

Media Professionals' Use of Digital Applications and its Association with the Enhancement of Their Professional Performance

Mahmoud Gamal Sayed Abd Elrahman^{1*}, Khaled Mohamed Salah Abdou², Ahmed Samir Hammad³

¹ Associate Professor, Imam Mohammad Ibn Saud Islamic University (IMSIU), Email : mgamal@imamu.edu.sa

² Assistant professor, Imam Mohammad Ibn Saud Islamic University (IMSIU), Email : kmabdou@imamu.edu.sa

³ Associate Professor, Imam Mohammad Ibn Saud Islamic University (IMSIU), Email : ashammd@imamu.edu.sa

*Corresponding Author: mgamal@imamu.edu.sa

Citation: Elrahman, M. G. S. A., Abdou, K. M. S., & Hammad, A. S. (2025). Media Professionals' Use of Digital Applications and its Association with the Enhancement of Their Professional Performance, *Journal of Cultural Analysis and Social Change*, 10(4), 3785-3803. <https://doi.org/10.64753/jcasc.v10i4.3663>

Published: December 25, 2025

ABSTRACT

Research into the importance of digital applications in improving the working professional performance of media practitioners in media institutions is the focus of this study. A mixed-method approach was used in this research. The researcher collected quantitative data by surveying 153 media professionals. The sample was comprised of media professionals with a variety of level of experience, genders and fields. The researcher examined and used satisfaction with working professional performance, barriers to adopting digital applications and strategies to remediate barriers. Statistical testing was predominately Chi-square, T-tests, ANOVA and correlation analyses. Findings indicated significant relationships between the use of digital applications and working professional performance. This overall association was strongest for practitioners with the least amount of experience and for male practitioners. Challenges included low bandwidth access to communication technology, high costs and technology illiteracy. Suggestions for strategies included targeted training, policy improvements by the institution and development of better resources. Overall, the findings of this research illustrate the need for comprehensive strategies that provide the opportunity for technological, educational and organizational environments to enhance the potential benefits of digital applications for media practitioners.

Keywords: Digital Applications, Media Performance, Professional Development, Technology Adoption, Media Institutions.

INTRODUCTION

The use of digital sources in media organizations has transformed their production and distributions processes through writing, presenting, publishing, and marketing for convergence to ensure that subsequent processes are framed simultaneously. The move towards digital highlights the need to follow the various digital strategies to ensure quality content, and operational quality, while promoting cost effectiveness, but so that it also promotes continuous innovation that provides new opportunities to develop employee capabilities, and content outputs that align with changing community citizenship knowledges.

For media professionals, assimilating digital applications has become integral and has boosted performance with multiple aspects. By utilizing digital platforms such as email or social media for contacting audiences and gathering feedback, media sources and media-related programs can provide fun, engaging, and quick ways for audiences to interact with them. Digital technology facilitates ease for information access and fact-checking new content for credibility. Video and audio platforms have enhanced the ability to produce, upload, and distribute rich content that is visually and aurally stimulating. New applications focusing on news coverage keep media

practitioners up with trends and increasing an ability for practitioners to fill the gaps for their lively, dynamic, and engaging media content.

This study examines the association between media professionals' practice of digital applications (independent variable), as well as enhancing their profession (dependent variable), with mediators like educational level, media outlet type, and job seniority.

LITERATURE REVIEW

Previous studies highlight the importance of digital applications, how these applications change media work, and how they improve professional performance. To achieve this transformation, institutions must be willing to take on different applications that accompany this unpredictable change to media work—strengthening practitioner competencies and institutional effectiveness systems.

Several studies have explored the impact of digital applications on professional performance. **Calvo-Rubio and Rojas-Torrijos (2024)**, for example, investigated whether traditional journalism's codes of behavior have endured in the age of digital journalism and artificial intelligence. Their research indicates that there are digital innovations, specifically the integration of AI in the newsroom, has changed journalistic practice as journalists can now focus on creative skills. However, there are still concerns as to whether AI can reproduce existing codes and professional quality standards.

Al-Dub'a (2024) analyzed the workplace of the central desk editors both in respect to the traditional media and the digital media to see any differences and/or similarities. The editors formed strict standards, such as verifying the content, adhering to editorial policy, and paying attention to sensitive news items related to national security. The work environment was shaped by tools and other innovations like computers, lower internet costs, browsers, and search engines. They stressed the central skills that editors need: writing, summarizing, information extraction, verification of sources, and varying tasks involving added value from multiple sources of information.

Saleh (2024) investigated the impact of artificial intelligence (AI) on employee performance and as a tool to improve the efficiency of media organizations. The results showed evidence to suggest that AI produces quantifiable improvements in performance of organizations and individuals toward expected performance being in part a function of available material and immaterial stimuli. It goes on to elaborate the expected deadlines for the advances in AI technology being used contemptibly across the industry.

Boufous and Azdimousa (2023) assessed the positive influence of AI on Moroccan journalists' performance and how they adapt to the challenges faced by modern journalism, which increasingly incorporates AI-based tools and applications. They determined that AI furthermore enabled journalists to improve their skills in gaining a wider audience while maintaining their positions as trusted and relevant sources of information.

Al-Shalhoub (2023) explored the relationship between the professional performance of the *Al-Ikbbariya* Saudi Channel and the perceived credibility of the news and topics that it provides to Saudi audiences, as well as the amount of trust the audience has in the content of the channel and its tendency with the perceived credibility. The study found a statistically significant relationship between the professional performance of *Al-Ikbbariya* and the credibility of the station among Saudi viewers. This indicates that the more positively the audience relates *Al-Ikbbariya* with professional performance, the greater their perceived credibility of that station.

Abdelhalim (2022) explored Egyptian journalists' perceptions of the Supreme Council for Media Regulation (SCMR) and related bodies in rationalizing professional performance. Findings revealed generally positive views of the SCMR's role in enforcing media standards, particularly its actions to block websites and accounts violating ethical codes. However, respondents expressed negative attitudes toward its limited role in training young journalists, which they perceived as rhetorical rather than practical.

Hassanein (2022) analyzed the difficulties of investigative journalism as they relate to the investigative editor's performance in some Egyptian newspapers. The research found that recruitment into investigative units was based on professional competence. The results also illustrated the differences between the press institutions regarding the type and amount of training given to journalists, as well as the differing degree of prioritization given to the teaching of investigative journalism skills.

Frias and Cruz (2021) investigated the value Venezuelan journalists ascribe to utilizing digital tools within their everyday work. The findings indicated that 34.9% of journalists believe the use of digital tools is extremely important; 68.3% regard them as necessary as a means to search for sources and information related to stories; and 52.4% indicated that they valued social media platforms as a means to promote stories and engage audiences.

Wafi and Zaqout (2021) reported on the type of media training available to communications practitioners in Palestinian media organizations, as well as its relevance to professionalism. The study highlighted that training is fundamental to the media profession and improving practitioners' professional performance. The main motivations for participating in training courses are based on the subject area, while the main barriers are connected

to the demands of workload and lack of time. Specialized academic institutions were the most common sources of training.

The literature review describes the importance of digital applications being used by journalists to improve professional practice, specifically by developing skills like editing, photography, and communication via social media. In using these tools, journalists achieve efficiency while creating content that meets audiences' informational needs and advanced levels of engagement through interaction with the digital media platforms. As shown above, literature is limited as it relates to digital applications, journalism, and the quality of journalism and media. Still, these gaps provide justification for the current study's aim of exploring how journalists are leveraging digital applications and how that relates to their professional development.

Problem Statement

The use of digital applications has developed into a necessity for media professionals and have dramatically improved their utility. Digital applications improve the way media professionals manage daily work tasks and improve productivity in addition to offering a variety of tools that enhance creativity and develop content attractiveness. Furthermore, digital applications enable media professionals to reach wider audiences quicker and more efficiently that strengthens journalists' abilities to disseminate sustainable media content.

Digital technologies have simplified, accelerated and influenced media production and media distribution, from writing and presentation, to publishing and marketing; this highlights the need to incorporate digital applications to improve the quality, efficiency, and creativity of content. To recap, the applications of digital technologies have strengthened practitioners' media creation skills, improved their communication and production skills, and improved the standard of products related to the shifting informational needs of the audience. It is also worth noting that there was a consistent trend of professionals placing greater reliance on digital applications, and that contributed to substantial performance improvement.

Based on this, the research problem is expressed in the following main question:

"What is the relationship between journalists' use of digital applications and the development of their professional performance?"

STUDY OBJECTIVES

- Identify the key digital applications used by journalists in professional practice.
- Analyze patterns and habits in journalists' use of digital applications.
- Assess the contributions of digital applications to enhancing professional performance in media institutions.
- Examine the areas where journalists integrate digital applications into their work.
- Evaluate both the positive and negative impacts of using digital applications in media contexts.
- Investigate journalists' perceptions of the implications of digital application use for themselves and their institutions.
- Explore journalists' attitudes toward obstacles to using digital applications in media institutions.
- Examine perspectives on the prospective use of digital applications in future media work.

Study Questions

- Which digital applications are most frequently used by journalists in their professional practice?
- What habits and patterns characterize journalists' use of digital applications?
- To what extent do digital applications enhance professional performance in media institutions?
- In which areas do journalists integrate digital applications into their work?
- What positive and negative impacts result from journalists' use of digital applications?
- How do journalists perceive the implications of digital application use for themselves and their institutions?
- What are journalists' attitudes toward obstacles to using digital applications?
- What are journalists' perspectives on the future use of digital applications in media work?

Study Hypotheses

H1: There is a statistically significant relationship between the perceived impacts (positive and negative) of journalists' use of digital applications and their attitudes toward the prospective use of these applications.

H2: Statistically significant differences exist, based on demographic variables (gender, educational level, job seniority), in the perceived positive and negative impacts of journalists' use of digital applications in media work.

H3: Statistically significant differences exist, based on demographic variables (educational level, type of media outlet, job seniority), in the areas where journalists integrate digital applications into their work.

H4: There is a statistically significant correlation between the extent of media professionals' use of digital applications and their attitudes toward the role of these applications in enhancing professional performance.

H5: There is a statistically significant correlation between the advantages of using digital applications within media institutions and media professionals' attitudes toward their role in enhancing professional performance.

Study Boundaries

Substantive scope: The research focuses on "Journalists' use of digital applications and its relationship to the enhancement of their professional performance."

Human scope: The study population comprises communicators working within media institutions.

Temporal scope: The research was conducted during the year 2024.

Type and Method of the Study

This study is a descriptive study focused on examining aspects of journalist's professional practice. This study intends to describe and assess (this phenomenon) through an accurate and objective observation (**Abu Hatab & Sadiq**). Falling within the category of descriptive studies (**Hussein, 2006:**), it focuses on examining the relationship between journalists' use of digital applications and the advancement of their professional performance, while considering relevant mediating variables.

The study utilized the survey method, which is arguably the most popular method in media research, particularly in descriptive studies. It is a systematic and controlled process that collects data which is descriptive of a particular phenomenon (**Hussein, 1995**). Specifically for this study a media survey was used to investigate journalists' use of digital applications and view - to what extent do the applications influence their work.

Study Population and Sample

The study targeted media practitioners across all Bahraini media institutions. An exploratory survey was conducted using a convenience sample of 153 practitioners. The inclusion of journalists is justified by the following considerations:

- The media sector is heavily shaped by technological advances, making it essential to analyze practitioners' use of digital applications and their impact on professional performance.
- Digital tools have transformed work patterns and communication practices, and examining these dynamics can inform strategies to enhance performance.
- The use of digital applications fosters skill development and effectiveness in media work, underscoring the importance of investigating their relationship with professional performance.
- Practitioners' growing engagement on social media platforms has become a key driver of professional development, warranting systematic analysis.

Study Tool

The study used a structured questionnaire as the main instrument for collecting data. Commonly used in social sciences and media research, the structured questionnaire is a precise way to collect direct data from a specified sample through a fixed set of questions. The questionnaire makes it possible to identify what information participants have, and is able to investigate their beliefs, attitudes, motivations, and the processes that account for their targets. The versatility of the questionnaire, and its various formats, confirms its usefulness for a broad range of research purposes (**Hussein, 1995**).

The questionnaire was organized into five sections:

1. Use of digital applications in media practice.
2. Criteria for enhancing professional performance in media work stemming from the use of digital applications.
3. The future of media work in light of digital applications and strategies for their optimal utilization.
4. Negative implications associated with the use of digital applications in media work.
5. Respondents' demographic profile.
- 6.

- **Reliability and Validity:**

The internal consistency of the scale was evaluated using Cronbach's alpha, which yielded a coefficient of 0.933, indicating high reliability (93%) and confirming the clarity and suitability of the questionnaire items. The criterion validity, calculated as the square root of Cronbach's alpha, reached 0.965, further affirming the strong measurement quality of the instrument (**Table 1**).

Table 1. Cronbach's Alpha for the Scale Measuring Media Practitioners' Attitudes toward the Role of Digital Applications in Enhancing Professional Performance

Reliability	Cronbach's Alpha
93%	0.933

Theoretical Framework: The Professional Practice Approach in Media

The Professional Practice Approach in Media represents the methodological and ethical framework through which journalists and media practitioners produce and deliver news content (**Dina & El-Sayed Saleh, 2024**). It is grounded in internationally recognized ethical principles designed to safeguard the integrity, objectivity, and transparency of media work.

- **Ethical Principles and Standards (Nikolopoulou & Miliopoulou, 2023):**

The core of this approach lies in a set of ethical standards that guide media professionals toward responsible and trustworthy journalism. These include:

- **Accuracy and truthfulness** – Ensuring factual correctness and precision in all media outputs.
- **Impartiality** – Presenting diverse viewpoints fairly, free from bias or distortion.
- **Respect for privacy** – Upholding individual privacy rights in compliance with relevant laws and regulations.
- **Conflict-of-interest avoidance** – Maintaining editorial independence by avoiding any form of influence that could compromise objectivity.
- **Community engagement** – Actively engaging with local communities, reflecting their issues through balanced and comprehensive coverage.

- **Key Components (Sokolović, Šiđanin, Duđak, & Kokotović, 2023):**

The operationalization of the professional practice approach requires a combination of essential competencies and values:

- **Media ethics** – A formalized code of conduct emphasizing objectivity, accuracy, respect for privacy, and protection of free expression.
- **Technical media skills** – Proficiency in media writing, editing, audiovisual presentation, and the use of contemporary communication technologies.
- **Cultural and social literacy** – The ability to interpret and convey complex sociocultural and political issues with depth and accuracy.
- **Legal and ethical compliance** – Comprehensive understanding and adherence to national and international media laws, press freedoms, and ethical obligations.
- **Diversity and inclusivity** – Commitment to equitable representation of voices across diverse, multicultural audiences.

- **Critiques and Limitations (Ekman & Widholm, 2023):**

Despite its strengths, the professional practice approach is subject to recurrent criticism, including:

- **Credibility concerns** – Perceptions that some outlets compromise professional standards, eroding public trust.
- **Bias and selective framing** – Accusations of manipulating facts or framing stories to serve particular narratives.
- **Political instrumentalization** – Allegations of leveraging journalism for partisan or political objectives.
- **Social fragmentation** – Claims that certain coverage styles intensify societal divisions.
- **Professional lapses** – Insufficient fact-checking and deviation from established journalistic protocols.

Operationalizing the Professional Practice Approach in This Study

This study adopts the Professional Practice Approach to examine how digital applications influence media practitioners' performance and identify ways to optimize their use for better outcomes. It also informs training

and professional development by clarifying the skills and knowledge required for effective adoption of these tools, while supporting digital transformation in media institutions by demonstrating how digital applications enhance both professional performance and content quality. In doing so, the study contributes to scholarly literature and promotes the development of strong digital competencies within the media sector amid ongoing transformation.

Study Concepts and Terms

- **Digital applications in media work:** Defined as a set of tools and software that enable the news and media industry to enhance performance through the use of modern technologies. These applications include social media platforms, electronic publishing systems, data-analysis tools, and customer relationship management software, all of which collectively contribute to improving the efficiency and effectiveness of media practices.

- **Enhancement of media professional performance:** Enhancement of media professional performance refers to the development of skills and knowledge in the media field and the advancement of practical practices to meet emerging challenges through the adoption of digital tools and new technologies. This process improves the quality and effectiveness of media work, supports the production of engaging and innovative content, and strengthens practitioners' capacity to adapt to the rapid transformations that define the digital media environment.

STUDY RESULTS

This study investigates the relationship between media practitioners' use of digital applications and the enhancement of their professional performance. Adopting a survey design, face-to-face questionnaires were administered to a sample of 153 respondents, with demographic variables incorporated into the analysis. The subsequent section presents the main empirical findings in response to the study's research questions.

- **Training on Digital Applications During Employment:**

Table 2. Receipt of training courses on digital applications by years of professional experience

Years Statement	Less than 5 years		5-10 years		11-15 years		More than 15 years		Total	
	n	%	n	%	n	%	n	%	n	%
I always receive training courses	10	29.4	17	47.2	26	63.4	26	61.9	79	51.6
I sometimes receive training courses	12	35.3	11	30.6	10	24.4	6	14.3	39	25.5
No, I have not received training courses	12	35.3	8	22.2	5	12.2	10	23.8	35	22.9
Total	34	100	36	100	41	100	42	100	153	100

χ^2 value = 13.439; degrees of freedom = 6; contingency coefficient = 0.284; significance level = significant at 0.05.

The chi-square test ($\chi^2 = 13.439$, $df = 6$, $p < .05$) confirmed a statistically significant relationship between journalists' years of experience and their receipt of training courses on using digital applications in their media institutions. The contingency coefficient ($C = 0.284$) further indicates the strength of this association. Detailed results show that 51.6% of respondents reported always receiving training courses, 25.5% sometimes received training, while 22.9% had not received any training in digital application use within their institutions.

- **Degree to Which the Study Sample Benefited from Training Courses on Using Digital Applications in Their Media Work:**

Table 3. Degree to which the study sample benefited from training courses on using digital applications in their media work

Experience Benefit	Less than 5 years		5-10 years		11-15 years		More than 15 years		Total	
	n	%	n	%	n	%	n	%	n	%
High benefit	7	31.8	12	42.9	27	75.0	23	71.9	69	58.5
Moderate benefit	11	50.0	13	46.4	4	11.1	6	18.8	34	28.8
Low benefit	4	18.2	3	10.7	5	13.9	3	9.4	15	12.7
Total	22	100	28	100	36	100	32	100	118	100

χ^2 value = 18.913; degrees of freedom = 6; contingency coefficient = 0.372; significance level = significant at 0.01.

The chi-square test ($\chi^2 = 18.913$, $df = 6$, $p < .01$) confirmed a statistically significant relationship between journalists' years of experience and the degree to which they benefited from training on digital applications in their media work. The contingency coefficient ($C = 0.372$) indicates a moderately strong association. Results further reveal that 58.5% of the sample reported benefiting greatly from training, 28.8% to a moderate extent, and 12.7% to a low extent.

• **Extent to Which the Study Sample Benefited from the Training Courses They Received in Their Media Work:**

Table 4. Extent of benefit from the training courses received in their media work

Extent Statement	To a great extent		To moderate extent ^a		To a low extent		Points	Weighted %	Overall response
	n	%	n	%	n	%			
Becoming aware of new variables affecting my work	36	53.4	30	25.4	25	21.2	258	14.63	High
Learned new methods to implement my work	55	46.6	44	37.3	19	16.1	272	14.52	High
Improved my skill in employing technology in my work	51	43.2	48	40.7	19	16.1	268	14.31	High
Expanded my experience and knowledge	50	42.4	48	40.7	20	16.9	266	14.6	Moderate
Mastery of communication technology skills	50	42.4	48	40.7	20	16.9	266	14.6	Moderate
Professional development	47	38.8	53	44.9	18	15.3	265	14.15	Moderate
Benefit from human expertise in the field	52	44.1	40	33.9	26	22.0	262	14.0	Moderate
Total	N= 118						1873		

• **Study Sample's Attitudes toward Using Digital Applications in Their Media Work:**

Table 5. Attitudes of the study sample toward using digital applications in their media work

Experience Attitude	Less than 5 years		5-10 years		11-15 years		More than 15 years		Total	
	n	%	n	%	n	%	n	%	n	%
High benefit	17	50.0	16	44.4	21	51.2	23	54.8	77	50.3
Moderate benefit	15	44.1	18	50.0	15	36.6	16	38.1	64	41.8
Low benefit	2	5.9	2	5.6	5	12.2	3	7.1	12	7.8
Total	34	100	36	100	41	100	42	100	153	100

χ^2 value = 2.869; degrees of freedom = 6; contingency coefficient = 0.136; significance level = not significant.

The chi-square test ($\chi^2 = 2.869$, $df = 6$) was not statistically significant at any conventional level, with a contingency coefficient of 0.136, indicating no significant relationship between years of experience and journalists' attitudes toward using digital applications in their media work. Descriptive results show that 50.3% of respondents expressed positive attitudes toward digital applications, 41.8% reported neutral attitudes, while only 7.8% expressed negative attitudes.

• **Extent of the Study Sample's Use of Digital Applications in Practicing Their Media Work:**

Table 6. Extent of use of digital applications in practicing media work

Extent Applications	Always		Sometimes		Rarely		Points	Weighted %	Overall response
	n	%	n	%	n	%			
Interactive applications	112	73.2	41	26.8	-	-	418	13.0	Always
Automated media reporting	90	58.8	63	41.2	-	-	396	12.3	Always
Podcast	73	47.7	80	52.3	-	-	379	11.8	Always
Augmented journalism	72	47.1	74	48.4	7	4.6	371	11.5	Always
Machine reading of audience-specific news	81	52.9	52	34.0	20	13.1	367	11.4	Sometimes
AI applications (ChatGPT)	61	39.9	77	50.3	15	9.8	352	10.9	Sometimes
Robots	62	40.5	66	43.1	25	16.3	343	10.7	Sometimes
Virtual photography	50	32.7	60	39.2	43	28.1	313	9.7	Sometimes
Language processing (speech-to-text & text-to-speech)	19	12.4	87	56.9	47	30.7	278	8.64	Sometimes
Total	N= 153						3217		

Respondents reported the highest use of interactive applications (ranked 1st, 13.0% weight), followed by automated media reporting (12.3%), podcasts (11.8%), and augmented journalism (11.5%). Moderate use was observed for machine reading of audience-specific news (11.4%), AI applications such as ChatGPT (10.9%), robots (10.7%), and virtual photography (9.7%). The lowest use was reported for language processing applications, including speech-to-text and text-to-speech (8.64%).

• **Main Advantages of Using Digital Applications within the Media Institution – from the Perspective of Journalists in the Study Sample:**

Table 7. Main advantages of using digital applications within the media institution, from the journalists' perspective

Response Advantages	Agree		Neutral		Disagree		Points	Weighted %	Overall response
	n	%	n	%	n	%			
Broadcasting content on multiple platforms simultaneously	145	94.8	–	–	8	5.2	443	6.95	Agree
Identifying current trends	119	77.8	29	19.0	5	3.3	420	6.59	Agree

Creating AI-generated videos	130	85.0	7	4.6	16	10.5	420	6.59	Agree
Following latest articles/news from multiple sources (with category filtering)	122	79.7	18	11.8	13	8.5	415	6.51	Agree
Detecting fabricated media content	122	79.7	7	4.6	24	15.7	404	6.34	Agree
Audience interaction	110	71.9	30	19.6	13	8.5	403	6.33	Agree
Scheduling posts & analyzing social media performance	100	65.4	21	13.7	32	20.9	374	5.87	Agree
Live streaming on YouTube & Facebook	68	44.4	80	52.3	5	3.3	369	5.79	Agree
Mobile video editing	79	51.6	55	35.9	19	12.4	366	5.75	Agree
Audio game editing	63	41.2	86	56.2	4	2.6	365	5.73	Neutral
Photo editing & metadata adjustment	61	39.9	89	58.2	3	2.0	364	5.71	Neutral
Easy podcast publishing	58	37.9	83	54.2	12	7.8	352	5.53	Neutral
Professional video editing	47	30.7	102	66.7	4	2.6	349	5.48	Neutral
Easy access to information & services	63	41.2	69	45.1	21	13.7	348	5.46	Neutral
Image authenticity verification	46	30.1	89	58.2	18	11.8	334	5.24	Neutral
Easy creation of graphic designs	37	24.2	97	63.4	19	12.4	324	5.09	Neutral
Idea generation & content writing	64	41.8	39	25.5	50	32.7	320	5.02	Neutral
Total	N= 153						6370		

The study sample largely agreed on the advantages of using digital applications in media institutions. The top-ranked advantage was broadcasting content across multiple platforms simultaneously (6.95%), followed by identifying current trends and creating AI-generated videos (6.59% each). The ability to follow and organize articles and news from multiple sources ranked third (6.51%), while detecting fabricated media content ranked fourth (6.34%), and audience interaction fifth (6.33%). Other notable advantages included scheduling posts and analyzing social media performance (5.87%), live streaming on platforms such as YouTube and Facebook (5.79%), and mobile video editing (5.75%).

Respondents reported neutral views toward some applications, such as audio game editing (5.73%) and photo editing with metadata adjustment (5.71%). Lower-ranked advantages included easy podcast publishing (5.53%),

professional video editing (5.48%), easy access to information and services (5.46%), image authenticity verification (5.24%), graphic design creation (5.09%), and, finally, idea generation and content writing (5.02%).

• **Disadvantages of Using Digital Applications within Their Media Institution, from the Perspective of Journalists in the Study Sample:**

Table 8. Disadvantages of using digital applications within their media institution, from the journalists' perspective

Response Disadvantage	Agree		Neutral		Disagree		Points	Weighted %	Overall response
	n	%	n	%	n	%			
Reducing the need for some traditional jobs	119	77.8	4	2.6	30	19.6	395	19.9	Agree
Increased likelihood of personal data being exposed to hacking or viruses	96	62.7	34	22.2	23	15.0	379	19.1	Agree
Excessive reliance on technology	45	29.4	80	52.3	28	18.3	323	16.2	Neutral
Increased digital isolation due to relying on applications for all major tasks	54	35.3	42	27.5	57	37.3	303	15.2	Neutral
Higher costs	48	31.4	48	31.4	57	37.3	297	14.9	Neutral
Some applications require intensive training to use	40	26.1	58	37.9	55	35.9	291	14.6	Disagree
Total	N= 253						1988		

The study sample identified key disadvantages of digital applications in media institutions. The most cited was the reduction in demand for certain traditional jobs (19.9%), followed by the increased risk of personal data exposure to hacking or viruses (19.1%). Respondents were neutral regarding excessive reliance on technology (16.2%), growing digital isolation due to overdependence on applications (15.2%), and higher costs (14.9%). They disagreed, however, that the need for intensive training to use some applications should be considered a disadvantage (14.6%).

• **Degree of Impact of Digital Applications on the Professional Performance of the Study Sample within Their Media Institutions:**

Table 9. Degree of impact of digital applications on professional performance by years of experience

Experience Impact	Less than 5 years		5-10 years		11-15 years		More than 15 years		Total	
	n	%	n	%	n	%	n	%	n	%
To a great extent	14	41.2	15	41.7	9	22.0	11	26.2	49	32.0
To some extent	14	41.2	11	30.6	21	51.2	22	52.4	68	44.4
To a small extent	6	17.6	10	27.8	11	26.8	9	21.4	36	23.5
Total	34	100	36	100	41	100	42	100	153	100

χ^2 value = 7.387; degrees of freedom = 6; contingency coefficient = 0.215; significance level = not significant.

The chi-square test ($\chi^2 = 7.387$, $df = 6$) was not statistically significant, and the contingency coefficient (0.215) confirmed no significant relationship between journalists' years of experience and the impact of digital applications on their professional performance. Descriptive results indicate that 44.4% of respondents reported the applications affected their performance to some extent, 32.0% to a great extent, while 23.5% perceived only a small impact.

• **Impact of Digital Applications on the Performance of Employees in the Media Institution – as perceived by the study sample:**

Table 10. Perceived degree of impact of digital applications on employee performance

Response Impact	To a great extent		To moderate extent ^a		To a small extent		Points	Weighted %	Overall response
	n	%	n	%	n	%			
Increased ability to handle technology	111	72.5	40	26.1	2	1.3	415	16.3	High
Developing journalists' professional performance and skills in line with new future requirements	113	73.9	26	17.0	14	9.2	405	15.9	High
Increased media work skills	96	62.7	56	36.6	1	0.7	401	15.7	High
Changed ways of communicating with the audience	98	64.1	43	28.1	12	7.8	392	15.4	High
Saved significant effort and time in work performance	67	43.8	45	29.4	41	26.8	332	13.0	High
Institution became more responsive to audience requests	38	24.8	74	48.4	41	26.8	303	11.9	Moderate
Increased audience interactivity with the content presented	48	31.4	50	32.7	55	35.9	299	11.7	Moderate
Total	N= 153						2547		

Respondents identified the most significant perceived impacts of digital applications as an increased ability to handle technology (16.3%), the development of performance and skills for future requirements (15.9%), enhanced media work skills (15.7%), changes in methods of audience communication (15.4%), and saving effort and time (13.0%). Moderate impacts included greater institutional responsiveness to audience requests (11.9%) and increased audience interactivity with content (11.7%).

• **Degree of Impact of Digital Applications on the Professional Performance of the Study Sample within Their Media Institutions:**

Table 11. Degree of impact of digital applications on professional performance by years of experience

Experience Satisfaction	Less than 5 years		5-10 years		11-15 years		More than 15 years		Total	
	n	%	n	%	n	%	n	%	n	%
Very satisfied	24	70.6	20	55.6	21	51.2	22	52.4	87	56.9
Somewhat satisfied	9	26.5	14	38.9	15	36.6	10	23.8	48	31.4
Not satisfied at all	1	2.9	2	5.6	5	12.2	10	23.8	18	11.8
Total	34	100	36	100	41	100	42	100	153	100

χ^2 value = 12.160; degrees of freedom = 6; contingency coefficient = 0.271; significance level = significant at 0.05.

The chi-square test ($\chi^2 = 12.160$, $df = 6$, $p < .05$) indicated a statistically significant relationship between journalists' years of experience and their satisfaction with professional performance in light of digital application use. The contingency coefficient ($C = 0.271$) confirmed the strength of this association. Descriptive results showed that 56.9% of respondents were very satisfied with their professional performance when using digital applications, 31.4% were somewhat satisfied, while only 11.8% reported being not satisfied at all.

• **Journalists' Opinions in the Study Sample Regarding the Role of Digital Applications in Developing Their Professional Performance within Their Media Institutions:**

Table 12. Study Sample's Opinions on the Role of Digital Applications in Developing Their Professional Performance

Response Statement	Agree		Neutral		Disagree		Points	Weighted %	Overall response
	n	%	n	%	n	%			
Digital applications help complete tasks on time	69	45.1	39	25.5	45	29.4	2.16	0.852	Agree
Facilitate business management in the media institution	4	2.6	43	28.1	106	69.3	1.33	0.526	Disagree
Reduce the effort exerted by employees in the media institution	35	22.9	94	61.4	24	15.7	2.07	0.619	Neutral
Contribute to increasing productivity within the media institution	-	-	43	28.1	110	71.9	1.28	0.451	Disagree
Increase the accuracy of employees' work	44	28.8	99	64.7	10	6.5	2.22	0.553	Neutral
Lack or insufficient availability of equipment and digital	34	22.2	33	21.6	86	56.2	1.66	0.820	Disagree

applications hinders media work									
Digital applications reveal strengths and weaknesses in the performance of the media institution and its employees	15	9.8	58	37.9	80	52.3	1.58	0.666	Disagree
Managers work to improve employee performance by providing all kinds of digital applications	56	36.6	43	28.1	54	35.3	2.01	0.851	Neutral
Digital applications have contributed to immediacy and timeliness	115	75.2	28	18.3	10	6.5	2.69	0.590	Agree
Gave me speed in publishing news	116	75.8	27	17.6	10	6.5	2.69	0.588	Agree
Developed my media skills	116	75.8	15	9.8	22	14.4	2.61	0.727	Agree
Enabled me to keep up with developments in digital applications	86	56.2	46	30.1	21	13.7	2.42	0.723	Agree
Enhance the effectiveness of equipment and tools needed to provide media services	84	54.9	48	31.4	21	13.7	2.41	0.721	Agree
Improve the public image of journalists	91	59.5	40	26.1	22	14.4	2.45	0.734	Agree
Speed up access to information and data to provide media services	118	77.1	29	19.0	6	3.9	2.73	0.526	Agree
Provide media services that align with	92	60.1	39	25.5	22	14.4	2.46	0.734	Agree

digitization technologies									
Ensure sustainability in delivering media services creatively and innovatively	125	81.7	18	11.8	10	6.5	2.75	0.565	Agree
I always make sure to benefit from digital applications	-	-	29	19.0	124	81.0	1.19	0.393	Disagree
Their use is the only way to ensure service quality in the institution	12	7.8	102	66.7	39	25.5	1.82	0.552	Neutral
My use of digital applications increases the chances of improving my work performance in the institution	120	78.4	23	15.0	10	6.5	2.72	0.579	Agree
These digital applications require continuous training and expertise to learn and use	29	19.0	28	18.3	96	62.7	1.56	0.793	Disagree

The data in the above table indicate the responses of the study sample regarding the statements that clarify the role of digital applications in developing their professional performance within their media institutions:

- Respondents agreed that digital applications enhance their professional performance by facilitating timely task completion, increasing immediacy and speed in publishing, improving media skills, enabling adaptation to technological developments, enhancing the effectiveness of tools used in media services, strengthening journalists' public image, providing faster access to information, ensuring compatibility with digitization technologies, and supporting the sustainability of creative and innovative media practices.

- Their views were neutral regarding the role of digital applications in reducing employees' effort, improving work accuracy, encouraging managers to enhance staff performance through digital resources, and being the sole guarantee of service quality.

- However, respondents disagreed that digital applications facilitated institutional business management, boosted overall productivity, or that insufficient availability of digital tools hinders media work. They also rejected claims that these applications consistently reveal institutional strengths and weaknesses, are always fully utilized, or necessarily require continuous training and expertise.

• Challenges Facing the Use of Digital Applications in Media Institutions (as Viewed by the Study Sample):

Table 13. Challenges Facing the Use of Digital Applications in Media Institutions (as Viewed by the Study Sample)

Response Statement	Agree		Neutral		Disagree		Points	Weighted %	Overall response
	n	%	n	%	n	%			

Weak communication infrastructure and high cost	127	83.0	11	7.2	15	9.8	418	10.4	Agree
Technological illiteracy	121	79.1	10	6.5	22	14.4	405	10.1	Agree
Fear of losing professional status	75	49.0	56	36.6	22	14.4	359	8.95	Agree
Lack of clarity in principles and policies for adopting digital applications	97	63.4	8	5.2	48	31.4	355	8.85	Agree
Organizational culture not suitable for adopting digital applications	79	51.6	28	18.3	46	30.1	339	8.45	Agree
Lack of qualification and training	81	52.9	12	7.8	60	39.2	327	8.15	Neutral
I do not have the necessary capabilities to use these applications	85	55.6	6	3.9	62	40.5	329	8.2	Neutral
Financial resources	78	51.0	12	7.8	63	41.2	321	8.0	Neutral
Rapid technological developments	21	13.7	116	75.8	16	10.5	311	7.75	Neutral
Lack of incentives to use these digital applications	26	17.0	86	56.2	41	26.8	291	7.26	Neutral
Presence of a knowledgeable and tech-savvy user who can accept and deal with modern technology	49	32.0	29	19.0	75	49.0	280	6.98	Disagree
Weak communication infrastructure and high cost	127	83.0	11	7.2	15	9.8	418	10.4	Agree
Total	N= 153						4011		

The study revealed consensus among media professionals on several challenges in using digital applications within their institutions. The most significant were weak communication infrastructure and high costs (10.4%), technological illiteracy (10.1%), and fear of losing professional status (8.95%). Additional challenges included a lack of clear principles and policies for adopting digital applications (8.85%) and an organizational culture unsupportive of digital adoption (8.45%).

Neutral responses were recorded toward issues such as insufficient qualification and training (8.15%), limited individual capabilities to use digital applications (8.2%), financial constraints (8.0%), rapid technological developments (7.75%), and lack of incentives for adoption (7.26%).

Respondents disagreed on considering the presence of tech-savvy users as a challenge (6.98%) and ranked weak human efficiency lowest (6.88%).

• **Study Sample's Suggestions for Addressing Challenges in Using Digital Applications in Media Institutions:**

Table 14. Study Sample's Suggestions for Addressing Challenges in Using Digital Applications in Media Institutions

Response Statement	Agree		Neutral		Disagree		Points	Weighted %	Overall response
	n	%	n	%	n	%			
Develop training and qualification plans for communication staff to master these applications	123	80.4	14	9.2	16	10.5	413	16.6	Agree
Raise the educational and professional level of communication staff through specialized training and qualification programs	98	64.1	31	20.3	24	15.7	380	15.3	Agree
Study the requirements of the targeted regional environment and its audience, and work to meet them within the framework of digital applications	89	58.2	31	20.3	33	21.6	362	14.6	Agree
Amend work regulations in communication institutions to align with the nature of technological development	92	60.1	24	15.7	37	24.2	361	14.5	Agree
Allocate budgets and financial items dedicated to applying digital technology in regional media	84	54.9	23	15.0	46	30.1	344	13.8	Agree
Mutual support between	68	44.4	31	20.3	54	35.3	320	12.9	Neutral

different state institutions and the regional media institution									
Difficulty in controlling advanced software applications	67	43.8	18	11.8	68	44.4	305	12.3	Neutral
Total	N= 153						2485		

The study sample of media professionals agreed on several key suggestions to address challenges in adopting digital applications. The most important was developing training and qualification plans for communication staff (16.6%), followed by raising their educational and professional levels through specialized programs (15.3%), and studying the requirements of the regional environment and its audience to better integrate digital applications (14.6%). Amending institutional regulations to align with technological developments (14.5%) and allocating budgets dedicated to digital technologies (13.8%) were also emphasized.

Neutral responses were observed toward suggestions such as fostering mutual support between state institutions and media organizations (12.9%) and addressing difficulties in controlling advanced software applications (12.3%).

Testing Study Hypotheses

- **H1: There is a statistically significant relationship between the perceived impacts (positive and negative) of journalists' use of digital applications and their attitudes toward the prospective use of these applications:**

Table 15. T-test Results for the Significance of Differences Between the Mean Scores of Media Professionals in Their Attitudes Toward the Role of Digital Applications in Enhancing Their Professional Performance by Gender

Gender	N	Mean	Std. Deviation	t-value	df	Significance
Male	82	2.16	0.484	2.247	151	Significant at 0.05
Female	71	1.99	0.463			

The T-test results in the above table indicate the presence of statistically significant differences between the mean scores of male and female media professionals in their attitudes toward the role of digital applications in enhancing their professional performance, in favor of males. The value of t was (2.247), which is statistically significant at the 0.05 level. This confirms that male respondents were more positive toward the role of digital applications in improving their professional performance, supporting the validity of the first hypothesis.

- **H2: Statistically significant differences exist, based on demographic variables (gender, educational level, job seniority), in the perceived positive and negative impacts of journalists' use of digital applications in media work:**

Table 16. T-test Results for Differences Between Mean Scores of Media Professionals' Attitudes toward the role of digital applications in enhancing their professional performance by specialization

Specialization	N	Mean	Std. Deviation	t-value	df	Significance
Media specialization	95	2.08	0.467	0.190	151	Not significant
Non-media specialization	58	2.07	0.491			

The T-test results in the above table indicate no statistically significant differences between the mean scores of media professionals with media specialization and those with non-media specialization in their attitudes toward the role of digital applications in developing their professional performance. The t value was 0.190, which is non-significant at any significance level. This does not support the hypothesis.

- **H3: Statistically significant differences exist, based on demographic variables (educational level, type of media outlet, job seniority), in the areas where journalists integrate digital applications into their work:**

Table 17. One-way ANOVA Test for Differences in Media Professionals' Attitudes Toward the role of digital applications in developing their professional performance according to years of experience

Years of Experience	Mean	Std. Deviation	F-value	Significance Level
Less than 5 years	2.56	0.651	7.096	0.01
5–10 years	2.31	0.577		
11–15 years	2.07	0.469		
More than 15 years	2.07	0.513		

The results of the one-way ANOVA test show that there are statistically significant differences in the attitudes of media professionals toward the role of digital applications in developing their professional performance according to years of experience. The F-value (7.096) is statistically significant at the 0.01 level.

The mean score for those with less than 5 years of experience was 2.56, which is higher compared to those with 5–10 years (2.31), 11–15 years (2.07), and more than 15 years (2.07). This indicates that less experienced professionals have more positive attitudes toward the role of digital applications in enhancing their performance, confirming the hypothesis.

- **H4: There is a statistically significant correlation between the extent of media professionals' use of digital applications and their attitudes toward the role of these applications in enhancing professional performance:**

Table 18. Correlation Between Digital Application Usage and Attitudes Toward Their Role in Professional Development

Variable	Degree of Media Professionals' Use of Digital Applications Within Media Institutions
Correlation Coefficient (R)	0.291
Direction	Positive
Strength	Strong
Significance Level	0.01

The results indicate a strong positive correlation between the degree of use of digital applications by the media professionals in the study sample and their attitudes toward the importance of these applications in enhancing their professional performance. The correlation coefficient $R = 0.291$ is statistically significant at the 0.01 level, confirming the validity of the hypothesis.

- **H5: There is a statistically significant correlation between the advantages of using digital applications within media institutions and media professionals' attitudes toward their role in enhancing professional performance:**

Table 19. Correlation Between the Advantages of Using Digital Applications Within the Media Institution and Attitudes Toward Their Role in Professional Development

Variable	Advantages of Using Digital Applications Within the Media Institution
Correlation Coefficient (R)	0.202
Direction	Positive
Strength	Strong
Significance Level	0.01

The findings show a strong positive correlation between the advantages gained by media professionals from using digital applications in their institutions and their attitudes toward the role of these applications in improving professional performance. The correlation coefficient $R = 0.202$ is statistically significant at the 0.01 level, confirming the validity of the hypothesis.

CONCLUSION

The research has shown strong evidence that digital applications are a key factor in enhancing the professional practice of media professionals if issues such as infrastructure, skills, and institutional capacity are properly employed. The results do suggest a strong association between the use of digital applications and the level of

practitioners' practice/work improvement attitudes, and the amount used. The less experienced practitioners had more positive attitudes, indicating they may have more opportunity to incorporate new technology easily. For media organizations to leverage the digital tools further, they must take a client-oriented perspective built on continuous training, employment supportive policies, and resourcing. These factors are not simply optional factors but are essential to build a context where the use of technology demonstrates improved professional practice, operational advancements, and innovation in media practice.

REFERENCES

- Abdelhalim, S. (2022). Egyptian journalists' and media professionals' attitudes toward the role of the Supreme Council for Media Regulation and national press-media regulatory bodies in rationalizing professional performance. *The Egyptian Journal of Media Research*, 81, 147–201.
- Abu Hatab, F., & Sadiq, A. (1991). *Research methods and techniques of social analysis in psychological and educational sciences*. Cairo: Anglo-Egyptian.
- Al-Dub'a, M. I. (2024). Perceptions of central desk editors in traditional and digital Egyptian media regarding journalistic roles and standards and their impact on professional performance. *The Egyptian Journal of Media Research*, 86, 243–307.
- Al-Shalhoub, A. M. A. (2023). The relationship between the professional performance of the news channel and its credibility among the Saudi public: A study. *The Egyptian Journal of Public Opinion Research*, 22(4), 101–158.
- Boufous, S., & Azdimousa, H. (2023). Possible impacts of artificial intelligence (AI) on the performance of the journalism industry: Case of Morocco. In *International Conference on Advanced Intelligent Systems for Sustainable Development*. Cham: Springer Nature Switzerland.
- Calvo-Rubio, L. M., & Rojas-Torrijos, J. L. (2024). Criteria for journalistic quality in the use of artificial intelligence. *Communication & Society*, 247–259.
- Frías, M., & Calderín-Crúz, M. (2021). Importance of use of digital tools, metrics and social networks by Venezuelan journalists. In *Ninth International Conference on Technological Ecosystems for Enhancing Multiculturality*. New York: Association for Computing Machinery.
- Hassanein, S. (2022). Investigative journalism practice challenges and their impact on investigative editors' performance in Egyptian daily newspapers. *Journal of Media Research*, 60, 1059–1118.
- Hussein, S. (2006). *Media research: Studies in scientific research methods*. Cairo: Alam Al-Kutub.
- Saleh, D. (2024). The professional impact of employing artificial intelligence technologies on the performance of employees in Egyptian governmental and private television channels. *The Egyptian Journal of Media Research*, 86, 221–285.
- Wafi, A. M., & Zaqout, A. S. M. (2021). Media training for communicators in Palestinian media institutions and its relationship to professionalism. *Journal of Media Research*, 56(2), 635–676.