Ethical issues of employing artificial intelligence technologies in the field of media content production.

Ibrahim Ahmed Abdelalim
PhD researcher in the Department of Educational Media, Faculty of Specific Education, Minia University

Dr. Mohamed Ahmed Khalifa
Assistant Professor of Educational Media, Faculty of Specific Education, Minia University

Dr. Hossam Fayez Abdelhai
Assistant Professor of Educational Media, Faculty of Specific Education, Minia University

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Abstract

The current research aims to achieve a main objective, which is to clarify the ethical issues related to the use of artificial intelligence techniques in the field of media content production. The research is based on building variables and analyzing and interpreting the results concerning the ethical issues of employing artificial intelligence techniques, referencing some literature and previous studies. The research adopted a descriptive methodology, and the results revealed several issues related to the use of artificial intelligence techniques in media content production. The research recommended the necessity of benefiting from artificial intelligence techniques in this field.

Keywords:

Ethical issues- Artificial intelligence techniques - Media content production.

Introduction:

News organizations face several key obstacles related to adopting and developing artificial intelligence technologies, including cultural concerns linked to job loss, changes in work processes, and the high costs of development. This highlights why major news companies and institutions have the capacity to access these technologies.

New challenges for journalism practitioners include familiarity with the "black box" of algorithms, studying programming elements and advanced statistics, addressing aspects related to linguistic engineering, assessing data quality, and

developing new forms of collaboration between professional cultures. This involves integrating technology with the nuances and symbolism of journalism, facilitating participation and collaboration between these factors, and invoking a qualitative shift in production and editorial methods, represented by the development of a mechanical form of journalistic thinking.

Among other challenges facing the journalism world is the commitment to ethics and incorporating editorial values into the design of software tools. A policy exchange forum between technicians and journalists—held by the Brown Institute for Media Innovation in collaboration with the Digital Journalism Center in 2017—concluded that readers have the right to a transparent methodology regarding how AI tools are used for analysis, pattern identification, or reporting discoveries in stories.

It is crucial to find common ground that balances the creation of feedback loops with the commitment to the public service mission of journalism. Therefore, ethical usage and data transparency are fundamental issues that journalists and editors must confront.

Regarding media content production, the Media Council published a report on self-regulation in the emerging age of news automation, highlighting ethical considerations and reaching the following key points:

1. Major media players use updated graphical representations, noting that automated news text generation is still in the experimental phase, which underscores the urgent need for self-regulation concerning news automation.
2. Issues related to data and transparency should not be overlooked when discussing news automation.
3. Media councils must critically reevaluate their complaint procedures to allow the public to express their critical views on news automation.

Research Problem:

The uses of artificial intelligence are diverse, especially in the media field and digital content production, resulting in ethical and professional transformations. Therefore, it is essential to understand these issues and work diligently to achieve the best application of AI technologies in media content production.

The research problem is encapsulated in the following main question:

What are the ethical issues in employing artificial intelligence technologies in media content production?

Research Objectives:

This research aims to achieve the following:

- Identify the key issues posed by AI technologies in digital media institutions.
- Assess the ethical dimensions imposed by AI technologies in media organizations.
- Highlight the ethical and professional challenges facing the employment of AI technologies in media content production.
- Propose suggestions to enhance the utilization of AI technologies in digital media content production.

Importance of the Research:

The significance of this research lies in the following:

Scientific Importance:

- The importance of ethical issues in employing AI technologies in digital media content production.
- The research benefits specialists by ensuring accuracy and credibility of AI-generated content before publication.

Practical Importance:

- The research aids academics in the media field by conducting studies on mechanisms for employing AI technologies in media content production.
- The research benefits media institutions by raising awareness among journalists about AI concepts and applications, and formulating an ethical guide to regulate the use of AI technologies.

Study Boundaries:

The study encompasses the following boundaries:

- **Subject Boundary:** The research addresses ethical issues in employing AI technologies in media content production.
- **Temporal Boundary:** This research was conducted from May to June 2025.
- **Spatial Boundary:** This research was applied at the Faculty of Specific Education, Minia University.

Study Methodology:

- **Method:** Descriptive analytical method.

Type of Study:

- This study belongs to the category of quasi-experimental studies, conducted on students of educational media.

Study Population and Sample:

- The study population consists of a sample of students from the Educational Media Department at the Faculty of Specific Education, Minia University, comprising both male and female students, totaling (30) participants.
- They possess a high level of education, awareness, and technological and digital culture in the modern era.

- Many studies and research reports indicate that youth represent the largest proportion of internet users worldwide.
- The nature of the dependent variable in the study is media content creation skills, which is crucial for educational media students.

Study Tools:

- Knowledge achievement test.

Research Questions and Hypotheses:

- The main problem of the study is encapsulated in the following central question: What are the ethical issues related to the use of artificial intelligence technologies in media content creation among educational media students?

From this question, several sub-questions arise:

1. What is the level of success in employing artificial intelligence applications in the field of educational media?
2. What is the impact of artificial intelligence applications on developing media content creation skills?
3. How do educational media students (the sample) evaluate the use of artificial intelligence applications?

The study also aims to verify the following hypotheses:

- There are statistically significant differences between the mean scores of the experimental group students in the pre-test and post-test of the knowledge achievement test for applications based on artificial intelligence technologies in developing media content creation skills, favoring the post-test.
- There are statistically significant differences between male and female participants in the experimental sample regarding their mean scores in the post-test of the knowledge achievement test.

Theoretical Framework of the Research:

First – Ethical Issues in Employing Artificial Intelligence Technologies

We are currently witnessing remarkable advancements in artificial intelligence (AI) technologies, which have become essential and pivotal tools in various fields, including scientific research. Despite the significant advantages these technologies offer, their excessive use in academia raises many issues regarding their impact on the objectivity, integrity, and quality of scientific research. One of the most affected groups by this development is master's and doctoral students, who bear the responsibility of producing original research that contributes to the advancement of scientific inquiry.

Among the most notable benefits of AI in scientific research is that it provides researchers with powerful tools to enhance academic performance and accelerate research processes, such as advanced data analysis and assistance in drafting and editing scientific texts. This contributes to faster writing of research papers and improves their linguistic quality. Thanks to this development, it is now possible to process vast amounts of data more quickly and accurately than traditional methods.

However, these benefits come with risks that threaten the integrity of scientific research, such as impacting academic originality and reducing researchers' creativity in presenting new theses and ideas or solving complex academic problems. Additionally, over-reliance on AI may lead to the recycling of previous research rather than producing new scientific content, which contradicts the fundamental goals of scientific inquiry.

Key Challenges Associated with AI in Scientific Research:

1. Increased Incidence of Scientific Plagiarism:
   Some automatic writing tools produce texts that appear to be human-edited but are actually extracted from non-

credible sources or plagiarized from previous research, affecting the credibility of scientific research.

2. Bias in Algorithms:
   AI systems rely on data that may be flawed or biased, leading to skewed or inaccurate research results.
3. Impact on Researchers' Skills:
   Excessive use of AI affects critical thinking and self-analysis skills among master's and doctoral researchers, diminishing their ability to solve complex research problems.
4. Difficulty in Evaluating Scientific Research:
   Academic evaluation committees face challenges in distinguishing between original research and that which relies on AI, making it essential to develop effective tools to detect scientific plagiarism and ensure research originality.

Moreover, many sources are now available to obtain data and use it legally and ethically. However, there is currently no necessary legal infrastructure to ensure the ethical development of AI technologies.

Therefore, the ethics of data science and artificial intelligence refer to the texts and regulations that help us discern right from wrong when dealing with this technology. There is increasing attention to several important elements that assist in developing these regulations, such as data governance for feeding intelligent systems, determining ownership, classification, privacy, accessibility, and ensuring the security of that data. Another critical aspect in the field of AI ethics is that the data used to feed intelligent machines must be of high quality and trustworthy.

The website (Syrian Geeks) has noted several ethical and behavioral issues regarding the use of AI technologies, including:

- Ethics and Responsibility:
  The widespread and uncontrolled use of AI tools can lead to unethical or irresponsible practices, such as using these

tools without informing the client. We will elaborate on the ethics of using AI in freelance work shortly.

- Privacy and Intellectual Property:
  When using any AI tool, be extremely cautious about the information you provide, as your data may become publicly available once entered, becoming part of the tool's database. Generative AI is an open model that relies on user-submitted information for responses, along with its extensive knowledge base.
- Increasing Competitive Market:
  One of the most notable challenges posed by AI affecting all freelancers is that the existence of AI tools that facilitate freelancers' work and save considerable time has led, on one hand, to clients exploiting this by offering lower wages and, on the other, to some freelancers accepting these wages to seize opportunities. Nevertheless, your professional reputation, personal brand, work, and footprint remain your face to all clients, illustrating your worthiness of the fees you request.
- **Transparency:** One of the ethics of freelance work is to inform clients that you are using artificial intelligence and clarify how you benefit from it and in what ways. This should be included in your work proposal, as clients typically seek high-quality human results rather than AI-generated outcomes. Some companies have even begun to include a clause in work contracts specifying whether AI will be used or not.
- Accuracy of Information and Quality: Try asking a mid-level AI model about the "Battle of Molokhia," and you'll be amazed at the response. Although the latest advanced AI models provide more accurate information, the likelihood of including incorrect information in their answers is still significant, even with references and web research. Such errors or inappropriate content fall on the freelancer, who is held accountable for them. Therefore, ensuring the quality and accuracy of AI outputs is one of the most important ethics of using AI in freelance work.

- Avoiding Overreliance on AI: The human brain has two hemispheres: the right hemisphere is responsible for arts, languages, and creativity, while the left hemisphere is responsible for logic, analytical skills, arithmetic, and intelligence. Overreliance on AI can diminish the functions of both hemispheres, according to recent studies. An analysis of user data from Chat GPT showed that many rely on it for various tasks, from simple routine tasks to complex ones that only humans can accomplish. Over time, this can lead to a decline in human intelligence and creativity, stemming from a lack of critical thinking and problem-solving engagement.
- **Respecting Intellectual Property:** One of the ethics of generative AI arises from its reliance on billions of images available online and published articles. Some of these images and articles carry intellectual property rights that should not be infringed upon by using them directly without modification or permission. Unfortunately, clients may not know that these articles or images are under copyright, which can lead them to produce illegal content that harms their business and reputation.

Adapting to AI in Freelance Work:

The challenges and ethics of using AI in freelance work impose additional responsibilities on freelancers. There is also a responsibility for organizations and institutions involved with AI in society to provide training and educational programs on using AI, raising awareness about its challenges, ethics, benefits, risks, and more. Furthermore, there should be laws and penalties for accountability, as well as an expansion of research and development to maximize the benefits of these technologies and tools in freelance work while adhering to quality standards and professional ethics.

Conclusions Drawn by the Researcher:

Despite the fact that artificial intelligence enhances efficiency and quality, verifying the accuracy and quality of AI-generated content remains a challenge.

- Addressing biases in AI algorithms is essential to ensure that the produced content is diverse and inclusive.
- Maintaining the originality and uniqueness of content requires a balance between automation and human creativity.
- Although using AI-powered content production tools may be costly, the long-term benefits can be substantial.
- Training and education are crucial for the effective deployment of AI tools in the content industry, ensuring that users understand how to leverage their capabilities.

To this end, the research presents a set of fundamental suggestions, including:

- **Focusing on Specific AI Technologies:** Discussing specific technologies used in content creation, such as Natural Language Processing (NLP), Machine Learning (ML), or Computer Vision, to provide deeper and more detailed analysis.
- **Comparing AI Tools:** Conducting comparisons of AI-powered content creation tools to assess their efficiency, utility, and impact on content quality.

- **User Experience:** Studying user experiences with AI content production tools to understand their impact on workflow and creativity for content creators.
- **Future Trends:** Exploring emerging trends in AI and content creation, such as integrating AI with Augmented Reality (AR) or Virtual Reality (VR) technologies.
- **Content Improvement:** Investigating how AI can be used to optimize content for search engines (SEO) and social media platforms to increase reach and engagement.
- **User Feedback:** Considering gathering user opinions and conducting surveys to understand how audiences perceive AI-generated content compared to content produced by humans.

Hisham Al-Natour explains that AI can customize content for diverse audiences, analyze data to understand audience interests, and deliver content that aligns with current and future trends. Additionally, tools such as video editing, text writing, and image generation significantly reduce production costs and provide content creators with professional results without the need to hire full teams.

However, he also emphasizes that there are a number of challenges facing the use of AI in content creation, including:

- **Ensuring Content Originality:** The increase in digital content production may lead to the spread of unreliable information or duplicated content, weakening credibility.
- **Professional Ethics:** Questions arise regarding the professionalism of some content creators and whether they are truly specialized or simply relying on tools to attract followers without providing real value.
- **Elimination of the Human Element:** Complete reliance on AI raises ethical questions, as it may diminish the role of human skills.
- **Accuracy and Verification:** Despite the ease of using AI tools, a lack of skills in handling them may result in disseminating inaccurate information.
- **Privacy and Intellectual Property:** There is growing concern about the intellectual property rights of AI-

generated content and whether this content threatens the rights of original creators.

- **Increased Competition:** Many new media platforms now compete with traditional newspapers, such as social media and websites.
- **Changing Audience Behavior:** Audiences have become more selective in the content they consume and are more engaged with media content.
- **Declining Revenues:** Changes in audience behavior lead to reduced advertising revenues for newspapers, impacting their sustainability.
- **Threat of Job Losses:** AI could replace certain journalistic tasks, such as news writing, analysis, and translation.
- **Risks of Misinformation:** AI can be used to spread false or misleading news, harming the integrity of journalistic work.
- **Ethical Challenges:** The use of AI in the media raises many ethical concerns, including privacy, data protection, and its impact on public opinion formation.

In addition to these challenges, journalists also face various pressures from content creators, including:

- **Work Pressures:** Journalists experience significant work pressures, especially in a highly competitive environment.
- **Security Threats:** Journalists are subject to security threats from entities that do not wish to disclose their information.
- **Declining Professional Respect:** Journalists suffer from a decline in professional respect from the public and official entities.

Research Results:

Verification of the First Hypothesis: There are statistically significant differences between the mean scores of the experimental group students in the pre-test and post-test of the knowledge achievement test for applications based on artificial intelligence technologies in developing media content creation skills, favoring the post-test.

Table of Significance of the Difference Between Mean Scores of the Study Sample Students in the Pre-Test and Post-Test of the Knowledge Achievement Test

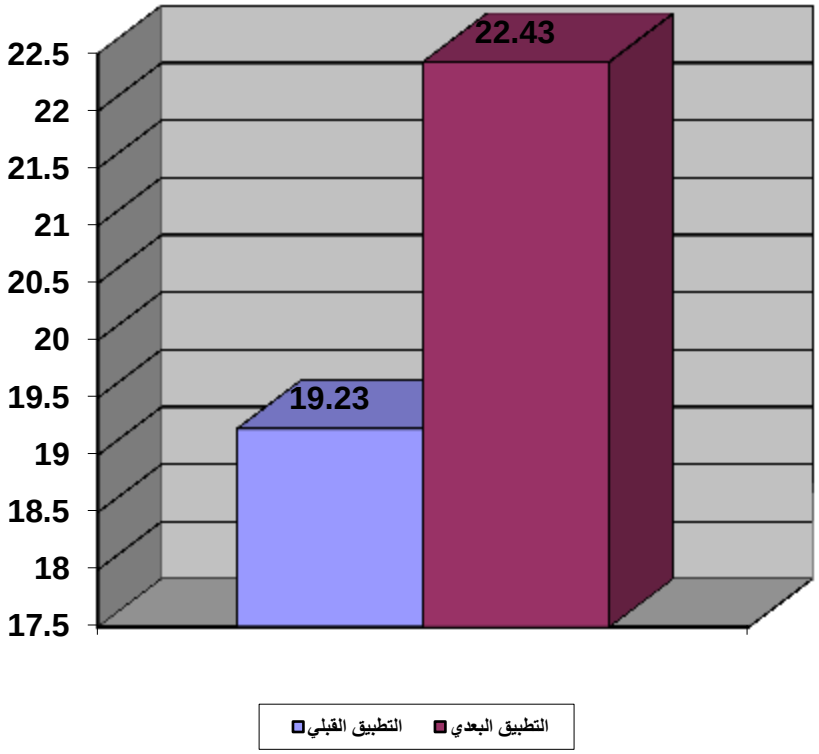
Degrees of Freedom: 29

Tool	N	Application	Mean	Standard Deviation	t-Value	Significance Level	Eta Squared	Effect Size
Knowledge Achievement Test	30	Pre-Test	19.23	3.52	-3.71	0.00	0.322	Large
		Post-Test	22.43	5				

There is a statistically significant difference at the level of (0.01) between the mean scores of the experimental group students in the pre-test and post-test of the knowledge achievement test for applications based on artificial intelligence technologies in developing media content creation skills, favoring the post-test, with a t-value of (3.71).

The effect size was calculated using the Eta Squared coefficient, and it was found to be large, with an Eta Squared value of (0.322). This indicates that the effect of the independent variable (the use of applications based on artificial intelligence technologies) on the dependent variable (the development of media content creation skills among educational media students) is significant, confirming the effectiveness of the training program for the experimental group in the research sample.

Figure Illustrating the Significance of Differences Between the Pre-Test and Post-Test of the Knowledge Achievement Test



Results Indication:

The results indicate an increase in knowledge achievement in the post-test for the research group when comparing the results of the pre-test and post-test of the knowledge achievement test. This increase can be attributed to several reasons, the most important of which are:

1. **Ease of Use of Educational Content:** The educational content does not require complex technical skills for learning, which has helped maintain motivation to learn, while also alleviating fear and anxiety associated with using the content.
2. **Clarity of Educational Objectives:** The clear educational goals of the provided content helped students identify the topic and gain a deeper understanding of the scientific material.

3. **Planning and Organizing Course Structure:** The sequencing and organization of course topics were designed to be easy, catering to the students' capabilities and skills.
4. **Diverse Learning Elements:** The use of various learning elements and presentations, such as texts and static images, engages students' attention and provides greater opportunities for learning through multiple senses simultaneously.
5. **Relevance of AI Technologies and Media Content Creation Skills:** The contemporary nature of the topics studied regarding AI technologies and media content creation skills increased excitement, attention, and focus, enhancing their absorption of educational content, as evidenced by their interaction during learning.
6. **Student Autonomy and Self-Learning Support:** Providing content allows students to follow and review lessons at their own pace and according to their individual learning styles.
7. **Design Based on the ADDIE Model:** This model made it easy for students to navigate the learning environment and access modules, facilitating interaction with the content, the researcher, and peers, thus boosting knowledge achievement related to skills.
8. **Use of Synchronous Communication Tools:** Utilizing WhatsApp groups and messaging the instructor increased interaction and improved achievement rates.

Verification of the Second Hypothesis:

There are statistically significant differences between male and female participants in the experimental sample regarding their mean scores in the post-test of the knowledge achievement test.

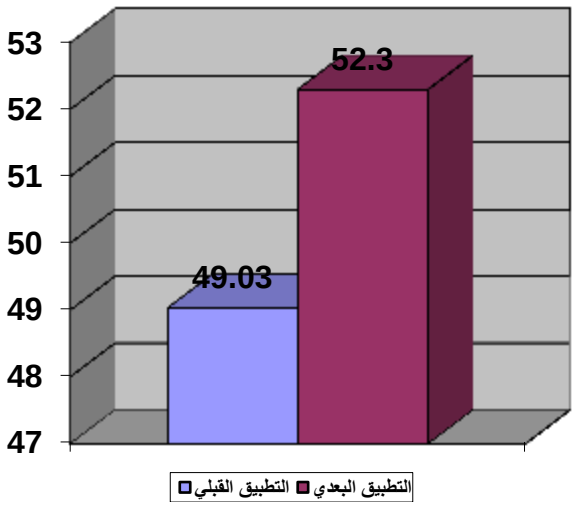
Table Illustrating the Significance of Differences Between Male and Female Participants in the Experimental Sample in Their Mean Scores in the Post-Test of the Knowledge Achievement Test (N=30)

Variables	Males (N=15)	Females (N=15)	t-Value	Significance Type	T-Test
Knowledge Achievement Test	(M)	(N)	(M)	(N)	3.86
	19.53	2.85	25.33	5.06	

Interpretation:

The previous table shows that there are statistically significant differences between male and female participants in the experimental sample regarding their mean scores in the post-test of the knowledge achievement test, favoring females over males. This indicates that the rate of benefit from the training program was higher for females compared to males, resulting in greater skill development in media content creation for females.

Illustrates the significance of differences between males and females in the post-test of the knowledge achievement test.



Results Indication:

The results indicated an increase in female scores in the knowledge achievement test for media content creation skills among the research group when comparing the scores of males and females in the post-test. The researcher attributes these results to several reasons, the most important of which are:

1. **Stability of Females at Home:** Their engagement with the provided educational content.
2. **Females' Love for Continuous Learning:** Their desire for modern techniques that enhance work and productivity.
3. **Higher Educational Motivation Among Females:** Compared to males.
4. **Males' Engagement in Other Tasks:** Such as work during study time.
5. **Females' Fear of Failing in Assigned Tasks:** Especially if linked to academic grades.

Interpretation of Results:

- The assessment of the ethical dimensions imposed by AI technologies in digital media institutions showed a relative weight.
- The main ethical issues posed by AI technologies in digital media institutions include the replacement of certain jobs with AI technologies, changes in access methods to sources, alterations in research and information discovery techniques, and modifications in content creation methods.
- The assessment of the professional dimensions imposed by AI technologies in media institutions.
- The significant ethical and professional challenges journalists face due to the employment of AI technologies in digital media content creation include a lack of creativity and innovation, the replacement of journalists by AI technologies, the absence of oversight for journalists, and the lack of self-awareness of AI algorithms.

Research Recommendations:

- Utilize AI technologies in media content creation.
- Mitigate the negative impacts of AI technologies in the media field.
- Encourage creativity and innovation in the application of AI in media content creation.
- Educate journalists on the concepts and applications of AI algorithms.
- Train and qualify journalists to reduce the gap between them and programmers.
- Ensure accuracy and credibility of AI-generated content before publication.
- Develop an ethical guide regulating the use of AI technologies.
- Select AI tools that demonstrate efficiency in data, energy, and resource use to address the challenges faced globally across various fields, including climate change, environmental issues, agriculture, manufacturing, justice and equality, anti-corruption efforts, energy enhancement, productivity, employment, and education.

Proposed Research Topics:

- Mechanisms for utilizing AI technologies in digital media content creation.
- Proposed ethical and professional guidelines for regulating the use of AI technologies in digital media content creation.

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