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Nada Safwat Mahmoud Abd Elraziq, Dr.Wael Salah Nagub,.Dr.Hany Nady Abdelma ksoud, Dr.Eman Ashour Sayed

Department of Educational Media, Faculty of Specific Education, Minia University



مجلة البحوث في مجالات التربية النوعية

معرف البحث الرقمي DOI: 10.21608/JEDU.2025.349064.2174

المجلد الحادي عشر العدد 56 . يناير 2025

الترقيم الدولي

E- ISSN: 2735-3346 P-ISSN: 1687-3424

موقع المجلة عبر بنك المعرفة المصري <https://jedu.journals.ekb.eg/>

موقع المجلة <http://jrfse.minia.edu.eg/Hom>

العنوان: كلية التربية النوعية . جامعة المنيا . جمهورية مصر العربية



Cairo 24's Communicators' Use of Artificial Intelligence Applications and its Relationship to Their Level of Satisfaction with The News Content Presented

Nada Safwat Mahmoud Abd Elraziq⁽¹⁾, Dr.Wael Salah Nagub⁽²⁾, Dr.Hany Nady Abdelmaksoud⁽³⁾, Dr.Eman Ashour Sayed⁽⁴⁾

Abstract:

The study aimed to identify the level of satisfaction of those in charge of communication at the "Cairo 24" website with the use of artificial intelligence applications in journalistic work and the extent of the impact of these applications on the news content provided. The study relied on the survey method. The study used a questionnaire tool on the study sample, which, according to the field visits carried out by the researcher, numbered about 50 journalists. The researcher distributed the questionnaire to all of them, and the sample that responded to the application for the questionnaire was about (42) male and female journalists, i.e. 84% of the original community, The study reached a set of results, the most important of which are:

-59.5% of the study sample use artificial intelligence technologies at the Cairo 24 news website to a (large) degree, while 35.7% use them to a (medium) degree and 2% use them to a (small) degree.

-Efficiency and productivity through the performance of journalistic tasks are among the most important reasons that prompted the Cairo 24 News website to use artificial intelligence technologies, followed by ensuring the continued competitiveness of the Cairo 24 News website in the media scene with its technological developments.

-The most technical forms used within the Cairo 24 News website to accomplish journalistic tasks were (content writing programs) and then (video production programs).

¹ PhD Researcher Department of Educational Media, Faculty of Specific Education, Minia university.

² Assistant professor of Radio, Department of Educational Media, Faculty of Specific Education, Minia university.

³ Assistant professor of journalism, Department of Educational Media, Faculty of Specific Education, Minia university.

⁴ Assistant professor of Radio, Department of Educational Media, Faculty of Specific Education, Minia university.

-The speed and accuracy of accessing data, while saving a lot of time and effort in completing the work, and the quality of video and audio production are among the most important effects that artificial intelligence technologies have had on journalistic work.

- There is a statistically significant relationship between the study sample's rate of use of artificial intelligence techniques in producing news content and the degree of improvement in their performance.

- There are no statistically significant differences between the study sample regarding the degree of satisfaction and the degree of confidence according to the variable (duration of work experience).

Keywords: Communicator – Artificial Intelligence Applications.

ملخص الدراسة باللغة العربية:

هدفت الدراسة إلى التعرف على مستوى رضا القائمين بالاتصال في موقع "القاهرة 24" عن استخدام تطبيقات الذكاء الاصطناعي في العمل الصحفي ومدى تأثير هذه التطبيقات على المحتوى الإخباري المقدم، واعتمدت الدراسة على المنهج المسحي، كما استخدمت الدراسة أداة الاستبيان على عينة الدراسة بالموقع من الصحفيين ومديري ورؤساء التحرير، والبالغ عددهم حسب الزيارات الميدانية التي قامت بها الباحثة للموقع نحو (50) صحفياً؛ قامت الباحثة بتوزيع الاستبيان عليهم جميعاً وبلغ قوام العينة التي استجابت للتطبيق الخاص بالاستبيان نحو (42) صحفياً وصحفية أي بنسبة 84% من المجتمع الأصلي، وتوصلت الدراسة إلى مجموعة من النتائج، من أهمها:

- أن نسبة 59.5% من عينة الدراسة يستخدمون تقنيات الذكاء الاصطناعي بموقع القاهرة 24 الإخباري بدرجة (كبيرة) ، بينما نسبة 35.7% يستخدمونها بدرجة (متوسطة) ونسبة 2% يستخدمونها بدرجة (قليلة).

- أن الكفاءة والإنتاجية من خلال أداء المهام الصحفية تعتبر من أهم الأسباب التي دفعت موقع القاهرة 24 الإخباري لاستخدام تقنيات الذكاء الاصطناعي، تليها ضمان استمرار القدرة التنافسية لموقع 24 الإخباري في المشهد الإعلامي بتطوراته التكنولوجية.

- أن أكثر الأشكال التقنية التي يتم استخدامها داخل موقع القاهرة 24 الإخباري لإنجاز المهام الصحفية تمثلت في (برامج كتابة المحتوى) ثم (برامج إنتاج الفيديوهات).

- تعتبر سرعة ودقة الوصول للبيانات، مع توفير الكثير من الوقت والجهد، في إنجاز العمل، وجودة إنتاج الفيديوهات والصوت من أهم التأثيرات التي أحدثتها تقنيات الذكاء الاصطناعي على العمل الصحفي.
- وجود علاقة ذات دلالة إحصائية بين معدل استخدام عينة الدراسة لتقنيات الذكاء الاصطناعي في إنتاج المحتوى الإخباري ودرجة تحسين أدائهم.
- عدم وجود فروق دالة إحصائية بين عينة الدراسة فيما يتعلق بدرجة الرضا ودرجة الثقة وفق متغير (مدة الخبرة الوظيفية).

الكلمات المفتاحية: القائم بالاتصال - تطبيقات الذكاء الاصطناعي.

Introduction:

The spread of artificial intelligence tools has led to a radical change in the field of Media in general, and digital journalism in particular. It has become necessary for news sites to adopt these modern technologies to keep pace with rapid technological developments and compete with social media platforms that a large segment of the public has come to rely on as a primary source of news. Relying on modern technology has become indispensable in light of the revolution of developments resulting from the Fourth Industrial Revolution, as well as the signs of the Fifth Industrial Revolution that the world is witnessing in various fields and levels, which require those in charge of them and their workers to be familiar with their role, functions, and how to deal with them and use them optimally, which employs these technologies in a way that serves the nature of their work, and then achieve the desired impact from these technologies. Hence, media institutions of all kinds have become in need of applying artificial intelligence technologies in order to reduce costs and achieve speed and leadership. It has also been linked to the need to achieve competitiveness among other global media outlets; so that they can keep pace with modern technological developments and global developments; In order to be able to achieve the quality of the message, and achieve the strategic plans prepared by the media institutions, this necessarily reflects on the media and professional work of those working in the media field, and any new culture may be met with rejection at the beginning and may be met with acceptance and then affect the future of

the communicator and his professionalism or field of work, and thus professional trends and behaviors can be modified based on artificial intelligence applications.

Artificial intelligence applications have recently spread widely thanks to the availability of large quantities of data, as well as the improvement of computing capabilities, and machine learning techniques are the most widely used at the present time, especially deep learning techniques; Because it has demonstrated high capabilities in data processing, understanding patterns and relationships, accuracy of conclusions, and quality of decision-making in specific tasks, machine learning technologies have also contributed to a qualitative shift in data analysis capabilities, which include its levels (Al-Ghamdi, 2022). Artificial intelligence applications have also contributed to the media work environment by providing a number of tools that enrich the television industry towards creativity. Artificial intelligence enables the possibility of retrieving images based on content, annotating images, and retrieving images according to users' preferences. All of this would provide those in charge of communication with many options for creativity in the television content industry, in addition to using artificial intelligence in developing video editing programs, such as converting texts into sounds and its ability to provide suggested options in the editing process, in terms of cutting the video or adding some effects, according to a pre-determined editorial line, as well as the possibility of publishing content on social networks (Al-Harbi, 2023). There are many research schools that have explained the importance of introducing artificial intelligence applications into the media industry, its message, and the extent of its impact on the credibility of the content of the media message and the audience receiving those messages. The study (Al-Warqali, 2019) showed the impact of the robot broadcaster on the media profession, and the study confirmed that robot journalism plays a major role in influencing the media profession, and it is expected that the robot broadcaster will replace the broadcaster in the future, and that the robot broadcaster will carry many semantic and implicit dimensions, and contribute to improving the media field. The study (Al-Ezza, 2017) also mentioned that the use of modern television technologies has affected the increase in the viewing of news programs on Jordanian television, especially the focus of news bulletins and programs. The study (Badis, 2015) to identify the role

of modern media technology concluded that the Constantine Regional Television Station has witnessed a significant development as a result of the use of modern media technology in media work. The additions that modern media technologies have introduced to media performance are represented in that they have reshaped the organizational model, by helping with functional integration, and have also contributed to the development of many aspects related to job performance.

literature Review:

Regarding the nature of the topic: Previous studies varied in terms of the nature of the topic, as they focused on the sample's trends regarding the use of artificial intelligence applications in the field of education, the field of media, press institutions, and television in particular, while the current study differed from previous studies like the topic, as it focused on the communicator on a news website, Cairo 24 News, and its relationship to their level of satisfaction with the news content provided.

Regarding the method: Most previous studies used the descriptive survey method, by using the questionnaire tool, interviews, and observation, and some studies used the experimental method, and the current study agreed with previous studies, especially the study (Badwi, 2021) using the survey method and conducting a case study on the Cairo 24 News website, as it is the only Egyptian website that uses artificial intelligence in producing its content, and the current study agreed with most previous studies that used the questionnaire tool to collect information and verify the results of the study, as well as using the interview tool.

-Regarding the sample: Previous studies differed in terms of the sample, as some of them relied on a sample of communicators in news websites, and others relied on a sample of experts specialized in the field of technology, and the current study agreed with some previous studies in determining the study sample, as the current study will be applied to a sample of journalists and communicators.

-Regarding the tools: Previous studies used the questionnaire tool as a tool for collecting information and achieving the objectives of previous studies, while the current study agreed with previous studies in relying on the investigative newspaper as a tool for collecting information, and this study was distinguished from previous studies in relying on standardized

interviews as a tool as well to suit the nature of the objectives and hypotheses of the current study.

The researcher benefited from previous studies in the following:

-Defining the study variables in a precise scientific manner, based on the variables covered in previous studies.

-Defining the importance and objectives of the study.

-Making the researcher aware of what science has reached at the point of her research, and thus this contributed to determining what the current study can add to the scientific and academic heritage.

-Choosing the appropriate approach to address the study topic, in addition to what previous studies have contributed to determining the conditions necessary to select the current study sample and its type.

-Determining the tools used by the researcher to measure the hypotheses and answer the questions.

-Commenting on the results of the current study and interpreting them in light of the results reached by previous studies.

-Study problem:

as a result of the use of artificial intelligence by several international media institutions such as: the Chinese Xinhua Agency, Reuters Bloomberg, the Associated Press, and other news agencies.

Also, after the Cairo 24 news website used artificial intelligence technologies in producing news content presented to the public through its press releases, as well as its initiative to launch its ongoing experiment in employing a robot broadcaster to deliver news bulletins through its official website, and after the website relied on using the programming language to produce economic press releases using automation, without any human intervention in the process of producing data related to the stock exchange, then publishing news of institutions, public figures, and officials.

The researcher saw the importance of subjecting this experiment to study and research; To know how to integrate and level the performance of the

news work provided and the relationship between the human element in this equation that relies heavily on one of its parties, which is: "the use of artificial intelligence" in order to produce tremendous results, and to know the relationship between the use of artificial intelligence applications by the person calling Cairo 24 website and its relationship to the level of their satisfaction with the news content provided as a result of its use, and did this technology affect the work of the human element calling at Cairo 24 news website? Or did it create a merger between it and him in a way that achieved integration, and ensured the work of both closely, by adding each to the other with the availability of the latest technology, and the ability and skill of the person calling to deal with this technology, or did the presence of this technology reduce the role of the person calling at the news website, and oblige him to tasks other than those he was performing before? Or did it leave him to other aspects of media work that may be more creative? The researcher also tried through this study to reach the negatives and positives of the experiment and how to influence the journalistic style by identifying the point of view of the respondents about what artificial intelligence technologies caused in terms of editing, preparation and production, which may be reflected on the audience negatively or positively. This technology is supposed to contribute to achieving more comprehensive and credible professional standards. Did artificial intelligence technologies actually do that or did they negatively affect the professional work of those in charge of communication on news websites? Thus, the research problem arises in trying to find out the relationship between the use of artificial intelligence applications by the Cairo 24's website contact person and its relationship to their level of satisfaction with the news content presented.

Study Aims:

-Identify the level of satisfaction of Cairo 24 news website communicators with the use of artificial intelligence applications in journalistic work and the extent of these applications' impact on their performance.

-Monitor the level of employment and use of artificial intelligence technologies by Cairo 24 news website.

-Identify the challenges facing the use of artificial intelligence and the mechanisms of its application from the point of view of the study sample.

Study questions:

-What are the reasons that prompted Cairo 24 news website to use and employ artificial intelligence technologies in the production of news content from the point of view of the study sample?

-What are the most technical forms that are used within Cairo 24 news website to accomplish journalistic tasks and improve the professional performance of the communicator from the point of view of the study sample

-What are the factors that helped Cairo 24 website to use artificial intelligence technologies in journalistic work?

- What is the degree of satisfaction of those who contact the Cairo 24 news website with the employment and use of artificial intelligence technologies in presenting news content?

- What is the impact of artificial intelligence technologies on the news content presented and on journalists on the Cairo 24 news website

Methodology: The study used the descriptive survey method.

Tools: Questionnaire.

Sample: A sample of journalists of Cairo 24 news website

- Study hypotheses:

- There are statistically significant differences between the study sample in each of (their degree of confidence in using artificial intelligence technologies in producing news content, and their degree of satisfaction with employing and using artificial intelligence technologies in presenting news content according to variables (gender, years of work experience.

- There is a statistically significant relationship between the rate of use of artificial intelligence technologies by the study sample in producing news content and the degree of improvement in their performance.

- **Importance of the study:** The importance of the current study lies in two aspects: theoretical and practical, as follows:

Theoretical importance:

-What this study provides in terms of educational literature and previous studies on the study variables (the use of artificial intelligence applications by the contact person on the Cairo 24 website and its relationship to their level of satisfaction with the news content provided). Thus, it helps researchers and those interested in this field to conduct more studies related to this field in the Arab environment in general, and the Egyptian environment in particular.

-The importance of the case study in the field of media and what it can provide in terms of facts and data related to the research topic, and giving a clear and in-depth picture of the study, and the hypotheses and questions it raises that open the door In front of other studies in the future.

-The importance of using robots in journalistic and media work as one of the most important technologies of artificial intelligence and its current and future impacts on the media process.

- The scarcity of Egyptian media studies in this regard, which address the use of artificial intelligence technologies in the production of news content on the Cairo 24 website, and its relationship to the effects achieved on the same website, and the study is also considered a natural extension of a broad research field in Western studies that employed artificial intelligence in the production of their media content, relying on modern technological developments compared to the human product, and the extent to which this is reflected in the future of workers, and the work patterns of media institutions.

Practical Importance:

-The results of the current study can contribute to laying the foundations on which work in the media field is based in the presence of more advanced technological techniques.

-The current study draws the attention of those working in the media field to the nature of their role and the skills required by artificial

intelligence techniques that the communicator possesses, making him more creative in presenting his content compared to his role and performance in the past.

Study Methodology and Tools: The study relied on the descriptive survey method, and used the questionnaire and interview tools, which are methods used to collect primary and basic data directly from the selected sample, or from all research items by directing a set of specific and pre-prepared questions.

Study Variables:

The variables of the current study are as follows:

-The independent variable: The communicator's use of artificial intelligence applications on the Cairo 24 news website.

-The dependent variable: The dependent variable is measuring the level of satisfaction of the communicators with the news content provided.

-The mediating variable: represented by demographic variables (duration of experience, gender, place of residence)

Study limits: The study limits are represented by many limits and can be represented in the following:

-Objective limits: The current study was limited in its objective limits to studying the subject of the use of the communicators to the (Cairo 24) news website of artificial intelligence applications in producing content and its relationship to the level of their satisfaction with the news content provided, without addressing any other research topics.

-Spatial limits: The current study was limited to the application in the Cairo 24 news website in the Arab Republic of Egypt without addressing any other countries or locations.

-Human limits: The current study was limited in its human limits to applying its tools to a sample of the caller to the Cairo news website, without addressing any other human categories.

- Time limits: The current study was limited in applying its tools represented by the electronic questionnaire and the standardized interview

with a sample of those in charge of contacting the site during the time period extending from 4/20/2024 to 6/20/2024 AD, without addressing any other time periods.

Study terms:

-The communicator is defined procedurally as: a person or group of people who are responsible for conveying information, ideas or messages to the receiving audience through the media, and is one of the basic elements in creating the communication process.

- Artificial intelligence: One of the modern technologies that can be employed in various fields to achieve the required speed, and with high efficiency, it is the name of an academic field concerned with how to create computers and programs capable of adopting intelligent behavior, and thus it can provide protection and safe methods for humans by performing functions that may cause harm to those who work in them while they are performing them in exceptional circumstances.

Results:

First. Description of the study sample:

Table (1) shows the demographic characteristics of the study sample

Description of the study	Category	Frequency	Percentage
Type	Male	26	61.9%
	Female	16	38.15
	Total	42	100%
Academic qualification	Higher qualification (media	28	66.7%
	Higher qualification (non-media)	7	16.7%
	Postgraduate studies	3	7.1%
	Masters	3	7.1%
	PhD	1	2.4%

	Total	42	100%
Job	Journalistic editor	26	61.9%
	Photojournalist	3	7.1%
	Digit content editor	12	28.6%
	managing editor	1	2.4%
	chief in editor	0	0
	Total	42	100%
Work experience duration	From 1 year to less than 5 years	16	38.1%
	From 5 years to less than 10 years	12	28.6%
	From 10 years to less than 15 years	10	23.8%
	From 15 years and above	4	9.5%
	Total	42	100%
Accommodation	Rural	4	9.5%
	Urban	38	90.5
	Total	42	100%

It is clear from the previous table: that the field study sample included all the variables in light of which the data was collected; where the percentage of (males) came in first place with 61.9%, then (females) came in second place with 38.1% according to the gender variable, and perhaps this is due to the fact that the male category is more active and present in the field of journalistic work than the female category. With regard to the educational qualification variable; In first place came those with (high qualification (media) at a rate of 66.7%, then (high qualification (non-media)) at a rate of 16.7%, then (postgraduate studies, master's) at a rate of 7.1%, and finally (doctorate) at a rate of 2.1%. The researcher attributes these results to the fact that the work environment primarily imposes specialized journalists, who are familiar with the basics of journalistic work. As for the variable (job), it came in first place (newspaper editor) at a rate of 61.9%, then (digital content editor) at a rate of 28.6%, then (photojournalist) at a rate of 7.1%, and finally (editor-in-chief) at a rate of 2.4%. As for the variable (duration of work experience), it came in first place (from one year to less than 5 years) at a

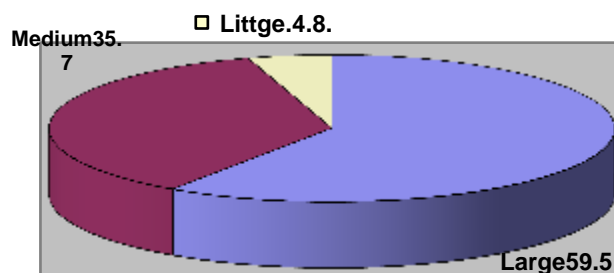
rate of 38.1%, and perhaps this category is the most aware of dealing with modern technological requirements, compared to the years of experience of the respondents for the age group of more than 15 years, which came in last place, after the years of experience of the respondents (from 5 years to less From 10 years) with a percentage of 28.6%, which came in second place, then (from 10 years to less than 15 years) with a percentage of 23.8%, then (from 15 years and over) which came in 9.5%. As for the variable (housing), the first place went to the (urban) population with a percentage of 38%, then (rural) with a percentage of 9.5%, and the researcher may attribute this to the concentration of the sample of respondents near the workplace in Cairo, as this requires their proximity within the governorate, due to their continuous presence, and their response to the speed of covering current events.

Table (2) shows the degree of use of artificial intelligence technologies by Cairo 24 news website:

Usage degree	Frequency	Percentage%	Arrangement
Large	25	59.5	1
Medium	15	35.7	2
Low	2	4.8	3
Not used	0	0.0	-
Total	42	100%	

The table clearly shows that 59.5% of the study sample use artificial intelligence technologies on the Cairo 24 news website to a (high) degree in the first place, 35.7% use them to a (medium) degree in the second place, and finally, 2% use them to a (low) degree.

Figure (1) shows the degree of use of artificial intelligence technologies by Cairo 24 news website.



The researcher believes that these results indicate Cairo 24's keenness to benefit from artificial intelligence technologies and employ them to the greatest extent in producing their news content, which may be due to the positives it was able to provide in their work, which increased their use of it, as the degree of their use of it came in the first place, followed by an average degree of use, with a denial of its non-use, and the degree of use varies among the sample, according to their specialization within the site, as there are those who use it more; Due to the need for it in the departments and specializations of work, and the production of news without human intervention, and there are those who use it less according to their specialization, and the requirements of the news content that is displayed and presented to the public. The results of this study are consistent with the study (Torrijos, 2019), which emphasizes the serious interest in introducing artificial intelligence technologies and relying on them in journalistic work, noting that many journalistic materials were produced, and there was no need for human intervention in producing news.

Table (3) shows the reasons that prompted the Cairo 24 news website to use and employ artificial intelligence technologies in producing news content from the point of view of the study sample.

Reasons	Frequ	%	Arrangement
Efficiency and productivity through performing journalistic tasks.	22	52.4%	1
Help journalists create in-depth reports and more creative content.	20	47.6	3
Quickly analyze massive amounts of data and extract valuable and more accurate insights and trends.	15	35.7	5
Help journalists verify information and content, and combat misinformation and fake news.	19	45.2	4
Enabling journalists to uncover unique and compelling stories that may have gone unnoticed.	11	26.2	8

Journalistic scoop	19	45.2	4
To ensure the continued competitiveness of the 24 News website in the media landscape with its technological developments.	21	26.2	2
To improve multimedia content such as automated video editing and image recognition.	13	45.2	6
To produce appropriate content with high quality and competitiveness.	13	50	6
To speed up performance compared to the human element.	12	31	7
To produce materials according to audience preferences.	9	31	9
To save expenses	2	4.8	10

The table shows that the reasons that prompted Cairo 24 News website to use and employ artificial intelligence technologies in the production of news content from the point of view of the study sample were (for efficiency and productivity through performing journalistic tasks) in first place with a percentage of 52.4%, then (to ensure the continued competitiveness of the Cairo 24 News website in the media scene with its technological developments) in second place with a percentage of 50%, while in last place (saving expenses) with a percentage of 4.8%. Perhaps these results clarify, from the researcher's point of view, the vision of Cairo 24 News website, and their aspirations towards excellence in what they provide to the public, and contributing to increasing efficiency and productivity, and improving news coverage by analyzing huge amounts of data faster and more accurately, which helps in following up on breaking news and covering it in real time, as well as through its ability to process quickly, which allows for the provision of continuously updated content, and extracting relevant information from various sources very quickly, thus improving the internal workflow, which saves time and effort that contribute to raising the efficiency of the work team within the site. The fact that the reason for “ensuring the continued competitiveness of the 24 News website in the media scene with its technological developments” came in second place, among the reasons that prompted

the website to use artificial intelligence technologies, indicates their efforts to meet the requirements of technological revolutions and their impact on the media scene in various countries of the world, and so that the website can be a leader by using technologies that facilitate its analysis of trends and popular topics on the Internet, and interact with global and local events, as well as the ability to understand what the audience is looking for, which all contributes to achieving the website's popularity and large presence. Perhaps the reason for "helping journalists create in-depth reports and more creative content" in third place is a continuation of the site's motives and vision to delve deeper into creating news content, by taking advantage of advanced search algorithms, and improving the process of searching for information in multiple sources on the Internet, which provides journalists with a huge database of facts and statistics that can be included in news reports, for example, and preparing reports that cover deeper and more comprehensive dimensions, while taking into account achieving journalistic scoops in terms of accuracy and speed at the same time, and the desire to be able to extract important patterns and topics by tracking and analyzing various trending topics. Therefore, these reasons and those that followed indicate Cairo 24's interest in employing artificial intelligence technologies in a way that enhances the quality of news content and ensures its distinction. Perhaps the reason for "saving expenses" in last place from the point of view of the study sample means that its interest in efficiency, productivity, and achieving progress in various aspects, no matter what the cost, is the main reason that prompted it to introduce these technologies into its work system, while developing the skills of its employees, and this is something that may cost it financially in The beginning, and did not save on it, so the reason for "saving expenses in the last order" came.

Perhaps these results are consistent with the study (Shields, 2018) and (Ruiz, Sanchez, 2019) and (Abdel Fattah, 2021). which importance of artificial intelligence technologies in the media industry was indicated, and what results from it in terms of producing more efficient work at a high speed, as well as what these technologies contributed to in reviving journalism by searching for new forms of communication and serious models of work, and increasing journalistic productivity through automated production and rapid review of journalistic texts, in addition to

their benefits within newsrooms in journalistic institutions, and their ability to save more time to perform complex tasks.

Table (4) shows the most common technical forms used within the Cairo 24 news website to accomplish journalistic tasks and improve the communicator's professional performance from the study sample's point of view.

Shapes	Frequ	%	Arrangement
Journalistic robot.	10	23.8	6
Chat GPT BOT	15	35.7	3
Machine translation techniques	13	31	4
Designs and image generation	9	21.4	7
Content writing programs	18	42.9	1
Video production programs	16	38.1	2
Audio applications	11	26.2	5
Drone photography	2	4.8	8
Using augmented reality	10	23.8	6

It is clear from the table: that the most technical forms used within the Cairo 24 news website to accomplish journalistic tasks and improve the professional performance of the communicator from the point of view of the study sample were (content writing programs) in first place with a percentage of 42.9%, then (video production programs) in second place with a percentage of 38.1%, while in last place (drone photography) with a percentage of 4.8%. This may be due to the needs of journalistic work, which is primarily based on writing, which requires, in light of the recent developments in journalistic work, technologies that help journalists write news content quickly, taking into account accuracy before publishing it to the public, which improves the quality of the content and increases reliance on the site to know the news, topics and various issues at the

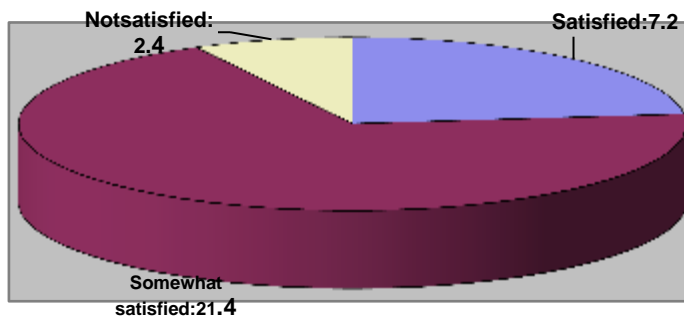
appropriate time. Perhaps this is what made content writing programs one of the most technical forms used to accomplish tasks within the site, followed by video production programs. This may be due to their keenness to enhance the digital presence of the site, and to carry out the editing process easily while supporting the news with images, which increases interaction with the public, and presents information in a more easy and clear way, and attracts the attention of the public. Thus, the site can keep pace with media developments by producing videos that have become an integral part of modern journalism, which helps to enhance dissemination and reach a wider audience. The use of "Chat GPT BOT" in third place among the most used technical forms by journalists on the site may be due to the ability of this technical form and application to provide them with all the information on various topics, and enable them to provide more explanations about questions in various fields and clarify them smoothly, in a way that serves their news content that will be presented to the public, in addition to what is used from other technical forms that came in fourth and fifth place, represented by machine translation technologies; Which is used by journalists to translate many terms that are unknown to them, some of whom do not know how to speak or translate sentences, or content in context in English or any other language, this tool allows its users to translate in all languages in a matter of moments, which helps journalists perform their tasks, in addition to their reliance on other forms, as it was arranged in the previous table, such as audio applications, journalistic robots, the use of augmented reality, design applications and image generation. As for the drone photography technology, which came in last place in terms of its use on the site, this may be due to the nature of the work that requires quick shots that rely on a mobile phone or camera, while being present to cover an event, in an easier and faster way compared to drone photography, which is dedicated to filming video and aerial photos, and it is also more expensive and takes more time than taking pictures with a mobile phone or a camera.

Table (5) shows the degree of satisfaction of those who contacted the Cairo 24 news website regarding the employment and use of artificial intelligence technologies in presenting news content.

Satisfaction Level	Frequ	%	Arrangement
Satisfied	32	76.2	1
Somewhat Satisfied	9	21.4	2
Unsatisfied	1	2.4	3
Total	42	100%	

The table shows that 76.2% of those who contacted Cairo 24 News website in the first place are satisfied (highly) with the employment and use of artificial intelligence technologies in presenting news content, then those who are satisfied (somewhat) with 21.4% in the second place, and finally (dissatisfied) with 2.4%.

Figure (2) shows the degree of satisfaction of those who contacted Cairo 24 News website with the employment and use of artificial intelligence technologies in presenting news content



This may be due to the results achieved by artificial intelligence technologies, and the difference they have made in the form and content of news content, and the ability to quickly complete tasks, in addition to their awareness and understanding of how to exploit these technologies to produce journalistic work with the highest level of efficiency and quality. This is what made the study sample percentage of 76.2% highly satisfied

with its employment and use in creating news content, followed by those who were somewhat satisfied with a percentage of 21.4% in second place, and the last ranking of those who were dissatisfied came at a very low percentage, and this may be due to their lack of understanding or direct interaction with these technologies in their work. Therefore, these results show the extent of the positive impact that artificial intelligence technologies have provided to journalists on the Cairo 24 news website, which made their degree of satisfaction with their use high.

Table (6) shows the factors that helped the Cairo 24 website to use artificial intelligence technologies in journalistic work.

Factors	Total sample						
	Frequency			Standard Deviation	Arrangement		Degree of Agreement
	Agree	Moderately Agree	Disagree	Mean			
The site's desire to adopt advanced technological techniques in the field of journalism to achieve competitiveness.	31	11	0	2.37	44.0	1	Large
The availability of material capabilities on the site that help in applying artificial intelligence techniques	23	14	5	2.42	7.0	3	Large
The presence of a digital newsroom that helps in the success of the experiment	15	21	6	2.21	68.0	4	Medium

The site's possession of a supportive technological structure that facilitates the application and use of artificial intelligence techniques	28	14	0	2.66	47.0	2	Medium
The quality and efficiency of the content produced through artificial intelligence compared to the human product	16	19	7	2.21	71.0	5	Medium
The site does not have a sufficient number of journalists, which imposed this trend towards automated news production	11	11	20	1.78	48.0	6	Medium
Mean and overall standard deviation			2.33	0.64			Medium

The table shows that the arithmetic averages of the factors that helped Cairo 24 to use artificial intelligence technologies in journalistic work ranged between (2.73: 1.78), where the phrase (the site's desire to adopt advanced technological techniques in the journalistic field to achieve competitiveness) came in first place, while the phrase (the site's lack of a

sufficient number of journalists, which imposed this trend towards automated news production) came in last place. This may explain the site's vision that seeks to keep pace with technological developments that impose not remaining at a certain level, but rather require acceleration and keeping pace with the needs of this progress in the field of journalism and media, and that the sites' desire to adopt advanced technology such as artificial intelligence technologies; came as a result of its keenness and aspirations towards competition and reaching a distinguished level in its news services and maintaining its continued success, and for this reason it came in first place and to a large extent among the factors that helped Cairo 24 to use artificial intelligence technologies in journalistic work. Perhaps the reason for "the site's possession of a supportive technological structure that facilitates the application and use of artificial intelligence technologies" in second place among the factors that helped the site adopt technologies indicates that its recent inception and its focus on the form of its work in digital journalism, and nothing else, is what enabled it to know the tools of technology and prompted it to the necessity of acquiring them, until it launched in 2020 its initiative to use the programming language to produce economic press data without human intervention. Likewise, the availability of material capabilities on the site helped to apply artificial intelligence technologies, and this shows that adopting artificial intelligence technologies requires material resources to be available, and this indicates the site's plan and clear strategy since its inception on its ability to provide these technologies, as well as the availability of a digital newsroom designed to benefit from technology effectively, and relies on organizing digital data in an organized and easy-to-access manner, all of which contributes to the quality and efficiency of the content produced through artificial intelligence compared to the human product, due to its speed in obtaining various data, and perhaps the reason for "the site's lack of a sufficient number of journalists, which imposed this trend towards automated news production" in last place, may be due to the fact that the availability of artificial intelligence technologies does not impose a necessity. Its presence, the small number of journalists inside the site, the site does not have a small number inside it who can do the work, but its presence complements their work and facilitates it.

Table (7) shows the challenges of using artificial intelligence technologies in journalistic work. Explain the most prominent challenges facing those in charge of communicating with the Cairo 24 news website when using this technology.

Challenges	Frequ	%	Arrangement
Lack of sufficient knowledge to deal with this technology.	18	42.9	18
Lack of training on how to use it.	22	52.4	22
Bias in artificial intelligence and violation of privacy.	14	33.3	14
Incorrect outputs of artificial intelligence due to software malfunction and ease of cyber attacks.	19	45.2	19
Artificial intelligence poses a risk to the profession of journalists.	12	28.6	12
Lack of technical resources and infrastructure at the 24 News website.	6	14.3	6

The table shows that the challenges of using artificial intelligence technologies in journalistic work, illustrate the most prominent challenges facing those in charge of communicating with the Cairo 24 news website when using this technology, represented in (lack of training on how to use it) in first place with a percentage of 52.4%, then (error of artificial intelligence outputs due to software malfunction and ease of electronic attacks) in second place with a percentage of 45.2%, while in last place (lack of technical resources and infrastructure at the 24 news website) with a percentage of 14.3%. Perhaps this confirms that in order to make the most of artificial intelligence technologies, it is necessary to provide adequate training for journalists, so that the benefit of employing them in completing tasks and facilitating them is achieved. Training is a basic condition for achieving the goal, obtaining the advantages of advanced technologies for the benefit of journalistic work, expanding their awareness of the importance of acquiring advanced technical skills, and breaking the barrier of fear of dealing with these technologies. Also, "the

error of artificial intelligence outputs due to software malfunctions and the ease of electronic attacks", which represents a challenge from the point of view of the study sample and came in second place, may indicate the disadvantages of these technologies, despite the benefits they provide in improving efficiency, but their disadvantages will remain a source of concern; because there will be a breach of privacy, and the error of their outputs will affect the credibility of what they provide, and the loss of confidence among the public in the journalistic institution or the site itself; As a result of publishing inaccurate or false information, and the ease of cyber attacks may facilitate the process of stealing data or content, and manipulating news, also their fear that it may pose a threat to the profession of journalists, perhaps because of their expectations that it will replace them, and perform their tasks, perhaps this indicates that journalists see that technology should be a tool to support journalistic work, and not a burden that adds new risks that may affect the quality of work and the speed of its performance, and their professional future.

Study hypotheses:

Verification of the first hypothesis:

- There is a statistically significant relationship between the study sample's rate of use of artificial intelligence techniques in producing news content and the degree of improvement in their performance.

Table (8) shows the correlation coefficients between the study sample's rate of use of artificial intelligence techniques in producing news content and the degree of improvement in their performance.

Variables	The degree of their performance improvement		
	(R) value	Significance level	Significance type
The study sample's rate of use of artificial intelligence techniques in producing news content	0.59**	0.01	Statistically significant

The table shows:

The hypothesis was achieved, as it was proven that there is a statistically significant direct correlation between the study sample's rate of use of artificial intelligence technologies in producing news content and the degree of improvement in their performance; meaning that the higher the rate of use of artificial intelligence technologies by the study sample in producing news content, the more it contributes to improving their performance level within the organization.

This may explain what was achieved as a result of using these technologies in producing content within the site, in terms of providing a number of positive factors that helped journalists and those in charge of communication within the site to perform their work more efficiently than before, in addition to contributing to supporting them in improving productivity through automation, especially in routine repetitive tasks that require a lot of time and effort in the different stages of work, while helping them to focus on work and produce more complex and important investigations and journalistic materials, and diverse storytelling methods that require more creativity.

Verification of the second hypothesis:

• There are statistically significant differences between the study sample in each of (their degree of confidence in using artificial intelligence technologies in producing news content, and their degree of satisfaction with employing and using artificial intelligence technologies in presenting news content according to the variables (gender, years of work experience.)

A) Differences according to gender:

Table (9)

shows the significance of the differences between the study sample in each of (their degree of confidence in using artificial intelligence technologies in producing news content, and their degree of satisfaction with employing artificial intelligence technologies in presenting news content according to the variable (gender (n= 42)

Variables	Males		Females		Value (t)	Type of significance
	M	A	M	A		
Confidence level	2.42	0.50	2.56	0.51	-0.865	Not statistically significant
Satisfaction level	2.61	0.57	2.93	0.25	-2.12*	Statistically significant in favor of females

The previous table shows:

There are no statistically significant differences between males and females in the study sample in (their degree of confidence in using artificial intelligence technologies in producing news content) according to the gender variable.

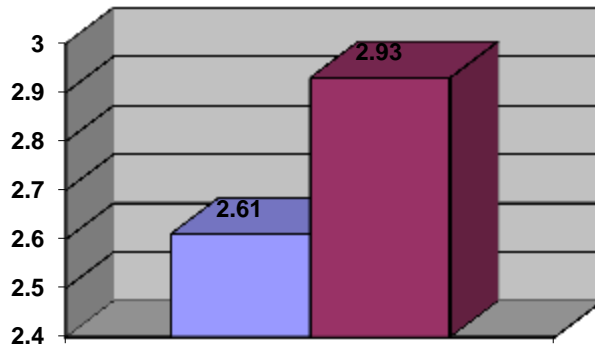
This may be due to the fact that the study sample all have a cognitive component that may be similar about the advantages and disadvantages of these technologies, in a way that made their degree of confidence in using them difficult to differentiate or distinguish between them, or explain them.

While it was proven that there are statistically significant differences between males and females in the study sample in their degree of satisfaction with the employment and use of artificial intelligence technologies in presenting news content in favor of females; which means that females are more satisfied with the employment of these technologies in presenting news content compared to males.

This may be because females are more exposed than males to artificial intelligence technologies according to their specialization and tasks within the site, which may make it easier for them to complete their work or perform it faster, and thus they are satisfied with their use of it, compared to males, as the nature of the work may require them to move around to cover or photograph the event, and their role may be less in using these technologies, in the following stages of formulating and

editing the news story, which may be completed in its final form by females, who are the most common within the site, and thus they are more likely to use them.

Figure (3) shows the significance of the differences between males and females in their degree of satisfaction with the use of artificial intelligence technologies in the production of news content.



b) Differences according to the duration of work experience:

Table (10)

The one-way analysis of variance between the study sample shows the degree of their confidence in using artificial intelligence technologies in producing news content, and the degree of their satisfaction with employing and using artificial intelligence technologies in presenting news content according to the variable (duration of work experience).

Channels	Source of clarification	Source of Clarification	Degree of freedom	Sum of squares	F	Type of significance
degree of confidence	Between Groups	0.772	3	0.257	1.008	Not significant

	Within Groups	9.704	38	0.255		
degree of satisfaction	Between Groups	0.869	3	0.290	1.19	Not significant
	Within Groups	9.250	397	0.243		

The table shows:

There are no statistically significant differences between the study sample in each of (their degree of confidence in using artificial intelligence technologies in producing news content, and their degree of satisfaction with employing and using artificial intelligence technologies in presenting news content according to the variable (duration of work experience).)

This may be due to the recent introduction of the use of technology within the site, and therefore, it did not significantly differ in the degree of confidence or satisfaction among its users, whether they had long or short experience in journalistic work within the Cairo 24 website.

Thus, the hypothesis was partially achieved; as it was proven that there were statistically significant differences between the study sample in the study sample between males and females in the degree of satisfaction with employing and using artificial intelligence technologies in presenting news content in favor of females, while it was not proven that there were statistically significant differences in their degree of confidence, nor was it proven that there were statistically significant differences between them regarding the degree of satisfaction and the degree of confidence according to the variable (duration of work experience).

Discussion:

□ The study reached many conclusions, the most important of which are:

- Emphasizing the need to use artificial intelligence technologies in journalistic and media work, and using them to assist the human element in performing its tasks with high quality.
- Emphasizing the need for adequate training for journalists at Cairo 24 website and familiarizing them with how to deal with artificial intelligence technologies, and how to employ them to serve journalistic work, to benefit from them to the maximum extent, as the more benefit is achieved, the greater their level of satisfaction with the extent of its use for the benefit of the work.
- The ability of Cairo 24 news website to compete in journalism, and the speed of completing tasks with high efficiency compared to other sites that did not use these technologies.

Perhaps many studies have indicated, including the study (Azab, Abdel Fattah, 2024), which confirms that employing artificial intelligence technologies in journalistic work contributes to developing the skills of journalists by dealing with digital technologies and programs dedicated to algorithms, thus improving the quality of performance. The study (Jamal Badawi, 2021) also indicated that robot journalism has been well received and satisfied by a large percentage of journalists on the Cairo 24 news website after its application and use, due to the benefits it has achieved for them, such as devoting themselves to producing more in-depth news reports, interpretation and analysis of events, or enhancing the site's ability to compete with other news sites in providing distinguished news content and creating a kind of good reputation for it.

Recommendations:

After presenting the results of the current study, the researcher, in light of the previous results, monitored the most important recommendations and suggestions, which can be summarized in the following points:

- Implementing many workshops and training courses for journalists and media professionals, to train them to deal with artificial intelligence technologies, and various advanced technological technologies, to benefit from them in improving their work.
- Including artificial intelligence as an essential part of the media institutions' strategy.

- Equipping Egyptian universities, faculties and departments of media with an advanced technological infrastructure.
- Implementing a partnership and concluding protocols between technological faculties and media departments; to exchange experiences, acquire skills between them, and provide media students with the greatest amount of technical skills during the study stages.
- Qualifying faculty members, by organizing courses and workshops that keep pace with technological developments and what the labor market requires; to prepare graduates capable of keeping pace with developments in the field of media work.

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