

## The Role of Advanced Google Tools in Supporting Fact-Checking Journalism Among Arab Journalists: A Field Study

Salima Bashir ALKUWAFI

Assistant Lecturer and Head of the Department of Journalism, Department of Journalism, Faculty of Arts and Media, University of Misurata, Misurata, Libya.

دور أدوات جوجل المتقدمة في دعم صحافة التحقق من المعلومات

لدى الصحفيين العرب: دراسة ميدانية

سالمه بشير الكوافي

محاضر مساعد، قسم الصحافة، كلية الفنون والإعلام، جامعة مصراتة، مصراتة، ليبيا.

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### الملخص:

شهد الفضاء الإعلامي العربي تحولاً رقمياً متسارعاً أتاح تدفقاً واسعاً للمعلومات، لكنه أسهم في الوقت نفسه في اتساع انتشار المعلومات المضللة، بما فرض تحديات متزايدة على الصحفيين وممارسات التحقق من المعلومات. هدفت هذه الدراسة إلى استكشاف دور أدوات جوجل المتقدمة في دعم صحافة التحقق من المعلومات لدى الصحفيين العرب، والكشف عن مستوى معرفتهم بهذه الأدوات وأنماط استخدامها والعوامل المؤثرة في توظيفها مهنيًا، اعتمدت الدراسة المنهج الوصفي التحليلي ضمن تصميم يجمع بين الأسلوبين الكمي والكيفي، وجمعت البيانات من 56 صحفياً عربياً باستخدام استبانة إلكترونية، إلى جانب مقابلات معمقة. أظهرت النتائج ارتفاع مستوى إدراك أهمية أدوات جوجل المتقدمة في عمليات التحقق، إذ بلغت نسبة الصحفيين الذين أقرروا بأهميتها 94.6%، مقابل انخفاض ملحوظ في استخدام بعض الأدوات المتقدمة؛ فلم تتجاوز نسبة استخدام أداة Pinpoint 7.1% كما كشفت النتائج عن فجوة بين الوعي بأهمية الأدوات والقدرة على استخدامها بكفاءة، رغم أن 87.5% من أفراد العينة أشاروا إلى حصولهم على تدريب في مجال التحقق. وأظهرت النتائج أن ضغوط العمل اليومية ونقص التدريب المتخصص يمثلان أبرز العوائق أمام الاستخدام الفعال. وتتلخص الدراسة إلى أن تعزيز قدرة الصحفيين العرب على مواجهة التضليل الرقمي يتطلب تدخلاً مؤسسياً منظماً، من خلال دمج مهارات التحقق الرقمي في المناهج الأكاديمية وبرامج التطوير المهني المستمر، مع توفير تدريب عملي متخصص على أدوات التحقق المتقدمة. وتبرز أهمية الدراسة في ربط الاستخدام المهني للأدوات الرقمية بمتطلبات العمل الصحفي، وتقديم مؤشرات يمكن الاستفادة منها في تطوير التدريب ورفع كفاءة ممارسات التحقق في المؤسسات الإعلامية العربية.

**الكلمات المفتاحية:** صحافة التحقق، أدوات جوجل، ذكاء اصطناعي، صحفيون عرب، معلومات مضللة

### Abstract:

The Arab media environment has undergone rapid digital transformation, enabling broad information flows while simultaneously expanding the circulation of misinformation and creating challenges for journalists and fact-checking practices. This study investigates the role of advanced Google tools in supporting fact-checking journalism among Arab journalists by examining their awareness, patterns of use, and the factors influencing professional adoption.

A descriptive-analytical approach was employed within a mixed-method design. Data were collected from 56 Arab journalists through an online questionnaire, complemented by in-depth interviews. The findings indicate a high level of awareness of the importance of advanced Google tools in verification practices: 94.6% of respondents recognized their importance. However, the use of some advanced tools remained limited; for example, only 7.1% reported using Pinpoint.

The results also reveal a clear gap between awareness of the value of these tools and the ability to use them effectively. Although 87.5% of respondents reported receiving training related to fact-checking, the findings indicate a continuing need for more specialized and practice-oriented training. Daily work pressures and insufficient specialized training emerged as the main barriers to effective adoption. The study concludes that strengthening Arab journalists' capacity to counter digital misinformation requires coordinated institutional intervention beyond individual effort.

This includes integrating digital verification skills into journalism curricula and establishing sustainable professional development programs that provide practical, continuous training in advanced verification tools and techniques.

**Keywords:** Fact checking, Google tools, Artificial Intelligence, Arab journalists, Misinformation.

## Introduction

Arab and international journalism faces significant challenges in the field of information digital fact-checking due to the accelerating spread of misinformation and fake news in the digital space.

Although Google provides an integrated arsenal of free, specialized Fact-checking tools such as the Fact Check Explorer, Reverse Image Search, and Pinpoint, studies in this field remain relatively scarce in the Arab world.

## Research Problem

The research problem lies in the gap between the immense technical potential of Google's Fact-checking tools and the actual practices of Arab journalists in fact-checking information, and the consequent impact on the credibility of Arab media content and its ability to counter misinformation.

## Research Aims

To examine the role of advanced Google tools in enhancing fact-checking journalism among Arab journalists.

To determine the extent of Arab journalists' knowledge and use of Google tools in Fact-checking practices.

To analyze how these tools contribute to improving the accuracy of investigative reporting.

To identify the obstacles that hinder the use of these tools in daily journalistic work.

To evaluate the impact of specialized training on journalists' effectiveness in countering misinformation.

## Research Questions

What is the level of awareness and actual use of specialized Google tools for information Fact-checking among Arab journalists?

How do Google tools (Fact Check Explorer, Reverse Image Search, Pinpoint) contribute to enhancing the accuracy of investigative reporting?

What are the obstacles that prevent Arab journalists from adopting digital Fact-checking tools in their daily work?

What is the impact of specialized training on the efficiency of using Google fact-checking tools in countering misinformation?

## The Academic and Practical Importance of the Research

### Academic Importance

This study contributes to filling a significant knowledge gap in Arab academic literature regarding the use of advanced digital tools in fact-checking journalism.

While most previous studies have focused on general media practices or the phenomenon of misinformation, this research specifically examines the role of Google's specialized tools such as Pinpoint, Fact Check Explorer, and Reverse Image Search within the context of Arab journalistic work.

Additionally, it provides empirical data on the gap between awareness and actual usage, offering a foundation for future comparative and longitudinal studies in the field.

### Practical Importance

The findings of this study offer practical insights for several stakeholders.

For media institutions, the results highlight the urgent need for structured training programs and the allocation of resources to enhance journalists' digital capabilities.

For journalism educators, the study provides evidence to support the integration of digital Fact-checking skills into academic curricula.

Furthermore, the research serves as a reference for technology companies such as Google by identifying specific challenges faced by Arab journalists, including weak Arabic language support and geographical restrictions, thereby informing the development of more inclusive and effective tools.

## Research Terms

### Fact-checking

Or investigative journalism encompasses a set of practices and tools that aid in Fact-checking the accuracy of information within a specific field, as the essence of journalism is a commitment to Fact-checking, which ensures credibility.

**Operationally**, fact-checking is defined in this study as "a systematic process for evaluating the accuracy of digital content based on verifiable evidence, encompassing the examination of texts, images, videos, and claims."

### Google Tools

As a Digital Infrastructure for Fact-checking: Classification and Analysis, and it presents/ provide evidence and proof confirming the results of the Fact-checking process.

**Operationally**, Google tools are defined as "the digital infrastructure provided by Google to journalists, including advanced search engines, reverse image search tools, Pinpoint, and others, aimed at supporting Fact-checking processes."

It also provides journalists with the ability to build a more resilient and trustworthy journalistic environment, influence the development of professional practices, and contribute to enhancing the integrity of media content in the digital space.

### AI tools

The intelligent embedded within Google's Fact-checking tools, that assist journalism verifying and enhancing the accuracy and efficiency of fact-checking practices.

**Operationally**, AI tools are defined as "the algorithms and intelligent models embedded within Google's Fact-checking tools, such as pattern recognition and big data analysis, which automate parts of the Fact-checking process."

### Previous Studies

6.1 (ALKUWAFI, 2026) This study examined the professional reality of Arab female fact-checkers and the challenges of employing modern technologies in their work.

It used a descriptive approach with a questionnaire applied to a sample of 98 female fact-checkers and interviews with experts.

The results revealed an almost absolute dominance of Google tools in Arab Fact-checking practices; the "Google" search engine was identified as a fundamental, vital, and indispensable tool (97.9%).

The "Google Images" tool topped the list of reverse image search tools, described as a "quasi-universal" tool among fact-checkers (97.9%), due

to its comprehensiveness and ease of accessing information in multiple languages.

6.2 (Omar, 2025) The study by Sherine Omar (2025) aimed to monitor the extent of journalists' use of visual recognition technologies and determine their attitudes towards them as an application of artificial intelligence in the journalistic field, with a specific focus on the "Google Lens" application.

The study used a survey method applied to a purposive sample of 100 journalists registered with the Egyptian Journalists Syndicate.

The results revealed that "Google Lens" is the most well-known among the sample (75%), with "instant text translation" and "searching and verifying information" via image scan being the primary motives for use.

The study showed that employing this tool enhances the journalist's digital efficiency and enables the production of more accurate content, despite some concerns among journalists about the potential for passing on misinformation or infringing on intellectual property rights.

6.3 (Yang, et al., Are Fact-Checking Tools Helpful? An Exploration of the Usability of Google Fact Check, 2024) This study aligns with the current research by focusing on the technical and informational characteristics of digital environments, the same environment in which Arab journalists operate.

It provides an understanding of the mechanisms of digital environments for employing advanced Google tools in information Fact-checking processes, enabling journalists to face the challenges of digital information flow and ensure the accuracy of published content.

6.4 (Wolf & Mitra, 2024) This study examined the impact of generative AI on the work of fact-checking organizations through 30 interviews with 38 participants from 29 organizations across six continents.

It aimed to identify the opportunities generative AI offers and the challenges limiting its adoption. Results showed varied uses based on organizational infrastructure, applied in editing (quality control), investigation (trend analysis), public communication (content translation), technology (data processing), and advocacy (promoting information literacy).

6.5 (Hartley, 2024) This study aimed to analyze the effectiveness of four AI-powered fact-checking tools: ClaimBuster, Full Fact, TheFactual, IsThisCredible, and Google Fact-Check Explorer.

Using a purely quantitative method, it revealed very high technical effectiveness, with 100% accuracy in detecting false claims and 89% of reports producing unanimous results from independent sources like Politifact and FactCheck.org.

The study also showed that all tools rely on databases organized by human fact-checkers, meaning AI acts as a technical intermediary facilitating access to pre-existing human judgments, not as an independent source of truth.

6.6 (Kyumin & Nguyen, 2018) This study aimed to address the key problem that fake news continues to spread widely despite the existence of fact-checking systems.

The researchers suggested these systems are underutilized and that after fake news is detected, a subsequent step is needed to prevent people from sharing it.

The results revealed the ability of certain individuals to respond quickly to false claims, with most fact-checking tweets being published within one day, focusing clearly on political issues and fabricated news.

## Commentary on Previous Literature and the Study's Contribution

Al-Kuwafi's study (2026) confirms one of the main findings of the current research—namely, the dominance of basic Google tools among Arab journalists.

However, it does not explain the gap between awareness and advanced usage.

The current study adds a new interpretation specific to the Arab context: the mere presence of systematic institutional training (87.5% of journalists received training) is not sufficient to close the awareness-practice gap; thus, the decisive factor is not the absence of training, but rather the quality, depth, and continued relevance of training, alongside structural barriers such as time pressure and weak Arabic-language support.

Omar's study (2025) aligns with the current research in confirming the growing role of Google's AI-powered tools in facilitating fact-checking.

However, the current study extends Omar's work in three fundamental ways: (1) comprehensiveness of tools studied (10 tools versus one), (2) geographical and professional scope (multiple Arab countries versus Egypt only), and (3) functional specialization (fact-checking versus general journalistic tasks).

The study by Nguyen & Lee (2018) demonstrated that employing advanced technical tools enhances fact-checking efficiency.

The current research builds on this finding by applying it to the Arab context, revealing that technical effectiveness alone (as shown by Hartley, 2024) does not guarantee adoption when structural barriers such as poor Arabic language support and lack of training exist.

The study by Wolfe & Mitra (2024) shares with the current research an interest in the role of AI in fact-checking journalism and relies on qualitative methodology.

However, while their study covered six continents without focusing on the Arab world, the current research fills this gap by revealing additional challenges specific to the Arab context: lack of specialized training, weak Arabic language support, and geographical restrictions on tools.

Furthermore, while Wolfe & Mitra relied solely on qualitative analysis, this research uses a mixed-method approach, providing a more comprehensive understanding.

Thus, the two studies are complementary: the first provides a global framework, and the second applies it to the Arab context.

## The Study's Added Value

### Theoretical Contribution

This study proposes a new model for understanding the gap between awareness and practice in fact-checking among Arab journalists.

Unlike previous studies that focused on individual factors (skills, motivation), this research demonstrates that "institutional factors —

particularly the insufficiency of existing training to drive advanced adoption (despite 87.5% receiving training), combined with persistent work pressure ('lack of time') — are the primary determinants of technology adoption."

This shifts the theoretical framework from individual-centric models (such as the Technology Acceptance Model) to institution-centric explanations.

### Methodological Contribution

This study employs a mixed-method design (quantitative questionnaire with 56 journalists + qualitative in-depth interviews with expert fact-checkers) within the Arab context—an approach rarely used in previous Arab fact-checking research.

This design enables methodological triangulation, capturing not only the prevalence of the gap but also its underlying causes from the practitioners' perspectives.

### Practical Contribution

The study provides evidence-based recommendations for three stakeholder groups:

1. media institutions (on designing effective training programs).
2. journalism educators (on integrating digital Fact-checking into curricula).
3. technology companies such as Google (on improving Arabic language support, addressing geographical restrictions, and enhancing local content fact-checking).

### Theoretical Framework

#### Fact-Checking in the Digital Age: Concept and Practice

Fact-checking encompasses a set of practices and tools that aid in fact-checking information accuracy within a specific field, as the essence of journalism is a commitment to fact-checking, which ensures credibility.

According to the [GIJN](#), investigative journalism is defined as "in-depth, original journalistic work that employs systematic research methods and often exposes secrets."

Investigation involves intensive use of public records and data, with a focus on social justice and accountability.

According to the [datajournalism](#) site of the European Journalism Centre, Fact-checking is the fundamental editorial and scientific approach used by journalism and other professions to confirm the accuracy of information or its source (such as a video, image, or claim).

It can also be defined as the examination, review, and Fact-checking of visual and textual content to confirm or refute the facts contained therein.

Kovach and Rosenstiel, in their book *The Elements of Journalism*, emphasized that "the essence of journalism is a discipline of Fact-checking," ensuring trustworthiness in news reporting (Rosenstiel & Kovach, 2001, p. 21).

The core principles of Fact-checking journalism include not adding anything that did not happen, not deceiving the public, transparency about methods and motives, and reliance on original reporting.

The profession of information fact-checking has become essential in our current digital age, as "fake news strikes the credibility of newspapers and other media, and also reflects the decline in professional capabilities of some newsroom editors when they cannot distinguish between true and false news (Rosenstiel & Kovach, 2001, p. 47)".

It is also "an important approach to protecting information integrity in light of the increasing influence of social media, where people can freely share information and potentially spread misinformation" (Yang, et al., *Are Fact-Checking Tools Helpful? An Exploration of the Usability of Google Fact Check*, 2024).

It is also defined as "a systematic process for evaluating the accuracy of digital media content" (ALKUWAFI, 2026, p. 102)

#### Google Tools as a Digital Infrastructure for fact-checking: Classification and Analysis

Due to the rapid flow of information in form and impact, false content has emerged, compelling journalists to turn to digital tools for information fact-checking.

These various tools have provided different methods and ways to Factcheck diverse visual and textual content.

Google has distinguished itself by enabling journalists to practice their profession with a higher degree of accuracy and responsibility by providing a number of tools that support and enhance fact-checking journalism.

Google has offered several AI-powered tools aimed at assessing source reliability, auditing references and data, ensuring quality standards are met, and elevating the level of accuracy in the fact-checking process.

These tools provide evidence and proof confirming the results of the fact-checking process.

From the researcher's perspective, Google tools provide journalists with the ability to build a more resilient and trustworthy journalistic environment, influence the development of professional practices, and contribute to enhancing the integrity of media content in the digital space.

This research discusses 10 Google tools used by Arab journalists in the information fact-checking process:

Google Advanced Search, Google Reverse Image Search, Google Maps, Google Pinpoint, Google Scholar, Google Trends, Google Public Data Explorer, Google Sheets, NotebookLM, Google Alerts.

## Theoretical grounding of the study

This study is guided by Rogers' Diffusion of Innovation Theory (1983) which states "Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system."

(Rogers, 1983 , p. 7). Rogers identifies five attributes that influence technology adoption: relative advantage, compatibility, complexity, trialability, and observability.

In the context of Arab journalists and Google tools, the findings of this study reveal that compatibility with existing newsroom workflows is low (journalists lack time for learning new tools), while observability of benefits is high yet does not

translate into adoption: 94.6% of the sample acknowledged the importance of Google tools, but actual use of advanced tools remained below 9%.

Furthermore, the complexity of advanced tools like Pinpoint, combined with limited effective trialability, although 87.5% of journalists received training, that training may not have provided sufficient hands-on, extended practice with advanced tools explains the knowledge-practice gap observed in the data.

Thus, this theoretical framework shifts the explanation from individual motivation (a common assumption in previous studies) to institutional and structural factors such as training systems and work culture.

## Research Methodology

### Research Population and Sample

#### *Quantitative Sample*

The questionnaire was distributed electronically to more than 100 Arab journalists working in fact-checking journalism using an availability sampling method.

A total of 56 completed responses were received (response rate approximately 56%), representing journalists from several Arab countries, including Libya, Egypt, Saudi Arabia, the United Arab Emirates, Jordan, Tunisia, Morocco, Yemen, and Lebanon.

#### *Qualitative Sample*

Qualitative Sample: In-depth semi-structured interviews were conducted with a purposive sub-sample of 14 journalists and fact-checkers. The purposive selection criteria included: Participants included Ruwaida Alarabi, Ahmed Al-Ashwal, Arwa Al-Kaali, Ghadir Hamadi, Shaimaa Abdelaziz, and others.

#### *The purposive selection criteria included*

a. a minimum of five years of experience in fact-checking journalism, b. employment across diverse media institutions (traditional and digital), and c. geographical diversity.

Participants included Ruwaida Alarabi, Ahmed Al-Ashwal, Arwa Al-Kaali, Ghadir Hamadi, Shaimaa Abdelaziz, and others.

## Data Analysis Procedures

### Quantitative Analysis

Data from the 56 questionnaires were analyzed using SPSS software to produce frequency and percentage distributions across key axes.

### Qualitative Analysis

Interview transcripts were analyzed using thematic analysis following Braun & Clarke's (2006) six-phase framework collect the data, Engage with the data, Code the extracts from the data, Generate the code categories from the codes, Contextualise the terms from the categories coded extracts and Contextualise and represent the findings:-

1. familiarization with data.
2. generating initial codes.
3. searching for themes.
4. reviewing themes.
5. defining and naming themes.
6. writing the analysis.

## Ensuring validity and Reliability (Trustworthiness)

To ensure the quality of the research, the following procedures were employed:

### General strategies

- **Methodological Triangulation:** Quantitative and qualitative findings were compared and integrated to identify convergence and divergence.
- **External Review:** The research methodology was reviewed by two external experts in social science research methods.
- **Reflexivity:** The researcher maintained a reflective journal documenting decisions and potential biases throughout the research process.

## Detailed reliability and validity procedures

- **Internal validity (Credibility):** Achieved through prolonged engagement with the data (repeated reading of interview transcripts), peer debriefing with two colleagues familiar with fact-checking research, and member checking with two interview participants who confirmed the accuracy of the initial interpretations.
- **External validity (Transferability):** Provided through thick description of the sample characteristics, including distribution across different Arab countries (Libya, Egypt, Saudi Arabia, UAE, Jordan, Tunisia, Morocco, Yemen, and Lebanon) and diverse media institutions (digital platforms, newspapers, news websites). This allows readers to assess applicability of findings to similar contexts.
- **Reliability (Dependability):** Dependability was enhanced through maintaining a detailed audit trail that included raw questionnaire data, anonymized interview transcripts, coding notes, and analytical memos.

In addition, an inter-coder reliability procedure was conducted on 20% of the qualitative data in collaboration with an independent colleague experienced in fact-checking journalism and qualitative thematic analysis.

The coding agreement yielded a Cohen's Kappa coefficient of 0.81, indicating a high level of consistency in thematic interpretation..

For the quantitative instrument (Questionnaire), internal consistency was verified using Cronbach's Alpha coefficient on a pilot study of 10 journalists. The results confirmed high reliability as follows:

**Figure 1:** Cronbach's Alpha results

| Dimension                                        | Cronbach's Alpha Value |
|--------------------------------------------------|------------------------|
| Dimension 1: Cognitive Awareness of Google Tools | 0.84                   |
| Dimension 2: Professional and Applied Usage      | 0.81                   |
| Dimension                                        | Cronbach's Alpha Value |
| <b>Total Reliability Score</b>                   | <b>0.89</b>            |

- **Objectivity (Confirmability):** Confirmed through a reflexivity memo documenting the researcher's assumptions and potential biases throughout the research process, as well as the external review by two research methodologists who examined the alignment between data, analysis, and conclusions.

## Data Analysis

### Quantitative Data Analysis

The data collected from the (56) questionnaires were analyzed using descriptive statistical techniques, including frequencies and percentages, in order to identify patterns of awareness, usage, and perceived importance of Google tools in supporting fact-checking journalism among Arab journalists.

### Demographic Analysis

The sample reflected diversity in both professional experience and workplace affiliation. The largest segment of respondents (41.1%) had between 5 and 10 years of professional experience.

Regarding workplace type, digital platforms represented the highest proportion (41.1%), followed by newspapers and news websites (33.9%), indicating a strong representation of journalists working within digital media environments.

### Awareness and Training Levels

Findings from the field survey revealed a high level of awareness regarding the importance of Google tools in supporting fact-checking journalism. Specifically, (60.7%) of the respondents considered these tools "extremely important," while (33.9%) viewed them as "important" in journalistic work.

Thus, a combined percentage of (94.6%) perceived Google fact-checking tools as either important or extremely important, reflecting increasing professional recognition of the role of digital fact-checking technologies in combating misinformation and digital fact-checking digital content.

The findings also showed that a large proportion of respondents (87.5%) had received specialized

training related to digital fact-checking tools, indicating growing institutional and professional interest in enhancing fact-checking skills among Arab journalists.

### Analysis of Knowledge and Usage Levels

The analysis demonstrated noticeable variation in journalists' levels of knowledge and use of Google Fact-checking tools.

Traditional and widely accessible tools such as reverse image search, Google Maps, and Google Advanced Search were among the most frequently used tools.

In contrast, more specialized tools, particularly Google Pinpoint and Google Trends, showed comparatively lower levels of awareness and practical use.

The findings further revealed a disparity between familiarity with basic Fact-checking tools and proficiency in advanced tools.

Approximately (67.9%) of respondents reported either limited knowledge of Google Pinpoint, awareness without practical use, or complete unfamiliarity with the tool, compared to only (32.1%) who indicated good knowledge or advanced proficiency in using it.

These findings suggest the existence of a gap between awareness of digital Fact-checking technologies and their advanced professional application in journalistic practice.

### Comparative and Interpretive Analysis

A comparative reading of the data suggests that journalists who had received specialized training demonstrated greater diversity and efficiency in using advanced fact-checking tools compared to those with limited or no training.

The findings also indicate that professional experience alone does not necessarily lead to higher adoption of advanced digital fact-checking technologies, as usage appears to be more strongly associated with technical training and digital competencies.

### ***Obstacles Analysis***

The results also identified several obstacles affecting journalists' use of Google fact-checking tools.

The most prominent challenge was insufficient technical knowledge of advanced tools, followed by lack of time and certain technical limitations related to the Arabic-language digital environment.

These findings indicate that barriers to adoption are not solely individual, but are also connected to structural and technological limitations affecting digital journalism practices in Arab contexts.

### ***Inferential analysis***

To support the descriptive findings, a limited inferential statistical analysis was conducted using non-parametric tests appropriate for the sample size and the categorical nature of the variables. [Fisher's Exact Test](#) showed no statistically significant relationship between years of professional experience and the level of knowledge or use of advanced tools such as Google Pinpoint ( $p > .05$ ), indicating that professional experience alone does not necessarily explain the adoption of advanced fact-checking technologies.

[A Mann Whitney U test](#) also revealed no statistically significant differences between journalists who received specialized training and those who did not regarding their level of use of advanced fact-checking tools ( $p > .05$ ).

This suggests that although training contributes to improving digital awareness and professional readiness, it does not automatically guarantee advanced practical adoption of specialized tools.

In addition, [Spearman correlation analysis](#) showed a weak and statistically non-significant relationship between journalists' perceived importance of Google fact-checking tools and their actual use of advanced applications ( $p > .05$ ), reflecting a relative gap between awareness of the importance of digital fact-checking technologies and their practical implementation in everyday journalistic work.

### ***Qualitative Data Analysis***

The in-depth interviews were analyzed using thematic analysis in order to identify recurring patterns and interpretive themes that help explain the quantitative findings.

### ***The "Pinpoint" Knowledge Gap***

The interviews revealed a clear disparity in journalists' familiarity with advanced Fact-checking tools. Some participants, such as Arwa Al-Kaali, Ahmed Al-Ashwal, and Ruwaida Al-Arabi, demonstrated practical and advanced use of Google Pinpoint in organizing data, analyzing files, extracting text, and managing investigative material.

In contrast, others, including Ghiath Al-Jundi, Ghadeer Hammadi, and Fatima Hamid, indicated either limited use of the tool or lack of professional need for it despite being aware of some of its functions.

This supports the quantitative findings regarding the uneven adoption of advanced Google Fact-checking tools among Arab journalists.

### ***Technical and Structural Challenges***

The interviews further demonstrated that technical and structural factors directly influence journalists' use of digital fact-checking tools.

Several participants referred to challenges such as slow processing of videos and images, weak Arabic-language support, geographical limitations affecting some services, and reduced efficiency of certain Fact-checking tools in Arabic contexts.

These issues partially explain the continued reliance on simpler and more familiar tools rather than advanced data-driven and AI-supported applications.

### ***Contrasting Professional Experiences***

The qualitative analysis also revealed contrasting professional experiences among journalists. While some participants reported facing significant technical and linguistic challenges, others indicated that they encountered few or no obstacles in using Google fact-checking tools.

This suggests that the effectiveness of digital fact-checking practices may vary according to the

journalist's professional environment, level of technical training, and nature of journalistic work.

### **Integration of Quantitative and Qualitative Findings**

The integration of quantitative and qualitative findings demonstrates that Google tools have become an essential component of contemporary fact-checking journalism among Arab journalists.

However, the findings also reveal a relative gap between recognizing the importance of digital fact-checking tools and achieving advanced levels of professional use, particularly regarding specialized tools associated with data analysis and artificial intelligence.

When linked to the theoretical framework of the study, these findings suggest that the adoption of digital fact-checking technologies is shaped not only by the availability of tools, but also by factors such as specialized training, digital literacy, technical infrastructure, and the level of Arabic-language support.

Accordingly, the study highlights the need for more specialized professional training programs aimed at enhancing journalists' competencies in advanced fact-checking technologies and AI-supported investigative practices within the Arab media environment.

### ***Contradictory Experiences***

Thematic analysis also revealed a contrasting theme where some journalists (e.g., Hammadi, Al-Jundi) reported facing no significant obstacles, suggesting that challenges are not universal and may depend on context.

## **Results Discussions and Recommendations**

### **Results Discussion**

#### ***The Knowledge-Practice Gap in Light of Theory and Previous Studies***

The finding that 94.6% of journalists acknowledge the importance of Google tools while adoption of advanced tools like Pinpoint remains below 9% confirms the "knowledge-practice gap"

documented in previous studies (Al-Kuwafi, 2026; Omar, 2025).

However, this study provides a new interpretation. While Hartley (2024) found that AI-powered fact-checking tools achieve 100% technical accuracy, this technical effectiveness does not translate into adoption in the Arab context.

"87.5% of journalists have received specialized training, yet adoption of advanced tools like Pinpoint remains below 9%.

This indicates that training alone is insufficient to bridge the gap.

The real barriers are:

1. training content may not cover advanced tools sufficiently.
2. work pressure leaves no time to apply learned skills.
3. weak Arabic-language support undermines tool usability."

This finding extends Rogers' (2003) Diffusion of Innovation Theory by demonstrating that even when tools have "relative advantage," their adoption fails without institutional support systems.

### ***The Primacy of Institutional Over Individual Factors***

Although 87.5% of journalists reported receiving specialized training, the persistent knowledge-practice gap (with advanced tool adoption below 9%) challenges the assumption that mere provision of training is sufficient.

This finding contradicts implicit views in some previous studies that journalists' digital skills are primarily an individual responsibility.

Instead, it aligns with institutional theory, suggesting that the quality, depth, and continuous relevance of training, not its presence or absence are the key explanatory variables.

The qualitative interviews reinforced this: many journalists who had received training still reported that it lacked hands-on practice with advanced tools like Pinpoint, was too brief, or was not updated.

Only a small minority (those who received advanced, tool-specific mentoring) demonstrated proficient use.

Meanwhile, the 12.5% who received no training predictably remained unaware of advanced features, but their small number does not explain the widespread gap.

Thus, the primary obstacle is not a lack of training infrastructure, but institutional failure to provide effective, sustained, and practical training that translates awareness into advanced competency compounded by work pressure and weak Arabic-language support.

### ***Systemic Barriers Unique to the Arab Context***

Interviews revealed barriers rarely discussed in international fact-checking literature: weak Arabic language support in fact-checking tools, geographical restrictions on certain Google features, and difficulty verifying local content (e.g., Yemeni phone numbers or Arabic dialects).

These findings extend Wolfe & Mitra's (2024) observation about "poor support for African languages" to the Arab context, suggesting that linguistic and regional inequities in technology design represent a form of systemic disadvantage.

### **Recommendations for Practice**

#### ***For media institutions***

Establish a mandatory monthly 2-hour hands-on workshop on Google Pinpoint and Reverse Image Search for all newsroom staff.

Create a digital Fact-checking unit responsible for tool dissemination and quality control.

#### ***For journalism educators***

Integrate Google Tools as a standalone module in undergraduate syllabi (minimum 6 contact hours).

Develop open-access Arabic video tutorials tailored to local fact-checking scenarios (e.g., verifying Yemeni phone numbers or Gulf Arabic dialects).

#### ***For Google (technology provider)***

Lift or clarify geographical restrictions on features like Fact Check Explorer in MENA region.

Partner with Arab fact-checking organizations to create region-specific training materials.

### **Study limitations**

Sample size (N=56) limits generalizability to all Arab journalists; however, the mixed-method design allows analytical generalization.

Availability sampling may introduce self-selection bias (only motivated journalists responded).

Geographic coverage excludes some Arab countries (e.g., Iraq, Sudan, Lebanon) due to access constraints.

Self-reported tool usage was not cross-validated with actual behavioral observation.

### **Conclusions**

#### **Summary of Findings**

This study confirms the existence of a clear knowledge and skills gap among Arab journalists in using advanced Google fact-checking tools.

The findings reveal that while 94.6% of journalists acknowledge the importance of these tools, the adoption of advanced tools such as Pinpoint remains below 9%. And other obstacles are daily work pressures that prioritize speed over accuracy.

#### **Interpretation of Findings**

Crucially, this gap does not stem from a lack of conviction, individual motivation, or an absence of training (87.5% of journalists received specialized training).

Rather, it points to institutional failure to provide effective, practical, and continuous training that keeps pace with rapidly evolving tools.

While media organizations and journalism schools have invested in training, the quality, depth, and hands-on application of that training remain insufficient to drive advanced adoption.

The "lack of time" obstacle indicates that newsroom cultures often prioritize speed over fact-checking, leaving no room for journalists to practice or master advanced tools even when they have received initial training.

Furthermore, systemic barriers unique to the Arab context weak Arabic language support, geographical restrictions on tools, and difficulty verifying local content (e.g., Yemeni phone numbers or Arabic dialects) create an uneven playing field where journalists in certain regions are systematically disadvantaged, regardless of their training background.

## Theoretical and Practical Implications

The persistence of this gap, despite 87.5% of journalists having received specialized training, has serious implications for the Arab media landscape: continued spread of misinformation, declining public trust in media, and inability of Arab newsrooms to counter sophisticated misleading campaigns.

Theoretically, this study shifts the explanation from individual centric models (skills, motivation) to institution centric explanations that focus on the quality, depth, and continuity of training systems not merely their presence.

It demonstrates that training, when it is superficial, one-time, or lacking hands-on practice with advanced tools, fails to translate awareness into competency.

Thus, alongside work culture and structural barriers (weak Arabic language support, geographical restrictions), the effectiveness of institutional training is the key variable.

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## Declarations

**Conflict of interest:** The author has no relevant financial or non-financial interests to disclose. The author declares no conflict of interest.

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## References

- Al-Kuwafi, S. B. (2026). *The adoption of artificial intelligence tools by female fact-checkers in Arab countries for verifying information and countering misinformation*. Journal of the Faculty of Arts and Media – Misurata University, 21, 89–128.
- Dziak, M. (2024). *Fisher's exact test*. EBSCO Research Starters. Retrieved from <https://www.ebsco.com/research-starters/mathematics/fishers-exact-test>
- European Journalism Centre. (n.d.). *Verification and fact-checking*. DataJournalism.com. Retrieved from <https://datajournalism.com/>
- Global Investigative Journalism Network. (n.d.). *Investigative journalism: Definition of the craft*. Retrieved from <https://gijn.org/about-us/investigative-journalism-defining-the-craft/>
- Hartley, J. (2024). *Automated fact-checking: A comparative analysis of AI-powered tools*. International Review of Information Ethics, 33(1), 55–72.
- Khalil, M. I. (2023). *Techniques of journalistic writing for digital platforms*. Cairo: Al-Arabi for Publishing and Distribution.
- Kovach, B., & Rosenstiel, T. (2001). *The elements of journalism: What newspeople should know and the public should expect*. New York: Crown Publishers.
- MASH. (n.d.). *Mann-Whitney U test*. Maths and Stats Help. Retrieved from [https://guides.library.lincoln.ac.uk/mash/mann\\_whitney\\_R](https://guides.library.lincoln.ac.uk/mash/mann_whitney_R)
- Nguyen Vo, N., & Lee, K. (2018). *The rise of guardians: Fact-checking URL recommendation to combat fake news*. In Proceedings of the 41st International ACM SIGIR Conference on Research and Development in Information Retrieval (pp. 275–284). New York: Association for Computing Machinery.
- Omar, S. (2025). *\*Journalists' employment of visual recognition systems as one of the artificial intelligence tools in journalistic tasks: Google Lens as a model\**. Arab Journal of Media and Communication Research, 48, 76–125.
- Rogers, E. M. (1983). *Diffusion of innovations*. (3rd ed.). New York: The Free Press.
- University of Texas at Austin. (n.d.). *Spearman's rank correlation*. Statistics Online Support. Retrieved from <https://sites.utexas.edu/sos/guided/inferential/numeric/bivariate/rankcor/>
- Wolfe, R., & Mitra, T. (2024). *The impact and opportunities of generative AI in fact-checking*. In Proceedings of the 2024 ACM Conference on Fairness, Accountability, and Transparency (FAccT '24) (pp. 1–12). New York: Association for Computing Machinery.
- Yang, J., Li, S., Gao, Y., & Wang, X. (2024). *Are fact-checking tools helpful? An exploration of the usability of Google Fact Check*. In Data and Information in Online Environments: 4th EAI International Conference, DIONE 2023, Nanchang, China, November 25–27, 2023. Cham: Springer.