THE ROLE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN INCREASING AWARENESS AND EDUCATING USERS THROUGH ELECTRONIC SOCIAL NETWORKS (SURVEY STUDY ON A SAMPLE OF THI QAR UNIVERSITY STUDENTS)

O PAPEL DAS TECNOLOGIAS DE INTELIGÊNCIA ARTIFICIAL NA SENSIBILIZAÇÃO E NA EDUCAÇÃO DOS UTILIZADORES ATRAVÉS DAS REDES SOCIAIS ELECTRÓNICAS (ESTUDO DE INQUÉRITO SOBRE UMA AMOSTRA DE ESTUDANTES UNIVERSITÁRIOS DO QATAR)

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ABSTRACT

The aim of the current study was to identify the aspects in which artificial intelligence (AI) technologies are employed in social media platforms, and to highlight the AI technologies used in creating educational and awareness content through electronic social networks from the perspective of Thi Qar University students in Iraq. The study adopted a descriptive-analytical approach using a survey method on a sample of 225 male and female students from Thi Qar University, randomly selected. The study results revealed the following: The use of AI technologies in transforming the content published on social media platforms from abstract form to tangible form was considered the most important aspect according to the participants of the study. AI technologies contribute to spreading awareness and educating users through the availability of programs that detect and combat fake news. AI technologies help shorten the time for recipients by providing editors with tools and capabilities to summarize news in a way that is appropriate for the audience, avoiding boredom and lengthy information.

Keywords: Artificial intelligence, social media platforms, awareness, education.

RESUMO

O objetivo do presente estudo foi identificar os aspectos em que as tecnologias de inteligência artificial (IA) são utilizadas nas plataformas das redes sociais e destacar as tecnologias de IA utilizadas na criação de conteúdos educativos e de sensibilização através das redes sociais electrónicas, na perspetiva dos estudantes da Universidade de Thi Qar, no Iraque. O estudo adoptou uma abordagem descritivo-analítica utilizando um método de inquérito numa amostra de 225 estudantes do sexo masculino e feminino da Universidade de Thi Qar, seleccionados aleatoriamente. Os resultados do estudo revelaram o seguinte: A utilização de tecnologias de IA para transformar o conteúdo publicado nas plataformas das redes sociais de uma forma abstrata para uma forma tangível foi considerada o aspeto mais importante de acordo com os participantes no estudo. As tecnologias de IA contribuem para a sensibilização e a educação dos utilizadores através da disponibilidade de programas que detectam e combatem as notícias falsas. As tecnologias de IA ajudam a encurtar o tempo para os destinatários, fornecendo aos editores ferramentas e capacidades para resumir as notícias de uma forma adequada para o público, evitando o tédio e informações longas.

Palavras-chave: Inteligência artificial, plataformas de redes sociais, sensibilização, educação.

Introduction

The world is witnessing a fierce race in the production and utilization of technology in daily life. Hardly a day goes by without a new technological and cognitive achievement. The telecommunications and media sector is a reflection of these developments, given its functional specificity and the nature of the services it provides, which are highly compatible with the spirit of the modern era. These services are in line with the fast pace of events and developments, and they seek the latest technologies that enable them to keep up with this pattern.

Artificial intelligence (AI) technologies are among the latest innovations that impose themselves on human life through their continuous applications in various activities and events. The ability of these software and robots to learn from their mistakes and simulate human behavior has made it possible to use them as alternatives to humans in many positions, especially when tasks or functions require danger or continuous accuracy.

The emergence and widespread use of social media networks have added an important task to the media landscape. They enable interaction between senders and recipients and allow media organizations to gauge public opinion on the content they provide in real-time, without the need for specialized polling centers.

It is within this context that the current study aims to uncover the roles played by artificial intelligence technologies, particularly their educational role, in increasing public awareness through the use of social media networks.

The statement of the problem

The performance of media outlets in fulfilling their roles requires harnessing all the capabilities and modern technologies, especially when it comes to educational and awareness roles. These roles require extensive knowledge of the nature of the target audience on one hand, and the methods through which the desired impact can be achieved on the other hand. The prevalence of artificial intelligence (AI) technologies and their various applications make it possible to leverage them for awareness and education purposes, as they are a fundamental characteristic of the current era. Awareness needs to align with this characteristic. Hence, the problem of the current study is defined by answering the following main question:

What is the role played by artificial intelligence technologies in increasing awareness and educating users through electronic social networks?

Research questions

-What are the key aspects in which artificial intelligence technologies are employed in electronic social media platforms?

-What types of AI technologies are used in formulating educational and awareness content through these platforms?

-How does the use of AI contribute to the educational and awareness aspects for the audience on these platforms?

-What are the emerging attitudes among Iraqis regarding the educational and awareness role played by the use of AI technologies through social media networks?

Significance of the Study:

The study is significant due to the widespread use of social media networks and their significant role as media platforms. Additionally, the importance of educational and awareness aspects, which are essential functions performed by various types of media, is highlighted. The study is also significant due to the increasing utilization of AI technologies in human activities, with a gradual transition to their use in the media field.

Objectives of the Study:

The current study aims to:

- Identify the aspects in which artificial intelligence technologies are employed in electronic social media networks.

- Determine the types of artificial intelligence technologies used in formulating educational and awareness content on social media platforms.

- Highlight the effects of utilizing artificial intelligence on the educational and awareness aspects for the audience.

- Investigate the attitudes of Iraqi recipients towards the educational and awareness role played by the use of artificial intelligence technologies through new media outlets.

Study Terminology:

1- Artificial Intelligence: It refers to the simulation of human behavior in programmed machines, enabling them to learn from their mistakes and imitate human actions (Greenfield, 2021, p. 12). It is also the science of engineering intelligent machines and specifically intelligent computer programs (Krizhevsky, 2012, p. 6).

2- Awareness: It is a general state of correctly knowing and perceiving various aspects of things (Abdulrahman, 2021, p. 812).

3-Education: It is a process of training, instructing, and informing aimed at establishing a cultural state in the recipient (Bokova, 2012, p. 3).

4-Social Media Networks: "An electronic network system that allows subscribers to create their own personal websites and then connect them through an electronic social system with other members who share the same interests and hobbies, or gather them with old friends who are geographically distant" (Al-Marzouki, 2021, p. 409).

Operational Definitions

1- Artificial Intelligence: All software and media that are self-responsive to commands and variables and can be employed in the media system.

2- Awareness: The state of the audience's perception of the surrounding reality through the presentation of news utilizing artificial intelligence technologies.

3- Education: The changes that occur in the general knowledge of the public as a result of exposure to media outlets.

4- Social Media Networks: Interactive media platforms that present diverse news that influences the awareness and culture of the audience through the use of artificial intelligence technologies.

Previous Studies

Boumakhla's study (2023) titled "Adapting the Media Industry to Artificial Intelligence Technology in Media - Possibilities and Usage." The study aimed to provide a comprehensive analysis of the impact of artificial intelligence on the media industry in light of technological advancements in this field. It employed a critical approach by discussing the available scientific and theoretical materials on the use of artificial intelligence in media. The study concluded that content generated through AI algorithms represents one of the most prominent aspects of integrating artificial intelligence technologies in media production, facilitating journalism by processing vast amounts of data in various journalistic forms.

Boukhari's study (2023) titled "The Use of Artificial Intelligence in Media - A Critical View of the Limits of Usage and Journalism Perspectives." The study aimed to provide a critical perspective on the uses of artificial intelligence in the field of media and communication, highlighting the key aspects of such usage.

The study emphasized that artificial intelligence has become a necessity for various actors in the media field, including professionals and academics. The study's sample consisted of 50 journalistic articles, which were critically analyzed. The study found that the use of artificial intelligence in journalism opens up more options through the ability to process vast amounts of data and news, making it suitable for performing routine tasks that take up most of journalists' time.

Abdulrazzak's study (2022) titled "Artificial Intelligence Technologies in the Media: Reality and Future Developments." The study aimed to determine the attitudes of editors and journalists towards adopting artificial intelligence technologies and their impact on their media performance. It also aimed to identify future expectations for media-related artificial intelligence equipment. The study sample included 451 participants, with 265 belonging to Egyptian media outlets and 186 belonging to Arab media outlets. The study concluded that the most commonly used areas for artificial intelligence technologies, according to the respondents, were marketing, followed by media and finally artistic and administrative fields.

Srikrishna et al.'s study (2021) titled "Artificial Intelligence in Marketing." The study aimed to identify the areas where artificial intelligence technologies are employed in commercial marketing. It employed a critical approach by analyzing a range of working papers and research studies related to marketing through artificial intelligence. The study concluded that digital evolution has enhanced the position of artificial intelligence in the media marketing system.

Salem's study (2021) titled "Effectiveness of Using Artificial Intelligence Technologies in Social Media from the Perspective of Educational Media Students." The study aimed to determine the effectiveness of using artificial intelligence technologies in social media from the perspective of media students, to identify the areas of using artificial intelligence technology. The study employed a survey method, surveying a sample of 400 media students from Damietta and Mansoura universities. The respondents demonstrated awareness of artificial intelligence technologies and indicated their reliance on social media platforms. Artificial intelligence technologies were used as a preliminary point for analyzing social emotions such as anxiety and stress.

Di Cui et al.'s study (2021) titled "The Effect of Media Use on General Perceptions of Artificial Intelligence." The study aimed to explore the level of adoption of artificial intelligence technologies in Chinese media and the benefits resulting from this usage. It used a descriptive approach, applying it to a sample of 130 participants. The study found that the benefits derived from the application of artificial intelligence technologies in the media field far outweigh the possible harms. The study also found no impact of demographic variables on the respondents' estimations of the degree of artificial intelligence utilization in the media.

Looking at the previous studies, it is evident that all of them sought to study the impact of employing artificial intelligence technologies in media work. The research methodologies used varied among these studies. The current study benefited from the previous studies in setting its research variables and in determining the adopted methodology. It also benefited from studies that used questionnaires as a tool to meet their methodological requirements.

The Theoretical Framework

The Concept of Artificial Intelligence Technologies and its History

The actual beginning of artificial intelligence sciences dates back to the second quarter of the 19th century when there was a shift from traditional algebra to Boolean algebra, which is based on the idea of matrices (1-0). These matrices paved the way for the emergence of computer programming, which was accompanied by algorithms (Irimia, 2016, pp. 8-9).

The influence of mathematics by Kurt Gödel's incompleteness theorem led to a change in the traditional view of algebra applications, and it eventually moved towards programming simple games, which ultimately led to the emergence of artificial intelligence and other computer sciences that rely on this theorem (Greenfield, 2021, p. 38).

Artificial intelligence is defined as the ability of a machine to perform tasks that humans can do through specialized programming based on a connected network of probabilistic commands (Aoukhal, 2021, p. 61).

Types of Artificial Intelligence Technologies

Scientific literature defines three main types of artificial intelligence:

Narrow Artificial Intelligence: It is programmed to perform only one task and cannot perform other tasks without changing the programming that machines operate on. This type of artificial intelligence is usually directed towards precise or critical tasks in a production line (Jason, 2019, p. 190).

General Artificial Intelligence: In this type, mechanisms and software control the entire working environment, allowing the system to manage and direct the work environment and make decisions when necessary (John, 2019, p. 284).

Super Artificial Intelligence: This type is described as an integrated and complex system that surpasses human abilities in general (Jason, 2019, p. 192).

Artificial Intelligence Technologies in Social Networks

This technology simulates human communication and media capabilities. Its working method involves writing, formulating, and editing content through algorithms that work without human intervention. It provides marketing and entertainment services automatically through a range of computer software programs. It also imitates human intelligence in performing some communication and media tasks on social networks and has the ability to evolve based on the data and information it collects (Salem, 2021, p. 20).

Methodology

The descriptive-analytical method was adopted, which is a method based on evaluating and providing a comprehensive description of the scientific phenomenon under study, analyzing its interrelated factors to obtain generalizable results (Jidouri, 2013, p. 26). This was achieved by describing the actual image of the use of

"artificial intelligence" in media and analyzing the respondents' reactions to reach the results.

By comparing the advantages of the descriptive-analytical method, we applied a survey with a sample by selecting a representative sample from the community under study, and applying the study tools to it, in order to understand their opinions about the use of "artificial intelligence" and its role in raising awareness.

The study community consists of all registered university students at Thi Qar University, distributed across all colleges, genders, and scientific and humanities disciplines. To assess the impact of this diversity on the study results, the data for the study was collected during the period between September and December.

To ensure methodological procedures, a random sample of 225 male and female students was drawn. The sample selection was based on the following:

-The awareness and perception of university students on the importance of artificial intelligence technologies through social networks. This importance is evident in the educational and awareness-raising role that artificial intelligence technologies play for the respondents.

-The reliance on social networks, which provide important services to the respondents and are an important tool for education and learning, especially for university students, to improve communication, educate them, and raise awareness using effective learning methods that differ from traditional methods.

-Previous studies have focused on university students and have shown that younger age groups are more active and make more use of the internet, especially social networking sites.

In order to achieve the study objectives and answer its questions, and based on the determination of the survey method, a questionnaire was chosen to represent the current study tool. The questionnaire was designed after theoretical reviews and reviewing previous studies. Four main axes were identified for the questionnaire: (Employment Aspects, Types of Technologies, Employment Contributions, Public Attitudes).

Then, questionnaire statements were developed, with 8 statements for each item, resulting in a total of 32 statements. A five-category scale was chosen (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree).

The internal consistency reliability was calculated after applying the questionnaire on a sample of 30 students from Thi Qar University, using correlation coefficients for each item of the questionnaire with each other, and the correlation with the overall questionnaire, as shown in the following table.

"Table 1 – Correlation Coefficients for Internal Consistency Calculation"

Item	Aspects of Recruitment	Types of Techniques	Contribution of Recruitment	Public Trends	Overall
Aspects of Recruitment	1	0.741**	0.813**	0.802**	0.769**
Types of Techniques	-	1	0.757**	0.741**	0.719**
Contribution of Recruitment	-	-	1	0.764**	0.723**
Public Trends	-	-	-	1	0.773**
Overall	-	-	-	-	1

"The source is designed by the researcher based on the results of the survey. ** Significance level at 0.01."

The table above shows that the correlation coefficients for the questionnaire axes with each other and the correlation coefficients with the overall questionnaire are all significant at a level of 0.01. This indicates the presence of reliability that makes the questionnaire usable for the purposes of the current study. As for the questionnaire's stability, it was verified through the application of Cronbach's alpha coefficient, as shown in the following table.

"Table 2 – Cronbach's Alpha Coefficients for Stability"

Items	"Alpha Value"	Items	"Alpha Value"	Items	"Alpha Value"
Recruitment Aspects	0.862	Recruitment Contribution	0.881	Overall	0.799
Types of Techniques	0.815	Public Trends"	0.759		

"The previous table indicates that the alpha coefficients for the survey dimensions reflect a high level of stability, as all values are greater than (0.600) and closer to the value (1). Thus, the survey is capable of providing consistent results when used by multiple researchers."

Results and Discussion

After applying the questionnaire to the participants, who are students of Thi Qar University, the study questions were answered as follows:

Main Question: What role do "Artificial Intelligence" techniques play in increasing awareness and educating users through electronic social networks?

The answer to the main question was derived from responding to the sub-questions, including:

Answer to Sub-Question 1: What are the prominent aspects in which "Artificial Intelligence" techniques are employed in "electronic social networks"?

To answer this question, the arithmetic means of the study sample's responses to the statements related to the item of employing "Artificial Intelligence" techniques in "electronic social networks" were calculated. The following table shows the results related to answering this question."

"Table 3 – Arithmetic Means for the item of Recruitment Aspects"

"The Phrases:	Mean	Standard Deviation	Grade	Ranking
Audience Familiarization with the Media Material	3.41	1.13	Moderate	8
Reinforcing Abstract Ideas and Clarifying Them	4.19	1.29	High	1
Simplifying Scientific Concepts	4.01	1.19	Moderate	4
Creating Virtual Images for Unknown Figures	4.11	1.22	High	3
Designing and Presenting Infographics	4.12	1.24	High	2
During Emotional Appeals	3.59	1.15	Moderate	7
Enriching the Publication's Theme	3.66	1.17	Moderate	6
Semiotic Aesthetic Aspects	3.79	1.18	Moderate	5
Recruitment Aspects	3.86	1.19	Moderate	

The mentioned table illustrates that the reactions of the individuals included in the sample towards expressions related to various aspects through which "Artificial Intelligence" methods are employed within "electronic communication networks" ranged between (3.41-4.19). This indicates moderate to high levels of assessment.

The table also reveals that the average responses of students on the item of employment aspects, in general, reached (3.86) with a standard deviation of (1.19), indicating a high level of appreciation.

Additionally, the table shows that the aspect that received the highest appreciation from students is the ability of these technologies to transform abstract ideas into tangible ones. The average for this statement was (4.19) with a standard deviation of (1.29), reflecting a high level of appreciation.

This result can be explained by the difficulty of accessing abstract ideas by all segments of the audience, as they are related to a specific thinking style and

approach. Simplifying these ideas through artificial intelligence techniques by transforming them into a tangible form helps broaden the target audience as desired by the content editor.

Answering Sub-Question 2: The posed question relates to the various methodologies used in developing awareness and educational materials across electronic communication networks. To address this inquiry, we calculated the mean values for the responses provided by the study participants regarding terms associated with different technologies of "Artificial Intelligence" used in "electronic communication networks." The following table provides an overview of the results specifically related to solving this issue:

Table 4 – Mean Scores for the Items of Technology Types:

Phrase	Mean	Standard Deviation	Grade	Ranking
Fake News Detection Programs	4.46	1.33	High	2
Phishing Websites Detection Programs	4.34	1.29	High	5
Fake Account Detection Programs	4.44	1.31	High	4
Virtual Report Generation Programs	3.12	1.09	Moderate	8
Media Story Suggestion Programs	3.25	1.16	Moderate	7
Voice Simulation Programs	4.01	1.22	High	6
Still Image Simulation Programs	4.62	1.38	High	1
Animated Image Simulation Programs	4.45	1.32	High	3
Employments Types	4.08	1.26	High	

Through the table, it is evident that the mean scores of the study participants' responses to phrases about the types of applications of artificial intelligence employed in Iraqi social networks ranged between (3.12-4.62) with appreciation levels ranging from moderate to high. The overall rating for the respondents' perceptions of employment types reached (4.62) with a standard deviation of (1.26), indicating a high level of appreciation.

The employment of artificial intelligence technologies for simulating still images appears to be the most appreciated type of employment, according to the

participants. The calculated mean is (4.62) with a standard deviation of (1.38) and a high level of appreciation.

This can be explained by the fact that within social networks, users often resort to simulating personal and thematic images to escape copyright and privacy constraints. Social networks impose restrictions on copying or using images without considering the intellectual property rights of the original image owner.

Answering Sub-Question 3: How does the employment of artificial intelligence contribute to educational and awareness aspects for the public through electronic social networks?

To answer this question, the mean scores of the study participants' responses to phrases related to the contributions of artificial intelligence technologies in educating and raising awareness through social networks were calculated. The following table illustrates the results for addressing this question:

"Table 5 – Arithmetic Means for the item of Contribution of Techniques"

Phrases	Mean	Sandard Deviation	Grade	Ranking
Simplifying Complex Ideas	4.12	1.19	Moderate	4
Intriguing the Receiver to Continue	4.03	1.16	Moderate	5
Representing Historical Events	4.53	1.34	High	1
Developing the Imagination of the Receiver	4.50	1.32	High	3
Targeting Diverse Cultural Segments	2.13	0.91	Low	7
Simulating Anticipated Social Behaviors	2.13	0.91	Low	7
Representing Scientific Equations	2.21	0.96	Low	6
Shortening the Receiver's Time	4.53	1.34	High	1
Contributions	3.52	1.14	Moderate	

The table above indicates that the respondents' evaluations of the contributions of artificial intelligence technologies to awareness and education through social networks ranged between (2.13-4.53) with appreciation levels ranging from low to high. The overall rating for the respondents' perceptions of the total contributions of artificial intelligence technologies reached (3.52) with a standard deviation of (1.14), indicating a moderate level of appreciation.

Participants found that one of the significant contributions of artificial intelligence technologies is the ability to shorten the recipient's time. This technology enables editors to condense and shorten news in a way that suits the recipient's time, preventing boredom and elongation.

Additionally, the sample members estimated that artificial intelligence technologies help visualize historical events by building a virtual environment that aligns with the historical conditions focused on in the publication, without the need for specialized studios and high production costs.

Answering Sub-Question 4: What are the trends of the Iraqi public towards the educational and awareness roles played by the employment of artificial intelligence technologies through electronic social networks?

To answer this question, the mean scores of the study participants' responses to phrases related to the public's trends towards the educational and awareness roles practiced by artificial intelligence technologies on electronic social networks were calculated. The following table illustrates the results for addressing this question:

"Table 6 – Arithmetic Means for the item of Public Trends"

Phrase	Mean	Sandard Deviation	Grade	Ranking
Represent a Negative Role in Awareness	2.28	0.89	Low	8
Improve the Quality of Educational Content	3.06	1.01	Moderate	6
Meet the Requirements of Educational Society	3.22	1.13	Moderate	3
Support Awareness Efforts of Official Institutions	3.12	1.08	Moderate	5
Enhance the User Experience	3.64	1.98	High	1
Play a Positive Role in Education	3.14	1.09	Moderate	4
Violate User Privacy	2.55	0.95	Low	7
Complement the Role of Traditional Media	3.26	1.15	High	2
Public Trends	3.03	1.07	Moderate	

According to the previous table, the average scores of students' responses regarding their attitudes towards the employment of artificial intelligence technologies in awareness and education through electronic social networks ranged from low to moderate, with averages ranging from (2.28-3.64) and standard deviations ranging from (0.89-1.98).

The overall estimation of the respondents' attitudes toward the use of artificial intelligence in awareness and education on social media sites was moderate, with a value of (3.03) and a standard deviation of (1.07).

These results indicate a positive role in educating users. They also suggest that these technologies complement the role of traditional media by monitoring user experiences, enabling the identification of appropriate content that contributes to building a better audience.

Conclusion

The use of artificial intelligence technologies to transform content published on social media sites from abstract form to a tangible form is considered one of the most aspects through which artificial intelligence technologies are employed in education.

There is a high level of diversification of artificial intelligence technologies employed on social media networks for educational purposes.

Simulating still images represents the most utilized type of artificial intelligence in social media networks.

Artificial intelligence technologies contribute to spreading awareness and educating users through providing them with programs to detect and combat fake news.

Artificial intelligence technologies work to shorten the user's time by providing editors with capabilities and tools to condense the news in a way that is suitable for the audience, avoiding boredom and prolongation.

Public attitudes are inclined towards the contribution of artificial intelligence technologies in analyzing the content published on social media sites to understand the emotions and feelings associated with it. This data can be used to enhance the user experience and provide content suitable for the user.

Based on the study results, we propose the following:

Work on disseminating the concept of artificial intelligence and introducing its media benefits to those responsible for editing posts on social media platforms.

The use of artificial intelligence technologies through social networking sites must be expanded due to their accuracy and speed of work, as well as saving time and effort in carrying out tasks.

Conduct more studies on the effects of artificial intelligence in other forms and types of media.

REFERENCES

Abdel Rahman, R. H. (2021). Development of Health Awareness Among Al-Azhar Secondary Education Students. Fayoum University Journal of Educational and Psychological Sciences, Vol. 15, No. 15, Egypt.

Abdel Razak, M. M. (2022). Artificial Intelligence Techniques in the Media: Reality and Future Developments - An Applied Study on Communication Professionals in Egyptian and Arab Media. Egyptian Journal of Media Research, No. 81, Egypt.

Al-Marzouki, A. A. (2021). The Role of Social Media Networks in Shaping Youth Attitudes Towards External Events. Journal of Research, Faculty of Arts, Vol. 32, No. 124, Egypt.

Awkal, L. (2021). The Role of Artificial Intelligence Algorithms in Quality Control Operations - A Case Study: Misur Plastics Industries Factory, Syria. Unpublished Master's Thesis, Syrian Virtual University, Syria.

Bokova, I. (2012). The World Program for Human Rights Education, United Nations Publications, Phase II, New York.

Bou Mkhaila, K. (2023). Adapting the Media Industry to Artificial Intelligence Technology in the Media - Capabilities According to Usage. Digitization Journal of Media and Communication Studies, Vol. 3, No. 2, Algeria.

Boukhari, M. (2023). The Use of Artificial Intelligence in the Media: A Critical View of Usage Limits and Press Prospects. Digitization Journal of Media and Communication Studies, Vol. 3, No. 2, Algeria.

Di Cui & Fang Wu (2021). The influence of media use on public perceptions of artificial intelligence in China: Evidence from an online survey‖, Information Development, Vol. 37(1).

Greenfield, David. (2021). AI-Enabled Cameras Help Solve Safety, Quality and Efficiency Issues, Automation World, 7 June.

Irimia R, Gottschling M (2016). Taxonomic Revision of Rochefortia Sw. (Ericaceae, Boraginales). Biodiversity Data Journal 4: e7720.

Jaidour, S. (2013). Research Methods in Social Sciences, Damascus University Publications, Syria.

Jason, Whittaker. (2019). Artificial Intelligence And The Future Of Journalism‖, New York: Routledge.

John, V. Pavlik. (2019). Journalism In The Age Of Virtual Reality: How Experiential Media Are Transforming News‖, New York: Columbia University Press.

Krizhevsky, I. Sutskever, G.E. Hinton. (2012). Imagenet classification with deep convolutional neural networks, Adv. Neural Inform. Process. Syst

Salem, D. F. (2021). The Effectiveness of Using Artificial Intelligence Techniques on Social Media Sites from the Perspective of Educational Media Students: Facebook. Journal of the Faculty of Arts, Vol. 20, No. 3, Part I, Egypt.