media institutions, enabling genuine and precise expression of opinions regarding media content. According to some, the importance of AI manifests in maintaining the accuracy and integrity of media messages and combating the spread of false information through facilitating fact-checking processes.

Based on these insights, it is observed that media professionals and officials perceive the importance of utilizing AI within the framework of traditional media and audience service as conducive to enhancing the quality of media content in accordance with audience preferences, enabling media institutions to fulfill their mission by influencing audiences and effecting societal change, as well as bolstering international competitiveness, reducing material costs in media content production, and fostering creativity among journalists by saving considerable time and effort in content preparation.

- Regarding the second group, they see that AI derives its importance within the framework of traditional media in many aspects, including: AI effectively contributes to making journalistic work easier, in addition to its ability to build public relations in various jobs, activities, and responsibilities, relying on its advanced techniques. Some members of the group clarified that the importance of AI is highlighted by keeping pace with the media's adaptation to the technological revolution worldwide, which resulted in AI with its highly efficient technologies, reflecting positively and tangibly on various aspects of media work and its output in general. The importance of AI stems from its ability to accomplish many journalistic or media tasks such as text preparation, presentation, and other various media functions, all through AI tools and modern applications. Some participants pointed out that the importance of AI manifests in its ability to assist journalists in investigating and accessing information, collecting it easily and quickly, as well as processing and verifying it for publication. According to most members of the second group, the importance of AI lies in its ability to produce more advanced media content, with the possibility of modifying this content professionally through its latest technologies. Others believe that the importance of AI stems from considering it as a differentiating factor that enables highly efficient journalists to activate their brilliance and creativity in the media field. Moreover, most participants emphasized that the importance of AI in serving the public lies in linking media content with all social groups, such as children, youth, adults, and people with special needs, and

employing this content on websites to serve those groups in various sectors such as health, economy, education, and others.

- It also became clear that the service of AI to the public appears through surveying and monitoring their opinions, based on which the quality of media content is improved to align with those opinions and aspirations. The service of AI to the public facilitates the lives of 8 billion people and eases their affairs in various aspects.

It is noted that the inputs of the second group (academics and experts) regarding the importance of using AI within the framework of traditional media focus on keeping up with the media's adaptation to the developments of AI and its various applications, which facilitate media work in all its details. Moreover, it facilitates access to information extremely easily and highlights the distinguished individuals in the media field. It also emphasizes that the service of AI to the public stands out by facilitating their affairs in various aspects of life, in addition to providing better media content based on monitoring the opinions of those audiences and employing this content on various electronic platforms to serve them. The participants also agreed that using AI within the framework of traditional media and serving the public contributes to facilitating media work, encouraging creativity, improving media products, and enhancing communication with the public.

Based on this, it is noted that members of both groups agree on the importance of using AI to improve media products and elevate them, enabling journalists to be creative and distinguished, and reducing time, effort, and financial costs in producing various media materials, as well as developing all stages of media content creation. They also agreed that AI enables media institutions to enhance their role in serving the public and interacting with them, identifying suitable media content for their interests and inclinations, and enabling media institutions to achieve their goals in influencing the public and society as a whole.

It is also evident that members of the first group (media professionals and media operators) have focused more on the importance of AI in developing the level of media institutions and serving the public, meeting their desires, and enabling them to monitor the performance of the media and evaluate it. In addition, they emphasize the importance of the role of AI in improving media content and maintaining a high level of accuracy in preparing media materials in light of the accuracy of the available digital archive, as well as its importance in eliminating false content and rumors in the face of the large amount of information provided through the digital archive and the ease of access to it.

6.3. The third axis: Positives and negatives (cons and pros) resulting from the use of AI in traditional media

Regarding the positives and negatives stemming from the use of Artificial Intelligence (AI) in traditional media, members of the first group (media professionals and media administrators) perceive them to be centered around several aspects. They include: optimizing time and effort by enabling quicker and broader access to information for journalists, providing an advantage for analysis, reducing financial costs in the media sector, fostering creativity among journalists, creating innovative

job opportunities in the media market, achieving higher levels of journalist safety in conflict zones, and empowering media institutions to reach larger quality audiences regardless of location or time.

Others emphasize the empowerment of media to track global trending topics instantly, amalgamate public opinion on media content, and enable direct interaction with media institutions. Additionally, AI is seen as impressive in media presentation through the design of still and animated images, as well as video analysis for accessing superior information on specific subjects. Moreover, it aids in combating misinformation and rumors while ensuring the highest levels of information accuracy through the provision of a rich digital archive of data.

It is evident from this discussion that the first group (media professionals and media administrators) underscore the positives arising from AI utilization in traditional media, which revolve around enhancing the media job market, saving time, effort, and financial costs in media work, fostering creativity among journalists, improving media product delivery, achieving higher levels of journalist safety in conflict zones by allowing AI software to assume journalistic roles in hazardous areas, enabling media institutions to expand their audience base and enhance direct interaction, thereby refining the quality of media products and ensuring the accuracy of media content while eliminating misinformation.

However, members of the group also identify the negatives resulting from the use of AI in traditional media, which revolve around: increased unemployment due to the displacement of many media workers, the inadequacy of Arabic digital content, posing a significant risk in relying on this weak content for the preparation of Arabic articles and studies, threats to human resources and media institutions unable to adapt to AI requirements, intrusion of technicians, programmers, and IT specialists into the media sphere, challenging media studies in finding employment opportunities, lack of trust in the accuracy of AI-generated media materials due to the inaccuracy of digital content, among other issues. Moreover, it was emphasized that AI lacks several journalistic values such as critical creative thinking, in-depth investigative research, and verification. The negative impact of AI on journalists' ethics, legal challenges related to privacy breaches, national security, and legal responsibility were also highlighted.

Furthermore, the group stressed that the negatives resulting from the use of AI in traditional media are evident in: increased unemployment due to the loss of many human workers, the inaccuracy of archived Arabic content in AI software, leading to inaccurate reports and studies, the absence of several journalistic work values, imposing burdens and requirements for upgrading infrastructure in media institutions, providing additional skills to media sector employees in information technology and AI, entry of individuals from technical and technological fields into the media profession, as well as the ethical and legal challenges posed by the use of AI in media work.

- As for the second group (academics and experts), they clarified that the use of AI in traditional media has several positives and negatives, which manifest in various aspects as follows: The majority of the second group affirmed that AI can create a more flexible and highly efficient media working environment. From another perspective, some members of the second group believe that AI enables

the production of distinctive media products quickly and at lower costs through its various high-level applications. Some participants pointed out the possibility of AI performing all media and journalistic functions, such as news writing, program presentation, and other tasks, along with the responsibilities that entail. Additionally, it assists media workers in accessing, processing, and updating information easily and quickly. Most members of the group (academics and experts) highlighted the positives of AI, such as its possession of location detection techniques, documentation and archiving applications, data analysis devices, and its ability to detect fraud and forgery.

- One member of the group emphasized that AI features some creative tools in the media aspect, which are evident in journalistic editing, image and video editing, and the ability to use language in various aspects of different media tasks. Moreover, AI enables journalism to develop itself autonomously in terms of professional output.

It is noted that the focus of academics and experts on the positives of AI is demonstrated through its ability to access and process media work easily and efficiently, as well as the superior quality of AI outputs within the media system. They also emphasized the creative reflection of many tools and techniques possessed by AI in various media functions, and its ability to access, process, and analyze information through all its advanced elements and tools.

Regarding the negatives of using AI in traditional media, participants from the second group (academics and experts) indicated the following: Most participants from the second group affirmed that AI reduces the performance of media workers and administrators within the media work environment, given its accomplishment of numerous media tasks in various forms through its multiple technologies. Others believe that the negatives of AI in traditional media manifest in highlighting governance challenges, as well as the monopolization of information accessed through its various tools. Some emphasized that the negative aspects of AI in media work include reducing reliance on human effort in general, by performing numerous activities and functions. It was also observed that there is a lack of accuracy and clarity in the information obtained through its various tools and applications, reducing the credibility of such information due to the absence of verification principles and the lack of clarity of its sources.

- The majority of participants from the second group affirmed that AI leads to an ethical vacuum within the media profession, considering it foundational in accomplishing numerous tasks and functions within the media sphere.
- Some pointed out that the drawbacks of AI in the context of traditional media lie in the vast volume of data and the resultant issues and misrepresentation.

It is evident from this that the second group emphasized that the negatives resulting from the use of AI in traditional media manifest in the transformation of media skills, the reduction of opportunities for many journalists and media workers by diminishing their performance, and not relying on their efforts in accomplishing various media functions. Moreover, the drawbacks of AI extend beyond this to include a lack of credibility and accuracy in the information it delivers, attributed to the enormous volume of data and the skepticism surrounding it, coupled with imprecise knowledge of its sources.

6.4. The fourth axis: The future of traditional media in the era of AI

Numerous perspectives were discussed by members of the first group (media professionals and media officials) regarding the future of traditional media in the era of AI, including: the involvement of media audiences in the media landscape through content creation, verification, and holding media institutions accountable for violating norms and religions. The media market is expected to witness significant development in the era of AI, reflected in the streamlining of many human resources, with a significant change in the services accompanying media personnel, matched by a notable enhancement in the speed of accessing and disseminating information to audiences. One participant from the first group believes that traditional media will inevitably face the dominance of AI, with traditional media outlets facing a significant challenge in keeping pace with its various tools and techniques. This is due to their failure to confront the digital revolution and the shift towards digital media, with AI occupying a significant space in media work, and traditional media institutions facing media Darwinism and a struggle for survival. Some participants from (media professionals and media officials) also expressed the view that AI will not be localized in Jordan and Arab countries, and we will not witness additions related to our Arab media. Others from the second group emphasized that by the coming year, human media personnel will undergo significant influence due to the replacement of some of them with AI technologies.

It is noted that the focus of the first group is on the radical transformation that the future of traditional media will undergo in the era of AI, with media institutions that do not work now to keep up with this transformation facing a challenge to their continuity, and AI negatively impacting the presence of media personnel within the media work environment, given its numerous advantages reflected in various jobs and tasks, as well as audiences playing an active role in content creation, monitoring media messages, and holding media institutions accountable for violating religions and customs.

In regard to the future of traditional media within the context of Artificial Intelligence (AI), the second group (comprising academics and experts) articulated the following perspectives: AI is anticipated to have profound implications for media professionals and practitioners, offering substantial opportunities for astute journalists. Most participants highlighted that AI is poised to engender shifts in the nature of media skills, indicating a prerequisite depth of knowledge in AI fundamentals for media practitioners to remain relevant amidst the advent of sophisticated AI technologies. Furthermore, it was asserted that AI will elevate the standards of media content production through modern AI techniques, alongside associated tools for visual representation and composition.

Conversely, divergent views emerged within the group regarding the future of media products under AI influence, with concerns raised about potential compromises to content credibility and accuracy. Some members expressed skepticism about the immediate integration of AI within media frameworks, suggesting a cautious stance regarding the future of traditional media in the AI era. Nevertheless, the majority within the second group emphasized that the future of journalism, amid AI advancements, hinges upon the provision of media freedoms and, consequently, the

cultivation of journalistic proficiency in editing, production, and other tasks through diverse AI applications and elements.

Consensus was reached across both groups regarding AI's significant impact on the future of traditional media, marked by its highly efficient tools. The ensuing media landscape is anticipated to confront a multitude of challenges within media institutions, affecting various job functions and journalistic activities, while necessitating adaptability among media professionals and stakeholders across diverse domains. Moreover, the content of media productions is expected to undergo substantial changes in both form and substance, reflective of the evolving AI-informed content creation mechanisms.

The divergent perceptions within the groups concerning the nature of AI-induced changes to the future of traditional media underscore the nuanced understanding of these transformations. While some anticipate negative repercussions, particularly in terms of job displacement and compromised content quality, others foresee positive outcomes, such as enhanced opportunities for adept journalists and advancements in media product quality, notwithstanding attendant challenges. Overall, it is evident that media institutions, regardless of their organizational structures and management paradigms, possess the capacity to adapt to AI innovations across its diverse dimensions and applications.

6.5. The fifth axis: The role of AI in formulating media policies

Participants from the first group (media professionals and media stakeholders) emphasized that the role of AI in shaping media policies lies in its ability to preserve the foundational tenets of media policy and generate timely reports on the positive and negative ramifications thereof, thereby furnishing decision-makers with indispensable analytical tools for policy refinement and reinforcement. Furthermore, the importance of aligning media strategies with national interests and constitutional guarantees of freedom of expression for all Jordanians was underscored. Several members of the group elucidated that crafting an AI-compatible media policy relies on several fundamental pillars, including the consolidation of the right to access information, the equipping of journalists with AI literacy, and the establishment of legislative frameworks defining the concept of AI. However, some members of the first group suggested that formulating media policies in this transitional phase within the media sector may impede journalistic endeavors, advocating instead for the provision of individual freedoms to journalists, with the state constitution serving as the guiding principle. In light of the aforementioned deliberations, it is evident that AI has the potential to assist in preserving the foundational principles of media policy while providing decision-makers with the necessary reports and analytical tools to refine and solidify media policies. Nevertheless, it is imperative to reinforce journalistic freedoms, access to information rights, and the integration of AI within a legislative framework that ensures the highest national interests.

In this domain, the second group clarified the following: Artificial Intelligence (AI) can generate novel media policies through the initiative of all governmental and private media institutions. This entails establishing interdisciplinary teams comprising academics, experts, media professionals, and executives aimed at formulating media

strategies, determining appropriate timelines for implementation, and devising execution plans to accommodate the anticipated changes AI will bring to the media industry. Moreover, some participants emphasized the broad nature of media policy-making, contingent upon the nature, ownership, and management of media outlets. However, with the integration of AI and its myriad tools into the media work environment, and with media platforms adapting to technological advancements, it is natural for this integration to impact media policies and their formulation mechanisms. Most members of this group asserted that AI currently lacks the capability to formulate media policies and will not directly influence their creation. Instead, it operates akin to a hidden advisor assisting decision-makers. Furthermore, AI is viewed merely as a set of tools designed to accomplish various tasks, thus incapable of dictating or formulating media policies and strategies.

It is notable that members of the second group (academics and experts) focused on the potential of AI in shaping media policies. However, they acknowledged the likelihood of policy diversity due to variations in media platforms, operational systems, ownership structures, and management approaches. Additionally, some contended that AI, with its advanced tools and techniques, is primarily geared towards executing diverse media tasks rather than formulating policies. Consequently, most members of both groups concurred that AI can aid in preserving the fundamental tenets of media policy, providing analytical tools to enhance policy development, and reinforcing journalistic freedoms and the right to access information within a legislative framework that prioritizes national interests.

The present study aligns with the perspectives of most members from both groups (media professionals and stakeholders, academics, and experts) who recognize AI's potential to construct and develop media policy in the era of AI. This underscores the importance of maintaining access to information, fostering media freedoms, and empowering journalists to engage with AI technologies in the media domain. The current study also echoes the findings of Di and Fang (2021) regarding the role of AI and its various techniques in supporting media policies, while the results are consistent with the study conducted by Al Jwaniat et al. (2023) which reinforces the role of policy-making and decision-making in media policy.

6.6. The sixth axis: Actions to be taken by traditional media to deal with AI

The first group (media professionals and stakeholders) emphasized a set of necessary actions for traditional media to deal with AI and its modern techniques, including: preparing media personnel to acquire technical skills, integrating AI technologies into media work, governing and regulating AI usage, reducing its independence, solidifying freedoms, particularly press freedom, investing in Jordan's strengths, which are characterized by ongoing developmental continuity and youth, and developing human capacities to deal with AI developments. It was emphasized that media institutions must adapt to communication and technological advancements and capitalize on innovations without delay, investing in AI technologies and software to serve the media message and achieve its objectives. Some members argued that it is premature to discuss the use of AI in the media in Jordan and that the media sector

has ample time to begin taking necessary measures for future use of AI technologies in media content production.

It is noteworthy that members of the first group (media professionals and stakeholders) focused on the necessary actions traditional media must take to deal with AI and its modern techniques, including: adapting media institutions to advancements in communications and information technology, investing in AI technologies to serve the media message, providing the necessary infrastructure, equipping media personnel with skills, integrating AI into the media production process, and the state's role in governing and regulating the use of AI and reducing its independence, and solidifying the right to access information. However, some members of the group believe that the time has not yet come to discuss the use of AI in the media in Jordan.

Among the members of the second group (academics and experts), the requisite actions to be undertaken by traditional media entities to engage with Artificial Intelligence (AI) and its modern technologies revolve around vigilance and attention to unfolding events within three spheres: firstly, the internal sphere of the media institution, focusing on management development and training; secondly, emphasis on monitoring local and Arab events in real-time; and thirdly, concentration on tracking international events. Additionally, members of the second group emphasized the necessity of contemplating the next steps by preparing media institutions and devising actionable plans from the outset to train media personnel in comprehending technological innovations and their management. Others emphasized the necessity of investing in journalism to preserve its value and quality, rather than reducing expenditures. Most members of the second group underscored the imperative of training and equipping journalists to address current demands and raising public awareness that AI is a fundamental element in media production.

Furthermore, some members of the second group highlighted the need for a dedicated strategy to regulate and govern the use of AI at the national level. Others emphasized the importance of raising awareness about the significance of utilizing AI while cautioning against its negative uses, emphasizing the utilization of AI tools as aids in media production rather than complete reliance. Moreover, there was a call for a reevaluation of media education to align with the use of AI in journalism and media, directing faculty members, especially in journalism colleges, to guide student projects and scientific research towards studying and analyzing AI technologies and their applications in the media sector. The results of these projects should be utilized by relevant authorities to adopt their outcomes and leverage them in developing the media sector.

It is observed that members of this group emphasized the importance of investing in the media sector and taking immediate measures to qualify and train journalists in employing AI to serve journalistic work, handling its tools and techniques, and developing media institutions by providing them with AI technologies. This emphasis is particularly directed towards local, Arab, and international events and their monitoring, as well as revisiting media education and developing it to align with the use of AI in journalism and media. Moreover, it advocates for leveraging the capabilities of youth in directing their research projects towards studying and analyzing AI technologies and their uses in the media field, and providing decision-makers and stakeholders with these projects' results to benefit policy development and

the formulation of a strategy for regulating and governing the use of AI at the Jordanian national level.

After reviewing all the results of previous studies, the measures identified by the current study align largely with those of previous Arabic and foreign studies, as some of the findings of previous studies coincided with or reinforced certain aspects of the current study. This indicates that the measures identified by previous studies are likely to largely converge with those of the current study.

7. Conclusions

The study reached several important conclusions regarding the capability of AI to: Lack a specific terminological formulation for the concept of AI, given its novelty and rapid evolution. As well as Bring about significant development in the media sector in all its facets, including content creation and journalist empowerment. Add to Enhance the relationship between media and audiences, as well as their influence and service and the credibility of media content and combat misinformation. Additionally, contribute to ensuring the safety of journalists in conflict zones by performing media coverage tasks in those areas, Reduce time, effort, and procedures in media production. Conditionally contribute to future employment in the media labor market, contingent upon mastering AI skills. Add to Despite the ability of AI to create distinguished media content, in some cases, this content may be unfit for publication due to the lack of information verification and credibility principles. Finally Create numerous challenges within media institutions regarding job performance, responsibilities, and changes in media skill sets. Currently, preserve the fundamental lines of media policy, whereas it may not have the ability to create new media policies.

8. Future research

Traditional media in Jordan, as is the case in many countries, faces great challenges with the development of technology and the spread of AI. It is expected that these transformations will accelerate in the future, and this opens the door to many potential research. An analysis of how AI can be used in editing and producing media content, including automated writing, smart editing, and news management, in addition to how to change the consumption habits and interaction of the public with media. Traditional media in light of the presence of AI technologies such as voice search and smart recommendations. Finally, the use of smart technologies such as machine learning and big data analysis to improve the quality of journalism and audiovisual media in Jordan and the impact of new technology, including AI, on the local and global economies of the media industry in Jordan. How to adapt to these transformations in the Jordanian context.

Conflict of interest: The authors declare no conflict of interest.

References

Al Hadeed, A. Y., Maysari, I., Aldroubi, M. M., et al. (2024). Role of Public Relations Practices in Content Management: The Mediating Role of New Media Platforms. Frontiers in Sociology. 8(1273371).

Al Jwaniat, M. I., Safori, A., Al-Tahat, K., et al. (2023). Investigating the Approaches to Improve Journalism Practices in Jordan: Data Journalism Perspective. In: Artificial Intelligence (AI) and Finance. Springer. pp. 811–820.

Al Olaimat, F., Habes, M., Al Hadeed, A. Y., Al Jwaniat, M. I. (2022). Reputation Management through Social Networking Platforms for PR Purposes: A SEM-Based Study in the Jordan. Frontiers in Communication, 11, 247.

Al-Dulaimi, A. (2016). Communication Theory in the Twenty-First Century, Publisher: Al-Yazouri Scientific Publishing and Distribution House - First Edition. https://archive.org/details/20200406_20200406_1329

Al-Sayyid, M. (2020). International and regional environments and state transformation in some Arab countries. In The State and Global Change (pp. 156-177). Routledge.

Alkhawaldeh, M. M. K., Bin Ali, A. J., Shlash Mohammad, A. A., et al. (2024). The Impact of Artificial Intelligence on Talent Acquisition Strategies in Jordanian Technology Startups. In: Business Analytical Capabilities and Artificial Intelligence-Enabled Analytics: Applications and Challenges in the Digital Era. Springer. Volume 1. pp. 309–323.

Almashawreh, R., Talukder, M., Charath, K. S., Khan, M. I. (2024). AI Adoption in Jordanian SMEs: The Influence of Technological and Organizational Orientations. Global Business Review.

Bdoor, S. Y., Habes, M. (2024). Use Chat GPT in Media Content Production Digital Newsrooms Perspective. In: Artificial Intelligence in Education: The Power and Dangers of ChatGPT in the Classroom. Springer. pp. 545–561.

Brennen, J. S., Howard, P. N., Nielsen, R. K. (2022). What to expect when you're expecting robots: Futures, expectations, and pseudo-artificial general intelligence in UK news. Journalism, 23(1), 22–38.

Di, C., Fang, W. (2021). The influence of media uses on public perceptions of artificial intelligence in China. Information Development, 37(1), 45–57.

El Ashry, W. (2023). The Reality of Arab and Foreign Media Studies in the Field of the Impact of Artificial Intelligence on Journalistic Practice-A Level Two Analytical Study in the Period (2018–2022). Journal of Media Research, 65(2), 877–946.

El Sayed, N. (2020). Focus Group Discussion: Theoretical Foundations and Methodological Considerations. Journal of Humanities and Social Sciences, 9(3).

Elareshi, M., Habes, M., Ali, S., Attar, R. W. (2024). Public Engagement through Public Service Advertisements for Health Care Awareness during Early COVID-19 in Pakistan. Frontiers in Communication, 9(9), 1–10.

Elareshi, M., Habes, M., Ziani, A., Ben Romdhane, S. (2023). The Mobile Apps Inflammatory and Terrorism in Saudi Arabia. In Proceedings of the 2023 Tenth International Conference on Social Networks Analysis, Management and Security (SNAMS); 21–24 Novmber 2023; Abu Dhabi, UAE. pp. 1–6.

Estrada, A., Laurence, J. (2002). A Guide to Focus Group Interviews. Washington: Defense Department Press.

Habes, M., Alanani, A., Youssef, E., Sharif, H. (2024). Why Do Jordanian Students Prefer Using ChatGPT A Case Study of Higher Education Institutions. In: Artificial Intelligence in Education: The Power and Dangers of ChatGPT in the Classroom. Springer. pp. 127–141.

Habes, M., Ali, S., Elareshi, M., et al. (2021). Understanding Users' Social TV Content Using Artificial Intelligence Approach: A Survey. In: Proceedings of the 2021 International Conference of Modern Trends in Information and Communication Technology Industry (MTICTI); 4–6 December 2021; Sana'a, Yemen. pp. 1–7.

Habes, M., Pasha, S. A., Tahat, D. N., et al. (2024). Factors Affecting Artificial Intelligence-Enabled Virtual Assistants Incorporation: A Case Study of the Students of Mass Communication. In: Artificial Intelligence-Augmented Digital Twins: Transforming Industrial Operations for Innovation and Sustainability. Springer. pp. 1–12.

Ismail, M. H. (2011). Research Methodologies in Media Studies. Dar Al-Fikr Al-Arabi.

Jwaniat, A. M., Tahat, D., AlMomany, R., et al. (2023). Examining Journalistic Practices in Online Newspapers in the Era of Artificial Intelligence. In: Proceedings of the 2023 International Conference on Intelligent Computing, Communication, Networking and Services (ICCNS); 19–22 June 2023; Valencia, Spain. pp. 183–189.

Kim, D., Kim, S. (2018). Newspaper journalists' attitudes towards robot journalism. Telematics and Informatics, 35(2), 340–357.

Krueger, R. A. (1998). Moderating Focus Groups. Sage Publications.

Mansoori, A., Tahat, K., Tahat, D., et al. (2023). Gender as a Moderating Variable in Online Misinformation Acceptance during COVID-19. Heliyon. 9(9), e19425.

Mansour, A. (2021). The Future of Egyptian Journalism in the Light of Artificial Intelligence Journalism Technologies in the Coming Decade (2021–2030)-A Prospective Study. Journal of Media Research, 58(3), 1397–1458.

Pashevich, E. (2018). Automation of news production in Norway: Augmenting newsroom with artificial intelligence [Master's Thesis]. University of Oslo.

Safori, A., Habes, M., Alzobi, A., Ali, M. (2024). An Analysis of Television News Media and Its Impact on Public Life. In: Artificial Intelligence and Economic Sustainability in the Era of Industrial Revolution 5.0. Springer. pp. 1071–1082.

Sahbi, S., Khalaf. (2018). Trends of Algerian Youth towards News Sources between Traditional Media and New Media.PhD thesis, University of Oum El Bouaghi – Tunisia

Shamsuddin, F. (2022). The Communicator's Vision for the Future of Media Professionals in the Era of Artificial Intelligence. Scientific Journal of Radio and Television Research, 2022(24), 1–26.

Sharadga, T. M. A., Tahat, Z., Omar Safori, A. (2022). Journalists' Perceptions towards Employing Artificial Intelligence Techniques in Jordan TV's Newsrooms. Studies in Media and Communication, 10(2), 239–48.

Thabet, G. (2022). The Future of Public Relations Industry in Light of (Artificial Intelligence-Creative Media-Media Integration). Scientific Journal of Public Relations and Advertising Research, 2022(24), 235–267.

Wang, S., Li, L., Liu, N., Habes, M. (2023). Transitioning from Information Sharing to Knowledge Services: Unpacking the Evolution of Rural Media Within the Context of Media Integration. Journal of the Knowledge Economy, 1–32.

Wölker, A., Powell, T. E. (2018). Algorithms in the newsroom? News readers' perceived credibility and selection of automated journalism. Journalism, 22(1).