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THE USES OF ARTIFICIAL INTELLIGENCE BY COMMUNICATORS IN DEVELOPING MEDIA CONTENT

Mohammad Farouq Hatmal AlQadi
Cairo University - Faculty of Mass Communication
Aboqasem_87m@yahoo.com

Abstract:
This research reviews the uses of artificial intelligence in developing media content in the communications sector. The research addresses the role of artificial intelligence in analyzing big data to understand user behavior and guide production and distribution strategies. It also highlights the ability of artificial intelligence to produce media content automatically, which increases production speed and reduces costs. The research also addresses the role of artificial intelligence in providing accurate recommendations to users based on their interests and past behavior, enhancing the user experience and the effectiveness of media marketing. The research concludes by highlighting the importance of artificial intelligence in improving search and retrieval processes, which increases the accuracy of results and increases user satisfaction.

Keywords: Media content, artificial intelligence (AI), algorithms, communication,

Introduction:

Artificial Intelligence (AI) is a modern technology that relies on computer capabilities to simulate human intelligence and carry out tasks in an intelligent manner. The media sector has a variety of opportunities and challenges that can be improved and avoided using artificial intelligence technologies. The communications and media industry is one of the main sectors that greatly benefits from the uses of artificial intelligence to improve the quality and effectiveness of media content. The term "artificial intelligence" first appeared in international conferences and publications in the 1950s. However, it has become a prominent trend in the past two decades and its presence has steadily increased in recent literature. With the accelerating pace of technological development in our digital age, artificial intelligence has become an important indicator of a nation's strength, and has even led to changes in the balance of

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power on the international stage.[1] The media field has witnessed a real revolution with the emergence of artificial intelligence (AI) technologies. These technologies have come to play a significant role in various stages of the media process, starting from data collection and analysis, through article writing, and finally to content publishing and audience engagement.[2]

Research problem:

Artificial intelligence applications are distinguished by their speed, low cost, and accuracy in producing media content. What distinguishes these applications is that the effort required to produce media content is much less than the effort required by humans to produce the same content. Therefore, this research aims to identify the uses of AI applications by communicators in developing their visual, written, and audio media content, and to identify their views on using these applications in the media outlet they work in.

Importance of the Study:

1) The importance of this research lies in shedding light on one of the modern and important topics in the media field, as studies have proven the significant contribution of artificial intelligence to the media field.
2) Benefits of Artificial Intelligence Applications in Media Content Production:[3]

- Increased efficiency of media work.
- Improved quality of media content.
- Saving time and effort for media professionals.
- Better understanding of the audience and their needs.
- Improved effectiveness of media campaigns.

3) This study is an extension of the studies that study the development of media outlets, as artificial intelligence applications and technological developments have contributed to the production of news content that is similar in its presentation and content to the product that humans present with the least effort, cost, and time. This is a significant development, of course, and has implications for the future of the media.

[1]) Gocen, I. (2023). **European union's approach to artificial intelligence in the context of human rights** (Order No. 30822335). Available from ProQuest Dissertations & Theses Global.
[2]) Salaudeen, A. I. (2023). **A survey of awareness and adoption of artificial intelligence journalism among lagos and kwara states journalists** (Order No. 30815477). Available from ProQuest Dissertations & Theses Global. (2899128710).
[3]) Salaudeen, A. I. (2023). Op.Cit.

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Study Objectives:

The main objective of this research is to identify the uses of artificial intelligence (AI) applications by communicators in media content production and their perspectives towards them. This main objective is divided into a set of sub-objectives, including:

1) To identify the reality of the use of AI applications by communicators within media organizations.
2) To identify the most important obstacles facing communicators that prevent them from benefiting from AI applications.
3) To identify the impact of the elements of the Unified Theory of Acceptance and Use of Technology (UTAUT) (perceived usefulness, perceived effort, facilitating conditions) on the attitudes of communicators towards using AI in developing and producing media content and thus developing media outlets.
4) To identify the most important proposals from the communicators' point of view for the employment of AI applications in developing media content production.
5) To identify the degree of impact of AI applications on media outlets in general.
6)

Methodology:

This study falls under the descriptive type, which aims to study current facts. The researcher will use the field survey method through a survey of a sample of media specialists working in the Jordanian Roya channel.

Study Sample:

The field study population consists of a group of specialists working in the Jordanian Roya channel, where the researcher will apply the study to a sample of media specialists working in the Jordanian Roya channel consisting of 300 individuals.

Theoretical Framework of the Study:

In this research, the researcher relied on the Unified Theory of Acceptance and Use of Technology (UTAUT).

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The researchers Davis, Morris and Venkatesh developed this theory in 2003, by reviewing previous studies and different scientific models prevailing in the field of user acceptance of information and communication technology. They discussed eight models and theories closely related to the acceptance and use of technology, namely:

- Theory of Reasoned Action
- Technology Acceptance Model
- Theory of Planned Behavior
- Combined Model of Planned Behavior and Technology Acceptance
- Motivational Model
- Model of Computer Use
- Diffusion of Innovations Theory
- Social Learning Theory

They also made a comparison between the similarities and differences between these theories and previous models, and based on this comparison they formulated a theory that includes most of the variables included in the previous models and theories.

This theory relies on comparing the following main factors:

- Performance expectancy
- Social influence on the acceptance of that technology
- Expected effort in dealing with technology
- Surrounding conditions that include the infrastructure necessary for the technology to work, such as the Internet.[4]

The (UTAUT) model consists of four main constructs[5]:

1) **Performance Expectancy**: This refers to the degree to which individuals believe that using the technology will improve their job performance. It is also seen as the perceived benefit of using the technology.
2) **Effort Expectancy**: This refers to the ease of use of the technology.
3) **Social impact**: This refers to the extent to which individuals believe that using the technology is important to others. In this context, Han pointed out that perceived social factors play an important role in employees' trust in the technology used in the workplace.

[4]) Venkatesh, and Morris, M.G.,Davis, F.D. (2003). User acceptance of information technology: toward aunfied view. MIS Quarterly, vol 27, pp425-478
[5]) Han, J.H. (2018). UTAUT Model of Pre-service Teachers for Telepresence Robot-**Assisted Learning. J.Creat. Inf. Cu**lt,4. P.95.

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4) **Facilitating Conditions**: This refers to the extent to which individuals believe that the infrastructure and technology necessary to support the technology are available to the organization or individual. In other words, this variable is related to the provision of the necessary capabilities to use digital applications.

Hypotheses of the Theory:

The theory is based on a set of assumptions, including:[6]

1) Perceived risk has a negative impact on the audience's acceptance of using modern technology.
2) There is a positive impact of the audience's perceived trust in the technology on the audience's attitudes and behavior towards using and accepting the technology.
3) There is a direct relationship between perceived cost and the audience's acceptance and use of technology.
4) Performance Expectancy
5) Self-efficacy.
6) Effort Expectancy.
7) Social influences.
8) Facilitating conditions.

Research Questions:

1) What is the reality of communicators' use of artificial intelligence applications within media organizations?
2) What are the obstacles facing communicators that prevent them from benefiting from artificial intelligence applications?
3) What is the impact of the elements of the unified theory of technology acceptance and use (perceived usefulness, perceived effort, facilitating conditions) on the attitudes of communicators towards using artificial intelligence in the development and production of media content and thus developing media outlets?

[6]) Osama Issac. (2020). "Antecedents and outcomes of internet usage within organizations in Yemen: An extension of the Unified Theory of Acceptance and Use of Technology (UTAUT) model" **Asia Pacific Management Review** .24. P,335.

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4) What are the most important proposals from the communicators' point of view for employing artificial intelligence applications in developing the production of media content?
5) What is the extent of the impact of artificial intelligence applications on media outlets in general?

Research Hypotheses:

- There is a significant relationship between the attitudes of communicators towards the application of artificial intelligence technology in media organizations and the variables of the unified theory of technology acceptance (expected performance, perceived usefulness, social influences, perceived effort).

Study Tools:

This study uses a survey of a sample of its target audience, which consists of a group of specialists working at Roya TV Jordan.

Study Terms:

Artificial Intelligence:

It is one of the most important and well-known modern sciences that resulted from the convergence of the technological revolution in the field of systems science, computer science, and automatic control on the one hand, and logic, mathematics, languages, and psychology on the other hand. It aims to understand the nature of human intelligence by developing computer programs capable of simulating intelligent human behavior to provide the computer with these programs that help it solve a problem or make a decision in a situation based on the description of the problem or issue for that situation[7].

literature review:

After reviewing the available scientific literature on the role of artificial intelligence in developing media content, it became clear that there are many

[7]) Al-Shimari, Alaa Makki. (2021). "Visual media under the challenges of artificial intelligence: a survey studies". PHD, **University of Sharjah , College of Communication**, pp 717-742.

studies related to this topic, to the best of the researcher's knowledge. Some of these studies include the following:

1) **Salaudeen, Abdullahi Ishola, 2023, (A Survey of Awareness and Adoption of Artificial Intelligence Journalism Among Lagos and Kwara States Journalists)**[8]

This research is a survey of the awareness and adoption of artificial intelligence journalism among Lagos and Kwara States journalists. Five objectives were set for the study which were to: examine the level of awareness of artificial intelligence journalism among Lagos and Kwara States journalists; investigate the extent to which journalists in Lagos and Kwara States are adopting artificial intelligence in their journalism practice; identify the impact of the adoption of artificial intelligence on journalism practice among Lagos and Kwara States journalists; examine the likely threats in the adoption of artificial intelligence journalism among Lagos and Kwara States journalists and to identify the factors that will ensure successful adoption of artificial intelligence in journalism. Using Diffusion of Innovation Theory, and Unified Theory of Acceptance and Use of Technology (UTAUT) as the underpinning theories for this study, with a sample size of 376, the researcher adopts quantitative paradigm and precisely the survey design to examine journalists' level of awareness and adoption of artificial intelligence in their journalistic engagements. Findings from the study indicate that there is high level of awareness of artificial intelligence journalism among Lagos and Kwara States journalists. However, for the fact that the journalists are aware of the artificial intelligence in journalism, the study shows that not all of them adopt the innovation in their journalism practice. Findings also reveal that the adoption of artificial intelligence in journalistic practice will have both positive and negative impacts on the profession. The study also indicates that the adoption of artificial intelligence journalism in Nigeria is a challenge that will be overcome if largely supported by journalists and media owners.

[8]) Salaudeen, A. I. (2023). **A survey of awareness and adoption of artificial intelligence journalism among lagos and kwara states journalists** (Order No. 30815477). Available from ProQuest Dissertations & Theses Global.

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2) **Gohil, Harshil, 2023, (Factors Influencing the Adoption of Artificial Intelligence for Qualitative Data Analysis: A Quantitative Study Using UTAUT Model).**[9]

This Quantitative study aimed to measure the influence of UTAUT's variables on the adoption of Artificial Intelligence for Qualitative Data Analysis. The purpose was studied by research questions containing UTAUT's variables Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, and measuring to what extent these variables predict the adoption of Artificial Intelligence for Qualitative Data Analysis. A survey was created based on the UTAUT model to answer these research questions and distributed to the participants to collect data. The collected data was analyzed using multiple linear regression to determine the independent variables' influence on the dependent variable in adopting Artificial Intelligence for Qualitative Data Analysis. Independent variables were Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions, while the dependent variable was Behavioral Intentions. Data analysis discovered that independent variables accounted for a 62.50% variance in dependent variable in the adoption of Artificial Intelligence for Qualitative Data Analysis. This study revealed that Performance Expectancy had a significant influence on Behavioral Intentions in adopting Artificial Intelligence for Qualitative Data Analysis, while Social Influence had a moderately significant influence. Effort Expectancy and Facilitating Conditions had no statistically significant influence in adopting Artificial Intelligence for Qualitative Data Analysis. Considering these two influencing factors while developing new solutions or investing in Artificial Intelligence will bring innovative and efficient solutions to revolutionize Qualitative Data Analysis towards Artificial Intelligence.

3) **Owsley, Chad Stuart, 2023, (Understanding the Impact of Artificial Intelligence on Newsroom Social Culture and Journalistic Performative Roles: A Qualitative Case Study of AI as an Emerging Digital Innovative Technology in Newsrooms)**[10]

[9]) Gohil, H. (2023). Factors influencing the adoption of artificial intelligence for qualitative data analysis: A quantitative study using UTAUT model (Order No. 30640651). Available from ProQuest Dissertations & Theses Global. (2878146028).

[10]) Owsley, C. S. (2023). Understanding the impact of artificial intelligence on newsroom social culture and journalistic performative roles: A qualitative case study of AI as an emerging digital innovative technology in newsrooms (Order No. 30488848). Available from ProQuest Dissertations & Theses Global.

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This research investigates the impact of Artificial Intelligence as an emerging digital innovative technology on journalism and mass communication from a sociological and historical context. The aim of this study is to examine how the use of innovative AI technology may influence sociocultural perceptions and behavior in U.S. and UK-based news reporters and their semi-automated newsrooms by comparing present-day news reporters and newsrooms against the behavior of news reporters and newsrooms at the start of the last century when television and radio emerged as previous disruptive technologies.

Creating a new social role generates contention in a shared social space, leading existing occupants to consider their existing role and the opportunities or challenges posed by this new role. This phenomenon is examined using Diffusion of Innovation theory, Human-Machine Communication theory, and Actor-network theory to help understand the emergence of new social roles in shared social spaces. Such a perspective enables a more nuanced understanding of how new social roles emerge and gain influence, and how existing roles may be challenged or reinforced.

Data collected through semi-structured interviews from news reporters at a global news organization with offices in the U.S. and the UK have been analyzed using a comparative framework to study social behavior, customs, and culture evident in semi-automated newsrooms. The goal of this research is to better understand the impact that the diffusion of emerging digital innovative technology may have on the social culture of journalists and the newsroom within which they perform as newsmakers.

In order for humans and non-humans to coexist in the same space, it is important to have an awareness and understanding of how interactions between them can be stabilized. One way to achieve this is through HMC, which moves the machine from being solely a communication channel or intermediary into the role of communicator. HMC provides a way to view the machine as a mediator and to treat communication between humans and machines as an exchange of information toward some desired effect. This means that the AI synthetic journalist would no longer be merely a tool for human journalists, but rather an autonomous agent, endowed with the same responsibilities as human-journalist agents, capable of directly delivering journalism to an audience.

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4) Kirkpatrick, Alex Williams, 2022,(Communicating Proximity: The Effects of Technology Media on Information Sharing about Artificial Intelligence)[11]

Construal-level theory suggests that people could view novel issues and phenomena like artificial intelligence (AI) as being psychologically distant, irrelevant to people like themselves and even less believable relative to more familiar or salient issues. Synchronously, empirical construal-level theory studies suggest that information related to novel issues like AI is more likely to be shared online when people perceive the topic as being psychologically proximal, relevant to people like themselves and believable. Therefore, understanding how media might encourage information sharing about novel technologies by communicating psychological proximity (e.g., a sense of nearness and personal relevance) is key to understanding how people form perceptions of new innovations and share these perceptions with others. I conducted two studies examining the influence of technology media-system dependency (study 1) and online technology media content (study 2) on AI information sharing online, through psychological proximity to the impacts of AI. In study 1, I surveyed a sample of US citizens 18 years and older about their media habits in relation to AI, and tested a process model predicting AI information sharing from technology media-system dependency. Results suggest an indirect positive association between reliance on media resources to meet goals related to AI and online AI information sharing, through priming psychological proximity. Perceived rate of technological change was found to moderate this model, enhancing the association between dependency and proximity, and the indirect association between dependency and information sharing, through proximity. In study 2, I exposed a sample of US citizens 18 years and older to manipulated media content reporting on the potential economic threats posed by AI. Results suggest that thematically framing the threat of AI primed psychological proximity over episodically framing similar information, contrary to the predictions of construal-level theory. Furthermore, thematically framed content was more shareable through its positive effects on psychological proximity to the impacts of AI and perceived AI threat in serial mediation. Discussions of implications, trajectory of future research and

[11]) Kirkpatrick, A. W. (2022). Communicating proximity: The effects of technology media on information sharing about artificial intelligence (Order No. 28964460). Available from ProQuest Dissertations & Theses Global. (2720881732).

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limitations are discussed through the lens of construal-level theory and individual-level media-systems dependency.

Conclusions:

The study found that professionals in media organizations use artificial intelligence (AI) applications for various purposes, including data analysis, content creation and organization, personalization, and audience engagement. The extent of AI usage varied by role and department; some organizations use AI applications for a wide range of purposes, while others use AI applications for a specific purpose, such as data analysis or content creation.The study identified several barriers that prevent professionals from fully utilizing AI applications, such as lack of training, lack of understanding of AI technology, fear of job displacement, difficulty accessing AI resources, and data privacy concerns. The study supported the research hypotheses. The results showed a significant positive relationship between professionals' attitudes towards AI use and the variables of the Unified Theory of Technology Acceptance and Use (UTAUT). Specifically, perceived usefulness, ease of use (perceived effort), and supportive work environment (facilitating conditions) were found to positively influence professionals' attitudes towards AI adoption.

Experts proposed several strategies for effectively using AI in content creation, including: Provide specific training programs to familiarize professionals with different AI tools and applications relevant to their role. Develop clear guidelines and ethical frameworks to address concerns about data privacy and potential misuse of AI technologies. Facilitate collaboration between AI developers and media professionals to ensure that AI tools are designed and implemented to meet user needs. Make necessary investments in infrastructure and resources to ensure accessibility and ease of use of AI tools across the organization.

The study found mixed results regarding the overall impact of AI applications on media organizations. While some reported positive impacts such as increased efficiency, improved content personalization, and enhanced audience engagement, others expressed concerns about potential job losses, homogenization of content, and the ethical implications of AI-driven decision making.

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4) Han, J.H. (2018). UTAUT Model of Pre-service Teachers for Telepresence Robot- Assisted Learning. J.Creat. Inf. Cult,4. P.95.
5) Kirkpatrick, A. W. (2022). Communicating proximity: The effects of technology media on information sharing about artificial intelligence (Order No. 28964460). Available from ProQuest Dissertations & Theses Global. (2720881732).
6) Osama Issac. (2020). "Antecedents and outcomes of internet usage within organizations in Yemen: An extension of the Unified Theory of Acceptance and Use of Technology (UTAUT) model" Asia Pacific Management Review .24. P,335.
7) Owsley, C. S. (2023). Understanding the impact of artificial intelligence on newsroom social culture and journalistic performative roles: A qualitative case study of AI as an emerging digital innovative technology in newsrooms (Order No. 30488848). Available from ProQuest Dissertations & Theses Global.
8) Salaudeen, A. I. (2023). A survey of awareness and adoption of artificial intelligence journalism among lagos and kwara states journalists (Order No. 30815477). Available from ProQuest Dissertations & Theses Global. (2899128710).
9) Venkatesh, and Morris, M.G.,Davis, F.D. (2003). User acceptance of information technology: toward aunfied view. MIS Quarterly, vol 27, pp425-478.