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The Role of Artificial Intelligence in Development and Editing Television Media

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Abstract:

This study aims to explore the role of artificial intelligence in the development and editing of television media by analyzing the impact of smart technologies on the production, processing and presentation of content in more efficient and creative ways. The sample included a group of editors, media professionals and digital media experts, using surveys and interviews to collect their opinions on the applications of artificial intelligence in the television industry. The results revealed that artificial intelligence significantly enhances the quality of content, speeds up editing processes and improves audience engagement through smart analytics and personalized recommendations. The study recommended increasing investments in artificial intelligence technologies and providing training programs for media professionals to maximize the benefits of these developments.

Keywords: Artificial intelligence, television media, content editing, smart analysis, audience engagement.

Introduction

Television media has undergone fundamental changes over the decades, driven by technological advances that have reshaped production, broadcasting, and audience interaction. With the advent of AI technologies, the media industry has entered a new era of creativity and digital transformation, enabled more efficient media workflows and delivered highly accurate and tailored content to audiences. These changes are not limited to technological tools but also extend to redefining the roles of journalists and editors, necessitating a deeper examination of the impact of AI on the future of television media.

AI has revolutionized production and editing processes by enabling big data analysis to understand audience preferences, automating video editing and news production, and reducing time and effort while improving content quality. AI-based technologies such as machine learning and natural language processing are now widely used to generate news reports quickly and accurately, increasing media efficiency and streamlining editorial workflows. This in turn positively impacts the speed and quality of information dissemination (Reda, 2023).

In addition, AI has enhanced audience experiences by integrating augmented reality and interactive intelligence, making content more engaging and immersive. Smart algorithms now allow TV networks to personalize content based on viewer preferences, enhancing audience loyalty and increasing

engagement across different media platforms. However, the increasing reliance on AI raises challenges related to credibility and journalistic ethics, highlighting the need to balance technological innovation with professional and ethical standards in journalism (Abd Al-Karim, 2024).

Abed et al.'s (2025) study aims to explore the role of AI in modern media communications, and analyze its development, applications, benefits, and challenges. The researchers used a descriptive analysis approach to summarize the literature and recent studies published between 2019 and 2025, focusing on the impact of AI on content creation, journalism, marketing, and social media. The review highlighted the development of technologies such as machine learning and natural language processing, which have contributed to improving content creation and personalization, while addressing ethical and operational challenges such as bias and misinformation. The review expected that future developments in this field will continue to reshape the media landscape, presenting new opportunities and challenges for the industry.

The study by Shao (2025) seeks to investigate the impact of artificial intelligence-generated content (AIGC) on the efficiency and quality of digital media content creation, focusing on the ethical challenges and standards involved. The sample included scholarly articles, case studies, and industry reports related to AI-generated content. The study used a systematic analytical approach to evaluate the potential of AIGC and its impact on the digital media industry. The results showed that AIGC enhances production efficiency and scalability, but raises ethical challenges such as algorithmic bias and job displacement. The study recommended adopting ethical practices and providing safeguards in the use of AIGC to ensure its responsible integration with the SDGs.

Data extraction along with search optimization topic selection and news production error correction and news writing benefit from Al applications according to Maamri et al. (2023). Analysis of literature and research on the topic enabled researchers to establish their study sample for investigating Al techniques and their digital media effects. The research applied descriptive analytics for understanding modern trends within this field. Research findings demonstrate that digital media now integrates Al technology as its essential component thereby it boosts operational efficiency and enhances productivity. The research team proposed to raise development efforts because this work will drive digital media industry development along with optimizing AI technology advantages.

Atyqah et al. (2023) conducted a research study about Al technology progress for Arab media institutions utilizing communication expert surveys with academic elites from Libya and Palestine. A descriptive survey method with an electronic questionnaire reached a randomly chosen sample of 62 individuals. The study discovered that economic elements together with governmental backing provide the strongest impact on the adoption of Artificial Intelligence whereas poor tech infrastructure represents a main barrier with 32.16% and 21.85% respectively. Furthermore, the researchers predicted Al would dominate Arab media with 82.7% but simultaneously reported 59.6% non-awareness regarding technology implementation.

The research carried out by Abdul Razzaq (2022) examined professional communication specialists' acceptance of AI technologies as well as how these systems influence their media work methods in Egyptian national programs alongside other Arab organizations. The research employed "Unified Theory of Acceptance and Use of Technology" (UTAUT) to understand 451 participant views. Results show that most participants actively track AI news while understanding AI capabilities to mimic human behavior in various media functions. The use of AI technology showed growing interest for service as

well as economic journalism and marketing journalism. Media institutions anticipate implementing technological changes according to the research while upper management exhibits different viewpoints compared to lower management regarding these implementations.

Literature Review

Artificial Intelligence

An advanced technological system known as artificial intelligence performs problem solving and decision-making operations like a human.AI systems use image detection expertise and create original texts while using data analysis to make prediction models. Current businesses gather extensive customer data from different origin points including smart sensors alongside user-generated material and system logs and monitoring instruments. This data becomes more useful when AI technologies analyze and extract value from it to enhance business operations. The technology enables AI to both speak to customers while generating original marketing materials along with performing analytical tasks and suggesting options. The primary goal of AI exists in boosting software intelligence to deliver custom-focused applications while addressing complex challenges (Azeibi, 2024).

The field of computer science develops software systems through AI which empowers machines to solve problems that display intelligent humanlike thought procedures. The field of study demonstrates the creation of computer systems which operate on tasks equivalent to human intelligent functions that include decision-making along with speech and image recognition and problem-solving and reasoning abilities and learning capabilities (Baştanlar et al., 2014**).**

Components of AI Systems

If we consider AI to be the theory and practice of developing systems (i.e., machines or computer programs that receive or perceive inputs, process those inputs, and return the results of the processing as outputs), and that these systems operate to achieve the best expected outcome, we can break down AI systems into five building blocks that include: (Paschen et al., 2019).

1- Inputs

All information systems require sustainable processes to obtain environmental data for their data inputs as well as process work and generate outputs. Artificial Intelligence (AI) receives data through structured and unstructured data collections.

A. Structured Data:

Organized data follows a predefined data structure that ensures uniformity in its organization. Organizations use structured data as their starting point to perform business analytics and business intelligence activities that adapt a systematic approach for quantitative analysis of organizational resources. Two examples of structured data inside organizations are customer demographics and web browsing information alongside transaction records. The examples of external structured data include evaluations found on social media and stock market transactions. The combination of enhanced machine computing systems with machine learning improvements enables AI systems to process various structured data at high speeds (Abu Zaid & Al-Shura, 2022).

B. Unstructured Data:

Data that lacks predefined organizational standards counts as unstructured. The defining feature which sets AI apart from conventional information systems exists in the way it handles extensive unstructured datasets. Digital data has increased without limits due to the Internet of Things (IoT) and mobile device spread along with social media growth. Human language resources such as blogs, posts, comments

along with social media audio content and photos featuring people or objects compose the main categories of unstructured data. The web contains two different data types: structured response options and unstructured text inputs which visitors use to give contact information and service feedback (Abu Zaid & Al-Shura, 2022).

2- Processes

O'Leary (2013) explains in his book that AI systems need to perform data standardization and coordination before starting operations in his book. The first stage of processing activities turns unstructured data into structured data and prepares it for later AI operations in the platform. The core functionality of these systems depends on these activities that safeguard their internal operation.

A. Initial Processing

The first step of processing unstructured data requires multiple data cleaning and normalization methods along with transformation and feature extraction and selection techniques to make remaining data ready for value-creation processing.

B. Main Processes

Among the central AI operations stands the capability of machines to solve problems by applying logic alongside learning abilities. The process through which knowledge becomes modified or acquired works toward achieving better outcomes. Problem-solving along with logical thinking and machine learning form the three core operations found within the fourth principal component of AI. Machine learning employs previous two operations to improve machine intelligence (O'Leary, 2013).

3- Data Warehouse

Only through memory can experiences affect subsequent behavior since memory functions as a storage system for keeping accessible data and knowledge bases. AI systems need an efficient data management system to store and retrieve vast quantities of information for problem-solving and result drawing and knowledge acquisition.

4- Outputs

AI depends on structured data along with unstructured data because each data type helps transform supplied inputs into profitable outputs. Every input from the environment leads to processing stages involving natural language understanding and computer vision and core problem-solving activities and reasoning with machine learning (Building Block 1 through 3 and 4). Inputs undergo transformation through various processes which generate useful ways for value creation. Subsequently the information gets saved into a knowledge base (Building Block 5) to store for later applications. The fourth element examines how AI systems interact with real-world environments through their output interfaces following specific result achievement. The generated outputs either guide human choices or serve as data for additional information systems that deal with business environments.

5- Information

When data gets assigned to a particular context it transforms into information which becomes easy to understand. Artificial intelligence produces data that enhances the capability of humans to make decisions. Digital marketing organizations implement AI capabilities to boost search engine optimization through specific features as well as customize content delivery and search engine topic analysis techniques. The system combines standard SEO keyword search practices by extending beyond keywords to process semantic topics which allows computers to accomplish complex queries

that surpass human ability levels. The information output from AI systems will find application in various non-human tasks for business use (Paschen et al., 2019).

The characteristics of artificial intelligence are a set of features that distinguish its systems and capabilities from traditional systems, including:

1. **Learning**: The ability of intelligent systems to learn from past data and experiences and improve their performance over time, including deep learning and machine learning.
2. **Adaptation**: The ability to modify the system's behavior in response to changes in the environment or incoming data, allowing it to adapt to new or unexpected situations.
3. **Reasoning**: The ability of the system to infer new results based on the knowledge and information available to it, as occurs in decision-making systems.
4. **Natural language processing (NLP):** Enabling systems to understand and interact with human language. This ability includes analyzing texts and speech and generating meaningful responses.
5. **Computer vision**: The ability of systems to interpret and analyze images and videos, allowing them to "see" and recognize objects, such as recognizing faces or objects.
6. **Planning and problem solving:** The ability to analyze problems and plan solutions systematically and efficiently, as occurs in autonomous robots.

Television Media

Concept of Television Media

The transmission of news and information along with entertainment and educational content through screens constitutes television media as a mass communication system. Television stands out as a media platform because it merges sounds with moving images to deliver messages and educational content fully engaging to audiences (Addawy, 2016).

Characteristics of Television Media (Abbas, 2012):

1. Visual and audio impact: It combines sound and image, making it more capable of attracting the audience's attention and conveying information clearly.
2. Widespread: It reaches a large audience locally and globally, making it an influential media outlet in shaping public opinion.
3. Instant coverage: It is capable of transmitting live events and live coverage, making it a key tool in transmitting breaking news.
4. Diversity in content: It includes news, talk shows, series, films, documentaries, and educational programs, making it suitable for different age groups and interests.
5. Audience interaction: Television media has evolved with modern technology to allow audience interaction through social media or text messages.

The Role of Television Media

Television media is one of the most influential and widespread means of communication, as it contributes to shaping the awareness of societies and directing public opinion through the diverse content it provides, thanks to its ability to combine sound and image. Television has a great ability to convey information and messages clearly and effectively, making it an important tool in various fields (Addawy, 2016).

1-Awareness and education: Television media plays an important role in raising the level of cultural and social awareness through documentary and educational programs that highlight historical, scientific

and health issues. It also helps in spreading knowledge about healthy habits, awareness of environmental issues, and enhancing understanding of human rights and citizenship.
2- Transmitting news and information: Television is one of the fastest means of transmitting local and international news, as it provides live coverage of current events, allowing the public to follow political, economic and social developments in real time. This role makes it a major source of reliable information, especially during crises and natural disasters.
3- Influencing public opinion: Thanks to its strong influence, television media contributes to shaping viewers' opinions and directing them towards certain issues. Through talk shows and political discussions, events are analyzed and different points of view are presented, which helps the audience form their own opinions. However, this influence may be negative if the content is directed to serve certain agendas.
4- Entertainment and amusement: Television provides a variety of entertainment content including series, films, comedy programs, and musical performances, making it a major means of entertainment in people's lives. This content not only helps in entertaining the soul, but also contributes to enhancing creativity and art and spreading different cultures.
5- Promoting social values and cultural communication: Through series and social programs, television reflects the reality of societies and discusses social issues such as poverty, unemployment, and women's rights. It also contributes to enhancing understanding between different cultures by displaying global content that allows the audience to learn about the lifestyles and traditions of other peoples.
6- Supporting awareness campaigns and advertisements: Television is used as an effective means to spread awareness campaigns in the fields of health, traffic safety, and education. It is also a powerful tool for advertising products and services, which contributes to stimulating economic growth and supporting companies and institutions.
Although modern technology together with digital media exists television media continues to be highly dominant in information transmission and societal impact. Television continues to dominate other media platforms because it delivers varied fast content while providing enormous outreach potential to audiences. Technology development helps television connect more deeply with internet platforms as well as social media to expand its reach and response capability to current societal transformations. This integration procedure increases traditional media-audience interaction because viewers can now take part in live programs and discussions through social media networks which helps develop a more responsive media environment.

The Problem of the Study

Artificial intelligence serves as a fundamental aspect in television media production alongside editing because it drives a revolutionary shift in broadcasting operations. Advanced technologies combining machine learning and natural language processing help create faster content preparation while improving quality results in automatic video editing. The emerging technological progress using artificial intelligence has triggered multiple issues about AI's effects on television journalism because computers now complete human-specific duties, including creating news articles and show hosting tasks, through generative AI applications.
The issue of accuracy and credibility brings forward legitimate professional and ethical problems. The analysis of big data by AI systems falls short of information accuracy verification and social and political context understanding, which journalists perform effectively. AI dependency has emerged as a

threat to traditional media employment, which leads to doubts about journalistic professionalism because media tasks increasingly automate through artificial intelligence systems.

The purpose of this research is to examine artificial intelligence's influence on television media progress while exploring its benefits and difficulties along with effects on job ethics and employment conditions in this industry. The investigation seeks to answer a central inquiry regarding artificial intelligence involvement in television media development alongside editing tasks.

The following sub-questions branch out from this question:

1. What is the impact of artificial intelligence on the jobs of journalists and editors in television channels?
2. What are the most prominent ethical and professional challenges facing television media when relying on artificial intelligence in news production?
3. Are there statistically significant differences between traditional media content and content produced using artificial intelligence technologies in terms of quality and credibility?
4. What is the relationship between the use of artificial intelligence in television media and the level of audience interaction with the content?

Study Objectives

This study aims to:

1. Analyze the impact of artificial intelligence on the jobs of journalists and editors in television channels, and determine the extent of its impact on the nature of media work.
2. Explore the most prominent ethical and professional challenges facing television media when relying on artificial intelligence in news production.
3. Study the statistically significant differences between traditional media content and content produced using artificial intelligence technologies in terms of quality and credibility.
4. Determine the relationship between the use of artificial intelligence in television media and the level of audience interaction with media content.

Significance of the Study

Scientific importance: This study helps in understanding how artificial intelligence affects television media, especially in the fields of production and editing, and also contributes to enriching academic knowledge about the use of modern technologies in the media industry, which helps researchers and specialists in developing future studies on this topic. In addition, the study highlights the differences between traditional content and content created with artificial intelligence, which opens the way for a broader discussion about the future of journalism and media in the digital age.

Practical importance: This study provides great benefit to media workers, as it helps them identify the best ways to use artificial intelligence to improve the quality of content while maintaining journalistic credibility. It can also be a reference for media institutions in developing strategies to train journalists on modern technologies, which facilitates the integration of artificial intelligence into media work without negatively affecting the accuracy of news. In addition, the results of the study can contribute to guiding decision-makers to develop laws and policies that regulate the use of artificial intelligence in television media, in a way that achieves a balance between technological development and professional ethics.

• **Subject boundaries:** The study focuses on the use of artificial intelligence in television media and its impact on content and audience interaction.

• **Spatial boundaries**: The study is limited to media institutions that use artificial intelligence in media production and editing processes.
• **Time boundaries**: This study was implemented during the period 2023-2024, during which the questionnaire was distributed and data was collected.

Study Terms

Artificial Intelligence: "It is the ability of a system to accurately interpret external data, learn from it, and use that knowledge to achieve specific goals and tasks through flexible adaptation" (Sadia, 2020: 73).

Practical Definition: The researcher defines artificial intelligence in television media as the use of computer systems and programs to enhance or automate processes related to content production, viewer analysis, and providing intelligent recommendations to viewers, such as predicting audience preferences or automatically creating personalized content.

Television Media: "Television media is the dissemination and presentation of information, news, facts, topics, events, ideas, and opinions through television" (Adwi, 2016: 23).

Practical Definition: It is a system through which information and content are transmitted via visual and audible signals to a wide audience using television broadcast channels. This system includes all stages, from content production (such as programs and news) to broadcasting through various television channels and interacting with the audience through various technologies.

Study Type

This research belongs to the descriptive investigation that examines how artificial intelligence transforms television media during production editing and content presentation. The present study investigates actual developments of artificial intelligence technologies in television media institutions to document their scope and influence on media production efficiency and product quality, yet it avoids evaluating the factors that shape these findings or establishing fundamental sources of their behavior. The research examines the operational dependence of media institutions on artificial intelligence throughout media production activities alongside its implications for television media industry development.

Study Methodology

The research will assess the impact of artificial intelligence technology on television media production efficiency by studying its application in editing processes alongside montage functions and news preparation systems alongside media data evaluation activities. Additionally, the research examines how artificial intelligence changes television programming quality and how much artificial systems interact with audiences.

The study relied on the descriptive analytical approach, as data was collected through an electronic and paper questionnaire directed to the target sample, which included a set of questions that measured the extent of the use of artificial intelligence in media institutions, its impact on the quality of content, and the extent of audience interaction with it. The data were also analyzed using SPSS to extract frequency distributions, arithmetic means, and standard deviations, in addition to conducting various tests.

Study population and sample

Workers from television media sectors make up the population including journalists alongside directors as well as editors and media producers who operate in either local television channels or international television channels which utilize artificial intelligence systems during production and editing work.

Academics and researchers with specialization in digital media and artificial intelligence make up part of the community collection because they track and help build these technologies in media industries. Workers from television media institutions received purposive selection based on their direct use of artificial intelligence tools during their media production work. A total of 450 survey participants from media professions received the survey to achieve diverse viewpoints about how artificial intelligence influences television media.

Study Tool

A closed questionnaire was developed to collect data, consisting of four main axes:

1. General information: It includes questions about gender, age group, profession, and number of years of experience.
2. Use of artificial intelligence in television media: It focuses on the extent of the use of artificial intelligence in media institutions and the fields in which it is used.
3. The impact of artificial intelligence on the quality of media content: A study of the impact of this technology on the accuracy and speed of news production, in addition to its impact on credibility.
4. Use of artificial intelligence and the level of audience interaction with content: It includes a set of statements that measure the opinions of participants about the extent of the impact of artificial intelligence on audience interaction, using a five-point Likert scale, where:

(1) Strongly disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly agree

Validity and reliability procedures

First: Validity procedures

This type of validity aims to ensure that the phrases and questions included in the study tool are appropriate for accurately collecting the required data, which enhances the reliability of the questionnaire. To achieve this, the researcher presented the questionnaire to a group of academic professors specializing in media and artificial intelligence, in addition to experts in the field of journalism and media and experts in social networking. The arbitrators were provided with a copy of the questionnaire to evaluate the clarity of the phrases their suitability for measuring the studies, and their sufficiency to cover all aspects of the targeted variables.

After reviewing the arbitrators' comments and recommendations, the researcher made the necessary amendments, which included rephrasing some phrases and modifying the order of some paragraphs to ensure the clarity and accuracy of the tool. Thus, the final version of the questionnaire was approved as shown in Appendix No. (1).

Second: Validity procedures

The stability of the study tool means the stability and consistency of the results when the questionnaire is reapplied to the same sample at different times. To confirm this, the researcher tested the reliability by applying the questionnaire to a survey sample and calculating Cronbach's Alpha, which reached 0.807, a high value indicating a high level of reliability and internal consistency of the tool, confirming its suitability for application to the target sample.

Statistical treatments used in the study

The data collected through questionnaires received statistical analysis using SPSS in combination with Microsoft Excel in order to systematically validate and understand the collected results. Research findings regarding demographic characteristics relied on percentage and frequency calculations based on gender, age group, profession, and years of experience which generated a detailed outline of the

study participants' characteristics. A Cronbach's Alpha test established the internal reliability level of the research tool as it assessed the consistency throughout questionnaire paragraphs. The research instrument passed validity tests for measuring its target concepts while reliability tests assessed its measurement stability when used repeatedly (reliability). The analysis included calculation of means together with standard deviations to understand overall response trends while determining response variability between participants.

Description of sample characteristics

This section reveals the demographic profile as well as occupational details for the sample of 450 television media professionals including journalists along with editors and managers and media content producers. The research participants were strategically chosen to convey the knowledge of media professionals engaged in AI technology implementation for media production and editing tasks. Analyzing the sample's characteristics delivers better knowledge regarding participant composition between gender variations and age divisions and occupational types along with their work experience durations thereby supporting analysis of AI's television media sector effects across multiple viewpoints. The specified characteristics make it possible to compare distinct categories which increases result reliability while enabling researchers to draw more extensive findings regarding AI contributions to media operations development.

Table (1): Demographic and professional distribution of the study sample

Variables	sub-groups	Frequency	Percent%
Gender	Male	270	60%
	Female	180	40%
Age	Less than 30 years	90	20%
	30 - Less than 40 years	180	40%
	40 - Less than 50 years	120	27%
	50 years and above	60	13%
Profession	Journalist	140	31%
	Director	130	18%
	Editor	100	29%
	Media Producer	60	22%
Years of Experience	Less than 5 years	105	23%
	5- less than 10 years	140	31%
	10- less than 15 years	130	29%
	More than 15 years	75	17%

The data indicate that the percentage of males (60%) exceeds that of females (40%), which may reflect the nature of gender distribution in the field of television media. As for age, the most represented category is 30—less than 40 years old at (40%), followed by the category of 40—less than 50 years old at 27%, indicating that the majority of the sample consists of age groups with medium to advanced professional experience. In terms of professions, the sample was distributed among journalists (31%), editors (29%), managers (18%), and media content producers (22%), which ensures a balanced representation of various media roles. As for years of experience, the largest percentage falls within the category of 5 - less than 10 years (31%), followed by the category of 10 - less than 15 years (29%),

which reflects that the majority of participants have medium professional experience, which may contribute to a more accurate understanding of the use of artificial intelligence in media production processes.

Analysis and discussion of study results

The results of the field research are evaluated in this section concerning Artificial Intelligence development and editing capabilities for television media and its influence on production quality alongside viewing dynamics and audience-media contact patterns. The discussion includes analysis of results obtained through questionnaires sent to workers in television media institutions regarding artificial intelligence usage levels and professional satisfaction with its adoption and its influence on news credibility and production authenticity.

Axis One: The Use of Artificial Intelligence in Television Media.

This axis aims to analyze the extent of the spread of the use of artificial intelligence technologies in television media institutions, the aspects in which they are employed, and the extent of media professionals' satisfaction with these technologies. According to the results of the questionnaire.

Q1. To what extent do you use or are exposed to artificial intelligence technologies in your media work?

Table 2 The extent of the use of artificial intelligence technologies in the media work field.

Usage Range	Frequency	Percentage%
Very High	120	27%
High	180	40%
Medium	100	22%
Low	40	9%
Very low	10	2%

The survey found that AI technologies have extensive integration in media workplaces since 67% of professionals placed their use at very high and high levels. The survey data revealed that 22% of participants use AI at a standard level, but the number of those who use AI at either low or very low levels remains minimal (comprising 9% and 2%, respectively). The rising value of AI technology in media operations is shown through the research data, which demonstrates different levels of AI use, although this may highlight a requirement for improved training on adapting to these technological tools to maximize their advantages in media work.

This result is attributed to the significant expansion in the adoption of AI technologies in the media field, as the survey results showed that 67% of those working in this field use these technologies at high levels, reflecting their deep integration into the media work environment. This result is consistent with the study (Abdul Razzaq, 2022), which indicated that media practitioners are closely following developments in AI and recognize its ability to simulate human behavior in various media tasks. It is also in line with the study (Maamari et al., 2023), which confirmed that AI has become an essential part of the digital media industry, as it contributes to improving efficiency and increasing productivity. In contrast, this result differs from the study (Atabiqa et al., 2023), which showed that the weakness of the technological infrastructure and the lack of awareness of the use of AI in Arab media institutions constitute major challenges, indicating a disparity in the level of adoption and technical integration between different media environments. These results reflect the ongoing need to enhance training and professional development to ensure maximum benefit from AI technologies in the media field.

Q2. In which of the following areas is artificial intelligence used in your media organization?

Table 3 Use of AI in various aspects of the media

Aspects used	Frequency	Percentage%
Automatic news preparation	250	56%
Media data analysis	280	62%
Predicting audience trends	210	47%
Video and audio editing	300	76%
Automated translation and voice-over	190	%42
Generating texts and press reports	220	%49

Video and audio editing represents the most prevalent use of AI in media institutions followed by media data analysis based on survey results indicated by 300 participants using this feature at 76% and 280 participants using 62% (Survey results).

A majority of 56% (250 participants) utilize AI systems to automatically prepare news content according to research findings and 49% of participants (220 participants) confirm AI systems produce texts and press reports. The prediction of audience trends through AI technologies reached 47% according to 210 participants alongside translation automation and voice-over which were used the least by 42% of 190 participants.

Since the question allows for multiple choices, these results reflect the integration of several AI applications within media institutions, as these technologies are used in various stages of media production, enhancing its efficiency and quality.

Q3. How satisfied are you with the application of artificial intelligence in media production processes?

Table 4 Participants' satisfaction with the application of artificial intelligence in media

Satisfaction level	Frequency	Percentage%
Very satisfied	100	22%
Satisfied	190	42%
Neutral	80	18%
Dissatisfied	60	13%
Very dissatisfied	20	5%

The table results reflect the diversity of participants' opinions regarding their satisfaction with the application of AI in media production processes. The majority of participants (42%) expressed satisfaction with these technologies, while 22% expressed their extreme satisfaction, indicating a broad acceptance of the use of AI to improve media production. On the other hand, 18% of participants were neutral, indicating some reservations or lack of clarity about the full impact of these technologies. On the other hand, 13% expressed their dissatisfaction, while 5% expressed their extreme dissatisfaction, which may be related to concerns about the quality of content or the impact of AI on traditional media functions. These results reflect the need for further development and harmonization to ensure a balance between modern technology and media quality.

Research findings show video and audio editing takes precedence over media data analysis and automated news preparation because artificial intelligence technologies are getting more prevalent in

media production fields. The findings align with Maamari et al. (2023) who proved artificial intelligence functions as a fundamental digital media component because it improves several journalistic tasks such as data extraction and topic selection together with error correction to boost efficiency. The research findings of Shao from 2025 validate that AI-generated material enhances production efficiency and enables scale but encounters moral barriers in its application. The study (Atabiqa et al., 2023) revealed different outcomes because it demonstrated that insufficient technical infrastructure and limited understanding of artificial intelligence applications by Arab media institutions represented essential barriers to its widespread implementation. This demonstrated structural obstacles to institutional adoption of these technological integrations. The inconsistent results show that developing both infrastructure and improving professional knowledge base will become crucial for effective artificial intelligence usage in media applications.

Q4. How satisfied are you with the application of artificial intelligence in media production processes? (You can choose more than one answer)

Table 5 Technologies that rely on artificial intelligence

Satisfaction level	Frequency	Percentage%
Intelligent video editing tools	160	36%
Media content analysis software	180	40%
Voice and image recognition systems	70	16%
News writing robots	30	7%
Other	10	1%

The results of the table indicate that the most widely used AI technologies in media production are media content analysis software (40%), followed by smart video editing tools (36%), reflecting the role of these technologies in improving content quality and accelerating production processes. In contrast, voice and image recognition systems came in at (16%), indicating that their use is relatively limited compared to other technologies, while robots dedicated to writing news received only (7%), indicating that their use is still limited, perhaps due to the need for human intervention in formulating news content. Finally, the "other" category showed a small percentage (1%), meaning that most of the innovations used fall within the main categories mentioned in the table. These results reflect the preference of media professionals for tools that enhance the accuracy and speed of production, with the continued need to develop and test AI applications in other areas such as news writing.

This result is consistent with the study of (Abdul Razzaq, 2022), which indicated the increasing interest of media institutions in adopting artificial intelligence technologies, with a difference in attitudes between senior and lower managements regarding its use. On the contrary, it differs from the study of (Atabiqa et al., 2023), which confirmed that low awareness and lack of government support constitute major challenges to the use of artificial intelligence in Arab media.

Axis two: The Impact of Artificial Intelligence on the Quality of Media Content

Artificial intelligence is one of the factors that greatly influence the media industry and media content. The impact of this technology is evident in various aspects of media production, as it can contribute to improving the accuracy and quality of content, as well as accelerating processes related to the production of news and videos.

Q5. To what extent does artificial intelligence affect the accuracy and speed of media content production?

Table 6 effect of AI in accuracy and speed of media content production

Satisfaction level	Frequency	Percentage%
Very high impact	230	%46
Satisfied	180	%36
Neutral	60	%12
Dissatisfied	20	%4
Very dissatisfied	10	%2

The table shows that the impact of AI on the accuracy and speed of media content production is viewed very positively by the majority of participants, as 46% of the sample indicated that the impact of AI on media production is very high, reflecting a strong awareness of its role in improving efficiency and accuracy. 36% also expressed their satisfaction with this impact, which confirms that AI has become an essential tool in enhancing the quality and speed of media work. In contrast, the percentage of participants who expressed a neutral position towards this impact was 12%, while the percentage of dissatisfaction was very limited, as only 4% expressed dissatisfaction, and 2% felt that the impact of AI was weak or negative. These results reflect a broad consensus on the positive role of AI in improving media production, with some variations that may be due to technical challenges or the different degrees of reliance on these tools between different media institutions.

This result is consistent with the study (Maamari et al., 2023), which confirmed that artificial intelligence has become an integral part of digital media, which has contributed to improving efficiency and increasing productivity. On the contrary, it differs from the study (Shao, 2025), which indicated that content generated by artificial intelligence raises challenges related to accuracy and algorithmic bias, which may affect the quality of media production.

Q6. Do you think that artificial intelligence can affect the credibility of news and media content?

Table 7 effect of AI in credibility of news and media content

Satisfaction level	Frequency	Percentage%
Yes, positively	220	46%
Yes, negatively	140	31%
Has no impact	60	13%
I don't know	30	7%

The table results indicate that participants' views on the impact of AI on the credibility of news and media content varied. 46% of the sample believe that AI has a positive impact on credibility, reflecting great confidence in its ability to improve news accuracy and reduce human errors. In contrast, 31% believe that its impact is negative, which may be attributed to concerns about the spread of fake news and manipulation of media content via smart tools. While 13% of participants believe that AI has no significant impact on credibility, which may indicate their belief that editorial and human factors are still the decisive element in news quality. On the other hand, 7% were unable to determine their position, which may indicate a lack of clarity about the impact of AI on credibility for them or a

lack of knowledge about its technologies. These results reflect the need for policies and regulatory controls to ensure that AI is used in a way that enhances media credibility rather than undermines it. This finding aligns with the study by (Abed et al., 2025), which highlighted AI's role in improving content accuracy and reducing misinformation through advanced processing techniques. However, it contrasts with the study by (Shao, 2025), which pointed out concerns regarding AI-generated content, emphasizing risks related to bias and misinformation that could negatively impact media credibility.

Q7. To what extent do you think that artificial intelligence can replace the human element in the editing and montage process?

Table 8 Opinion on whether artificial intelligence may replace the human element

Answer	Frequency	Percentage%
At all	40	9%
To a large extent	110	24%
Partially	220	49%
The human element is indispensable	80	18%

The table results reflect the diversity of participants' views on the ability of AI to replace the human element in editing and montage processes. Only 9% believe that AI can completely replace the human element, reflecting a limited belief in its absolute ability to perform these tasks without human intervention. While 24% of the sample indicated that AI may be able to replace to a large extent, which may be driven by the development of algorithms and smart tools used in media production.

However, the largest percentage of participants, 49%, believe that AI can partially replace the human element, indicating a belief that its role will be complementary and not a complete substitute, as creative skills and human editorial judgment are still crucial factors in the quality of content. In contrast, 18% of participants confirmed that the human element is indispensable in these processes, which reflects their belief that creativity, critical thinking and human evaluation are elements that AI cannot fully simulate.

Based on these findings, there seems to be a consensus that AI can play an important role in editing and montage processes, but it still needs human supervision and guidance to ensure quality and credibility standards in media content.

Q8 "Is there a significant relationship between the extent of the use of artificial intelligence technologies in television media and their impact on the quality of media content in terms of accuracy, speed and credibility? "Is there a significant relationship between the extent of the use of artificial intelligence technologies in television media and their impact on the quality of media content in terms of accuracy, speed and credibility?"

To answer the question "Is there a significant relationship between the extent of the use of artificial intelligence technologies in television media and their impact on the quality of media content in terms of accuracy, speed and credibility?", the researcher measured the nature of the data using the values of deviation and flatness, as the results showed that the data follows the normal distribution. Accordingly, the Pearson correlation coefficient was applied, and its value was 0.673, indicating the existence of a strong and positive relationship between the use of artificial intelligence technologies in television media and their positive impact on the quality of media content, especially in terms of accuracy and speed.

Q9. To what extent do you think artificial intelligence contributes to improving the viewing experience and increasing audience interaction with media content?

Arithmetic averages combined with standard deviations will provide the response to this inquiry. This research task functions to assess how much artificial intelligence enhances viewing satisfaction and raises audience-engagement with media materials. The research will examine how artificial intelligence impacts personalization in content delivery while enhancing image quality together with sound performance and interaction capabilities and client preferences between AI-modified and manually modified content. The analysis will employ Independent Sample One Test to observe variable differences while measuring their influence.

Table 9 Averages and standard deviations Use of artificial intelligence and the level of audience interaction with content

Paragraph	mean	Standard deviation	t-value	p-value
Artificial intelligence contributes to personalizing media content to suit the audience's interests	***3.65***	***0.90***	***5.78***	***0.001***
Artificial intelligence enhances the viewing experience by improving the quality of images and sound	***3.70***	***0.85***	***6.05***	***0.00***
The use of artificial intelligence increases audience interaction with media content	***3.60***	***0.88***	***5.54***	***0.00***
Audiences prefer content prepared with human intervention over content produced using artificial intelligence	***3.12***	***1.10***	***2.43***	***0.002***
Artificial intelligence helps analyze audience reactions and adapt media content based on them	***4.01***	***0.77***	***6.40***	***0.0001***

Results

1- AI has helped speed up TV editing and production processes.

2- Improved content quality through smart analytics and automatic personalization.

3- Helped automate translation and dubbing processes, and expanded the target audience.

4- Enabled the development of smart recommendation systems to enhance the viewer experience.

AI is a driving force in the development of TV media, contributing to improving content quality, accelerating production processes, and enhancing the viewer experience. As AI technologies continue to evolve, their ability to have a broader positive impact on the media industry will increase, prompting media organizations to adapt to these changes to ensure a more innovative and effective future.

Recommendations:

1. In order to develop media production, the investment in artificial intelligence technologies should be improved.

2. The proper training of media staff to effectively handle artificial intelligence instruments.

3. Human editors should deliberately incorporate ethical principles of artificial intelligence into their television material editing process.

4. Organizations should create new methods which unite artificial intelligence technology with human creativity.

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