ISRAEL INTERNET ASSOCIATION ISOC-IL

# Building Journalistic Capacity in the Age of Information Disorder:

## Lessons from the Digital Desk Training Program of ISOC-IL and the Union of Journalists in Israel


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The Israel Internet Association (ISOC-IL) is a non-profit organization that has been operating since the early 1990s to promote the use of the internet for the benefit of the public in Israel. It operates critical internet infrastructure in Israel: the national domain name registries ".il" and ".ישראל", and the Israeli Internet Exchanges (IIX and IX-IL). ISOC-IL's professional knowledge and experience in researching, developing, and operating internet technologies for the Israeli public serve as the foundation for its research, policy activities, and community empowerment. ISOC-IL operates the Internet Safety Hotline initiative, Israel's oldest public online safety hotline, which serves as a first responder to hundreds of requests each month and is recognized as a trusted reporting partner by numerous social media platforms and online services. ISOC-IL also serves as a primary source of assistance, knowledge, and tools for the general public to improve online safety and security. To this end, it develops and implements initiatives aimed at reducing digital gaps and promoting internet skills and literacy in Israeli society. Through its open data initiative, ISOC-IL collects and shares statistical data about the Israeli internet and its users. Finally, ISOC-IL conducts and publishes professional policy research intended to inform and improve the Israeli and global internet arenas at the intersections of law and technology.

**Disinformation Resilience Israel (DRI) Project**

This publication is part of the Disinformation Resilience Israel: Developing a Comprehensive Response to Online Misinformation and Disinformation in Israel (DRI) project, led by the Israel Internet Association (ISOC-IL) with support from the European Union. The project aims to strengthen the Israeli public's resilience to misinformation and disinformation by enhancing the fact-finding capacity of media and civil society organizations, raising public awareness, improving media literacy, and advancing research. With the involvement of journalists, educators, tech entrepreneurs, activists, and the broader public, the project aims to foster a more informed, critical, and inclusive information ecosystem.

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# 1. Introduction

Contemporary journalism faces a profound capacity crisis shaped by the convergence of technological disruption, economic pressures, political polarization, and eroding public trust. The rise of digital platforms and algorithm-driven content distribution has intensified the circulation of misleading content, while undermining traditional business models, reducing newsroom resources, and increasing dependence on powerful digital intermediaries that effectively act as gatekeepers of information flows. At the same time, low public trust in news and rising news avoidance are weakening journalism's ability to serve as a shared factual authority.[1] **In this fragmented and rapidly evolving ecosystem, increasingly shaped by AI, journalists confront new challenges that demand advanced digital, data, and digital investigation skills, underscoring the need for sustained investment in journalistic capacity and tools for information verification.**

Civil society organizations (CSOs) can play a critical role in addressing these challenges by helping to strengthen journalistic capacity in the digital age. Through specialized expertise, research, and access to relevant global networks and local knowledge, CSOs can complement newsroom capabilities and gaps, and support more comprehensive, evidence-based reporting. CSOs are well-positioned to support journalist training and capacity-building in contexts where newsrooms lack sufficient resources and knowledge, thereby strengthening societal resilience against information disorder,[2] while growing collaboration between CSOs and news organizations facilitates resource sharing and skill development while maintaining editorial independence.[3] The role of CSOs is increasingly recognized in recent policy frameworks such as the EU Democracy Shield, which positions CSOs and fact-

1. Newman, N., Ross Arguedas, A., Robertson, C. T., Kleis Nielsen, R., and Fletcher, R. (2025). *Reuters Institute Digital News Report 2025*. Oxford: Reuters Institute for the Study of Journalism.

2. Wardle, C. & Derakhshan, H. (2017). *Information Disorder: Toward an Interdisciplinary Framework for Research and Policy Making*. Strasbourg: Council of Europe.

3. Stonbely, S. (2022). *A New Kind of Partnership: Journalists and Civil Society Organizations Are Teaming Up*. Nieman Reports.

checking organizations as essential actors in safeguarding the information environment through a multi-stakeholder approach.[4]

Israel's information ecosystem presents a combination of structural, societal, and demographic vulnerabilities that make it particularly susceptible to disinformation and foreign interference. High levels of social media use, linguistic and cultural segmentation, uneven access to reliable and verified information, and limited fact-checking capacity all heighten these risks. These challenges are compounded by structural weaknesses in the media ecosystem, where news organizations operate under resource constraints, fragmented audiences, and limited technological capacity, and sectoral media serving minority groups face even greater limitations.[5] In such an environment, strengthening journalistic skills in verification and digital investigation, and reinforcing ethical information practices is essential not only for newsroom performance but also for democratic resilience more broadly.

**This publication explores how CSOs can strengthen journalists' capacity to counter disinformation through targeted training programs. Focusing on Israel as a case study, the Digital Desk training program,[6] developed and conducted by the Israel Internet Association (ISOC-IL) in partnership with the Union of Journalists in Israel, serves as a key model of local civil society action. The project was implemented within the EU-funded Disinformation Resilience Israel (DRI) project between 2024-2026.[7]**

The Digital Desk training program combines introductory newsroom workshops with an in-depth flagship training course and an online toolbox, equipping journalists with practical skills in digital investigation, verification, OSINT, and data analysis. Findings from pre- and post-training evaluations show substantial reported improvements in participants' skills

4. European Commission. (2025). European Democracy Shield: Empowering, protecting and promoting strong and resilient democracies across the EU (IP/25/2660).

5. Ram, Y., Wiener, A., & Ring, E. (2025). Stakeholder Analysis: Towards Countering Misinformation and Disinformation in Israel, Israel Internet Association (ISOC-IL).

6. The Official Digital Desk Program Website.

7. The Official DRI Project Website.

and confidence, particularly in verification, geolocation, and advanced search techniques, as well as a strong perceived relevance to their professional work. The program also fostered ongoing collaboration among participants and supported independent investigative projects, demonstrating its broader impact on strengthening journalistic practice and offering a scalable model for enhancing resilience to disinformation.

**This publication highlights the growing need for expanded journalistic competencies – particularly in digital investigation, verification, and data analysis – in Israel and beyond, in response to the evolving challenges of disinformation.** It demonstrates how structured, CSO-led training programs can help address critical capacity gaps in contemporary journalism, while underscoring the importance of sustained collaboration between news organizations and civil society actors. This publication offers a scalable framework that can be applied in other contexts to strengthen journalistic capacity, combining practical training with a multi-stakeholder approach.

# 2. Skills and Competencies Needed for Journalists in the Digital Age

At the core of journalism lies a democratic mission: to inform the public, hold power to account, and sustain public discourse. However, this mission is increasingly strained by two main constraints: (a) Structural transformations of the digital media environment and skills required for journalists today. (b) Eroding public trust and journalism's credibility, authority, and ability to serve as a reliable source of shared information.

Over the past two decades, news organizations have faced declining revenues, shrinking newsroom resources, and the erosion of advertising-based business models, as digital platforms have captured much of the advertising market[8] and become central intermediaries in the distribution of news.[9] These changes have weakened the economic foundations of journalism, leaving many news organizations more vulnerable and less able to invest in sustained public-interest reporting.[10]

At the same time, the digital transformation of journalism has expanded the skills journalists need in order to fulfill their democratic functions and operate effectively in contemporary information environments. Journalists today are expected not only to report and write, but also to verify digital content, assess online sources, and navigate increasingly complex forms of

8. Bateman, J., & Jackson, D. (2024). *Countering disinformation effectively: An evidence-based policy guide* Carnegie Endowment for International Peace. See especially Case Study 1, "Supporting Local Journalism." ("Local newspapers and other outlets have seen steady declines in ad revenue and readership for the last two decades, as the internet gave birth to more sophisticated forms of digital advertising and alternative sources of free information").

9. Brown, P., & Jaźwińska, K. (2025). *Journalism Zero: How platforms and publishers are navigating AI*. Tow Center for Digital Journalism, Columbia Journalism School. ("Publishers have long viewed strong, direct relationships with their audiences as vital to their hopes for a sustainable future, ideally through their owned-and-operated properties." Yet, "many of the platforms that mediate publishers' relationships with their audiences remain unavoidable").

10. Bateman & Jackson. (2024). *Countering disinformation effectively*; Brown & Jaźwińska, (2025). *Journalism Zero: How platforms and publishers are navigating AI*. Tow Center for Digital Journalism, Columbia Journalism School. ("News organizations are digital businesses now. You need to have people who care about the mission, the community, the ethics, the journalism, who understand that news is not a great business to be in because it's expensive to produce journalism").

misleading and manipulated information.[11] Together, these pressures mean that newsrooms face growing demands for verification and investigation precisely as their resources become more limited.

An additional institutional constraint of journalism in the last decade is eroding public trust. Public trust is essential to journalism's credibility, authority, and ability to serve as a reliable source of shared information. Yet journalism today operates within a broader crisis of institutional trust and an intense atmosphere of disinformation, both of which weaken its authority and limit its ability to function as a shared source of reliable information.[12] Moreover, the weakening of local journalism can further undermine public trust and democratic resilience, while also creating conditions that increase vulnerability to disinformation.[13]

Against this backdrop, scholars and practitioners have increasingly turned to the question of what journalists need to effectively perform their public-interest function. **The journalist's "toolbox" is no longer seen as a fixed set of reporting abilities, but as a dynamic set of competencies encompassing technical skills, professional knowledge, and normative commitments.** Journalistic competencies today are therefore best understood as evolving and context-dependent, shaped by broader transformations in the media ecosystem. Importantly, strengthening these competencies is essential not only for effective journalism but also for helping sustain public trust in credible news and in the journalists who produce it.[14]

11. Estella, P. G. (2021). The journalist's 'toolbox' of competencies in the Digital-Global Age: Reflections on the global state of research. *Pacific Journalism Review*, 27(1&2), 194–214.

12. Christofoletti, R. (2024). Trust in media and journalism credibility in the sea of misinformation. *International Review of Information Ethics*, 33, 1–6. ("In recent years, there has been growing concern regarding the declining confidence in the news media. [...] This pervasive distrust adds to an intense atmosphere of disinformation, further undermining the consensual notions of truth and reliability, which are essential to information systems").

13. Bateman & Jackson (2024). *Countering disinformation effectively*. ("Studies suggest at least two mechanisms whereby the decline of local media outlets can fuel the spread of disinformation. First, the decline contributes to civic ignorance and apathy as voters become less informed about the issues, candidates, and stakes in local elections. [...] Second, when local media disappears, lower-quality information sources can fill the gap as people look elsewhere for information [...] Given the evidence that local media declines breed susceptibility to disinformation, it is reasonable to predict that efforts to bolster local media could have the opposite effect").

14. Estella (2021). *The journalist's 'toolbox' of competencies in the Digital-Global Age*.

Studies highlight how digital convergence has elevated the importance of capabilities such as **data literacy and online verification, social media engagement, and content curation**. At the same time, core "evergreen" traditional journalistic competencies remain crucial[15] and highly valued among journalism stakeholders such as reporters, editors, and academic experts.[16]

**Verification and fact-checking skills** are becoming more necessary than ever in the misinformation-rich online environment. Journalists now routinely use **digital forensic tools (for example, to verify images or videos), reverse image search**, and other digital research techniques to debunk false information, with some news organizations adopting fact-checking initiatives and stricter corrections policies in response to online dis- and misinformation.[17]

The proliferation of AI and automation in content creation also creates new pressures on journalists, who must understand algorithmic tools and navigate increasingly complex verification demands. However, a survey among journalism educators shows that although there is growing awareness that traditional curricula must evolve, the integration of automation-related skills remains limited.[18]

Despite the growing need for these competencies, their implementation in practice remains limited. A survey found that journalists report significant gaps in digital, data, and technological skills, noting that professional development is often informal, ad hoc, and insufficiently supported by their organizations.[19] Another global survey of journalists found strong demand for training in **data and privacy-preserving skills**, highlighting that many feel underprepared

15. Ibid.

16. Jackman, O. & Reich, Z. (2025). *Analyzing the Analysts. Desired Skills of Commentators Based on a Delphi Panel*. *Journalism Practice*, 1-20.

17. Mayerhöffer, E., Belluati, M., DeCillia, B., d'Haenens, L., Fubini, A., Lo, W. H., Núñez-Mussa, E., Ólafsson, J. G., & Rega, R. (2022). *Countering misinformation in and from the newsroom: How digital platforms redefine journalistic practice and the democratic role of news media*. In J. Trappel, & T. Tomaz (Eds.), *Success and failure in news media performance: Comparative analysis in the Media for Democracy Monitor 2021* (pp. 35-58). Nordicom.

18. Kothari, A., & Hickerson, A. (2020). *Challenges for journalism education in the era of automation*. *Media Practice and Education*, 21(2), 1-17.

19. Porcu, O., Hermans, L., & Broersma, M. (2020). *Unlocking the Newsroom: Measuring Journalists' Perceptions of Innovative Learning Culture*. *Journalism Studies*, 21(10), 1420-1438.

in these areas despite recognizing their importance. In particular, journalists reported that they are most interested in acquiring data analysis skills, followed closely by **programming/coding and data visualization skills**. Additional skills included "how to clean data," "how to develop data-driven applications," and "how to check if data is reliable," with over 48% of journalists expressing interest in each, indicating broad demand for strengthened data-journalism training.[20]

Research on journalism education and professional learning further confirms, and perhaps helps explain, these gaps. Although educators recognize the importance of digital and data-related competencies, and digital transformation has begun to influence some course offerings, integration remains partial. Structural barriers, such as limited resources, insufficient expertise, and rigid curricular frameworks, make it difficult for programs to systematically incorporate new competencies. As a result, key topics such as data journalism and mobile reporting remain limited in journalism education.[21]

**Together, these developments point to a widening gap between the skills journalists need to navigate today's complex information environment and rapid advances in AI, and the training, resources, and institutional support currently available to them**. As misinformation grows more sophisticated and social media, advanced digital tools, and AI become integral to news production, journalists require continuous, structured capacity-building. **If the profession is to remain capable of fulfilling its democratic mission, journalist training must expand and adapt to systematically equip reporters with the technical, analytical, and ethical competencies required in the digital age**. The next section presents ISOC-IL's digital investigation training framework as a practical model for building journalistic capacity and equipping reporters with the skills needed to operate effectively in today's complex digital environment.

20. Heravi, B. R., & Lorenz, M. (2020). Data journalism practices globally: Skills, education, opportunities, and values. *Journalism and Media*, 1(1), 26–40.

21. Kirchhoff, S. (2022). Journalism Education's Response to the Challenges of Digital Transformation: A Dispositive Analysis of Journalism Training and Education Programs. *Journalism Studies*, 23(1), 108–130.

# 3. Building Journalistic Capacity in the Age of Information Disorder: Lessons From ISOC-IL's 2025 Digital Investigation Trainings

Recognizing the need to address the existing capacity gaps in Israel's media ecosystem in order to strengthen resilience to disinformation, ISOC-IL launched the Digital Desk Training Program in December 2024 as a cornerstone of the DRI project. The training program was developed and led by ISOC-IL's Disinformation and Digital Investigations Lead, *Nitsan Yasur*, a specialist in OSINT and digital verification, and delivered in collaboration with the Union of Journalists in Israel. Founded in 2012, the Union is the national labor organization representing journalists across Israel's media sectors, and works to improve professional standards and strengthen journalists' working conditions and capacities. As an important partner for ISOC-IL, the Union coordinated with editorial teams and assisted with outreach to journalists to encourage participation in the program.

The program was designed to address rising skill deficits among journalists and news organizations by providing a structured training framework for developing digital investigation and verification capabilities. In its outreach, the program made a deliberate effort to interest a broad range of media organizations, including mainstream outlets such as *Kan 11* and *N12*, as well as independent and alternative news outlets such as *Local Call*, *The Seventh Eye*, *Shakuf*, and *+972 Magazine*. The training program combined theoretical instruction with intensive practical training, engaging participants in real-world case studies and hands-on exercises that simulate newsroom verification challenges, ensuring the immediate applicability of the skills acquired.

Central to the training program was the study and application of key verification methodologies, including provenance checks, source identification, location verification, and principles of privacy and source protection. These methods provided the analytical foundation for introducing a broad range of technical skills and investigative competencies, including advanced search strategies and query design, visual content verification and geolocation analysis, and social media intelligence techniques. In addition to empowering participants to use various tools, the program emphasized methodological thinking to build durable analytical skills that will remain relevant throughout rapid technological and platform-level changes.

**The program operated two training formats:** a *basic newsroom* workshop that introduced foundational digital investigation tools, and an advanced *flagship training course* that offered in-depth training for select mid-career and senior journalists, especially investigative journalists, representing diverse media outlets. In the newsroom workshop, journalists gained familiarity with the principles and tools of digital verification in a single hands-on session, while the flagship course provided a structured, multi-session setting that enabled participants to deepen their knowledge and apply advanced investigative techniques. This two-stage approach was designed to first introduce journalists to core principles and methods, and then allow those interested to progress to more advanced training.

**The curriculum architecture of the Digital Desk program was based on two pillars:**

**i. Recognized training resources and best practices:** The program's format and curriculum drew on leading international training frameworks, including elements from AFP digital investigation courses for journalists and journalism students,[22] Global Investigative Journalism Network (GIJN) training materials,[23] and UNESCO's journalism education and media literacy standards.[24] The overall structure of the program, particularly the division into an introductory workshop

22. AFP AFP digital courses.

23. Global Investigative Journalism Network. List of Courses.

24. Ireton, C., & Posetti, J. (Eds.). (2018). *Handbook for journalism education and training*. UNESCO.

and a series of more advanced sessions, was inspired by the International Center for Journalists' (ICFJ) Disarming Disinformation Investigation model.[25]

**ii. Field engagement and experiential learning:** The program was designed and implemented by a team of professionals who are deeply familiar with the journalistic field and its daily challenges, and have a comprehensive understanding of journalists' needs, constraints, and working environments. The team members' proximity to the field ensured that the training curriculum was grounded in real newsroom conditions and addressed the actual challenges journalists face in their work.

As part of the program, an online toolbox for journalists was launched in Hebrew and Arabic, offering a curated collection of digital tools and resources for investigation, verification, social media monitoring, geolocation, data analysis, and information preservation. Organized by category and accompanied by short explanations and links, the toolbox serves as a practical resource for newsroom work.[26]

## 3.1 Newsroom Training (Introductory Workshops)

The introductory newsroom workshops brought training directly into the newsrooms and were held on-site during regular working hours. Each workshop included participants from the same media outlet, creating a familiar and safe environment that encouraged open discussion and practical engagement. These half-day workshops introduced participants to the benefits of incorporating digital verification tools in their everyday reporting practices. The goal was to raise awareness of the range of tools available for various investigative purposes and to familiarize journalists with available options for digital inquiry. Designed as an accessible entry point, the newsroom workshops demonstrated how such tools can enhance both the efficiency and accuracy of reporting. A total of 88 journalists (48 men and 40 women) participated in seven workshops between December 2024 and November 2025.

25. International Center for Journalists. Disarming disinformation.

26. ISOC-IL and The Union of Journalists in Israel, The Journalist Digital Toolbox.


*Newsroom Training at Kan 11, January 2025*


*Newsroom Training at Haaretz, March 2025*

The introductory workshop also included a dedicated workshop for Arabic-speaking journalists and was conducted in partnership with I'lam – The Arab Center for Media Freedom, Development and Research, which promotes democracy, human rights, and freedom of expression and information for Arab Palestinians in Israel. Nine journalists participated in the session (5 women and 4 men).

*Newsroom Training for Arab-Society Journalists in Nazareth, November 2025*

Such collaboration with local civil society partners was essential for reaching cultural and linguistic minority journalists. News outlets serving these communities often operate with small staff and limited resources, which can make sustained participation in training programs difficult. These partnerships helped overcome some of these constraints and enabled the program to reach journalists who would otherwise have been difficult to enroll. Similar outreach efforts, however, were less successful with ultra-Orthodox journalists, many of whom are not members of the Union of Journalists, work in loosely defined media roles, or have limited online engagement, making outreach and recruitment for digital media training more challenging.

**The newsroom workshop, entitled "An Introduction to Digital Investigation and Advanced Searches," covered the following topics:**

1. Conceptual frameworks for understanding mis- and disinformation, verification, online investigations, and ethical considerations
2. Keyword strategies
3. Boolean search
4. Advanced search methods
5. Visual search and verification (images, videos, face recognition)
6. Geolocation search and verification (mapping tools, street view, satellite imagery, location verification)

7. Advanced search practices across social media platforms
8. Digital footprint and identity exploration
9. Website investigation and domain analysis

Together, these components cover the core foundational skills of digital investigation and verification and align with the basic competencies highlighted in leading global training, guidelines, and publications. Due to time and scope limitations, the workshops focused on introductory-level content and did not extend into more advanced areas. Topics such as data analysis, ethics, and privacy were not covered in depth, as these require more time, practice, and contextual discussion and were therefore addressed more extensively in the advanced flagship training course.

## 3.2 The Advanced Flagship Training Course

The flagship training course was built on the foundations of the basic newsroom workshop, offering deeper, more sustained learning goals and experiences. The course comprised a series of nine hybrid sessions held between May and October 2025, delivered in a combination of in-person and online learning. The flagship course focused on advanced investigative journalism tools, tailored for journalists seeking to enhance their knowledge and skills in digital investigation.

Journalists who participated in the newsroom sessions were invited to apply to the course, alongside other professionals from across Israel's media landscape, through an open call. The selection process prioritized journalists with strong investigative records or who demonstrated potential to apply verification techniques in their reporting and ensured representation across newsrooms and genders. The final cohort consisted of mid-career and senior journalists from diverse backgrounds — men and women contributing to Hebrew- and Arabic-language media outlets, independent media, and major national news organizations. A total of 17 candidates were selected for the program (6 men and 11 women).



*The Journalist Fellowship Flagship Program, 2025*

**The curriculum covered nine core topics in investigative journalism:** (1) data analysis, (2) OSINT and advanced research, (3) fact-checking, (4) digital investigation techniques, (5) digital safety and privacy, (6) ethics, (7) archiving, (8) monitoring, and (9) artificial intelligence (AI).

| Session | Topic |
|---|---|
| 1 | Introduction: Digital Investigation and Advanced Searches |
| 2 | Monitoring, Documentation, Archiving, and Labeling: Practice and Infrastructure Building |
| 3 | Mapping Tools, Searching for Sources, and Finding Evidence Online |
| 4 | Digital Safety and Risk Assessment |
| 5 | Artificial Intelligence for Analyzing and Verifying Information |
| 6 | Digital Infrastructure and Digital Attribution |
| 7 | Data Journalism and Data Analysis |
| 8 | Anonymous Accounts: Tools and Methods for Disclosure |
| 9 | Final Meeting: Conclusion, Feedback, and Grant Winner Announcement |

**Table 1:** *Flagship Training Program: Session Structure and Topics*

*The Journalist Fellowship Flagship Program, May 2025*

The flagship program brought together a carefully selected group of instructors, comprising local Israeli practitioners and internationally recognized experts in digital journalism and information verification. Key instructors included Craig Silverman (co-founder of *Indicator* and a leading expert on online disinformation, digital investigations, and media manipulation), Jane Lytvynenko (of *NBC News* and a former journalist at *The Wall Street Journal and BuzzFeed*), and Ela Stapley and Colin Pereira (digital security experts and members of the Committee to Protect Journalists). This international team ensured the transfer of knowledge in cutting-edge verification techniques while maintaining cultural sensitivity to regional information dynamics.

The program sought to cultivate a local community of professional experts in digital investigations. A dedicated WhatsApp group was created for flagship participants to encourage knowledge-sharing, and participants have initiated collaboration on joint investigations, cooperation on open calls, and publication of initiatives.

To strengthen participation and encourage the practical application of skills acquired during the training, ISOC-IL offered a scholarship designed to support full attendance and sustained engagement. Participants who completed all sessions received a scholarship to help them purchase or subscribe to digital tools relevant to their professional work.

In addition, the program offered five post-training grants for digital investigations and journalism projects to help overcome the broader economic and resource constraints facing journalists and newsrooms, while reinforcing professional independence and the use of innovative verification and investigation practices. The grants aimed to enable leading Israeli journalists to conduct independent, in-depth investigations using digital tools, focusing on issues of social importance and public value. ISOC-IL had no involvement in the journalists' investigative work in the funded projects, and participants retained full independence and confidentiality regarding sources and findings. Three months after receiving a grant, grantees were asked to submit a brief report outlining their project progress, the digital tools employed, and any challenges encountered.

Although the longer training course offered participants multiple opportunities to hone core competencies and extend their skills in areas such as data analysis and digital safety, it had several limitations. Because participants came from diverse journalistic fields, the training course was not designed to specialize in particular coverage areas or include domain-specific modules (such as finance or climate change), although varied examples were incorporated throughout. Furthermore, the training course offered basic awareness of digital threats to journalists, rather than a full coverage of malware, spyware, or infrastructure analysis — as offered in more specialized programs such as GIJN's cyber-investigations track, which require significantly more time and advanced expertise.[27]

## 3.3 Evaluating Program Impact: Key Indicators and Findings

Although it is still early to assess long-term impact, the program's integration of international best practices with local contextual knowledge has already demonstrated potential as a sustainable model for professional development. To evaluate effectiveness, we relied on **pre- and post-training surveys** to

27. The Global Investigative Journalism Network (GIJN), for example, offers a 6-week cyber-investigations training course. See the list of courses.

capture participants' reflections, self-assessed skills,[28] expectations, and patterns of digital and social media use. These surveys allowed us to measure changes in confidence and capability across the key digital investigation skills taught in the program.

Participants in the introductory newsroom workshop reported both high reliance on digital platforms and clear skill gaps prior to the workshop (see Figure 1). **Before participating in the workshop, the average self-assessment score across all digital journalism skills was only 2.16 out of 5**, yet 94.3% reported using social media for work several times a week or more, including 79% who use it daily — showing high social media use but low confidence in digital and investigative capabilities. Moreover, only 9.4% had ever participated in any relevant formal training in Israel or abroad.

After completing the newsroom workshop, respondents' overall self-rated skill average rose from 2.16 to 3.91 out of 5 (+1.75).[29] The most significant increases were seen in **verification and authenticity checking**, which rose from 2.02 to 4.26 (+2.24); **geolocation**, from 1.74 to 3.98 (+2.24); **investigating sponsored ads and promoted conten**t, from 2.02 to 4.23 (+2.21); **website and domain investigatio**n, from 1.81 to 4.02 (+2.21); and **advanced Google search techniques**, from 2.09 to 4.08 (+1.99). A moderate improvement was recorded in **organizing, archiving, and documenting digital findings**, which increased from 1.98 to 3.57 (+1.59). Smaller yet still noticeable gains were found in **social media investigations** (2.96 to 4.24, +1.28), **AI tools for journalism** (1.75 to 2.81, +1.06), and **people-search skills** (3.02 to 3.90, +0.88).

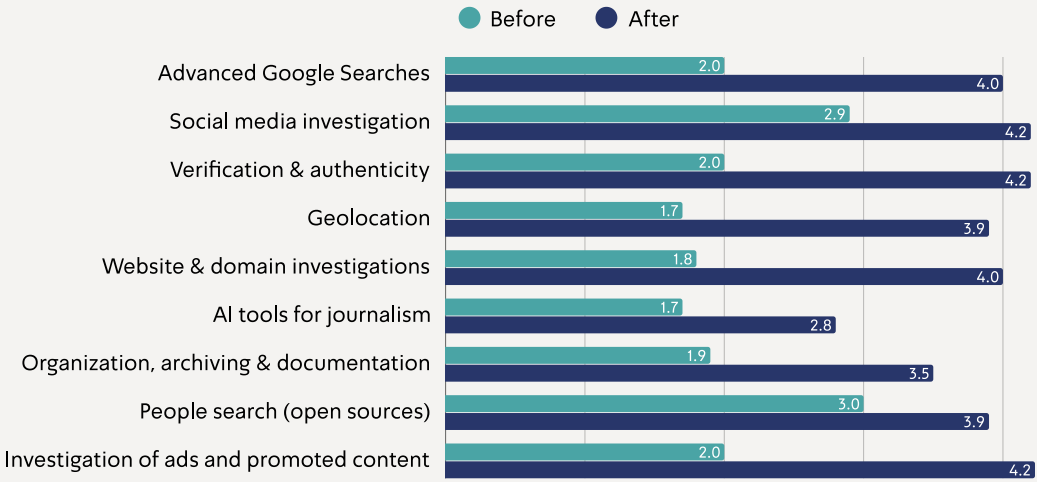
Importantly, participants also expressed **strong confidence in the future relevance of the skills they acquired in the workshop**, with an average rating

28. The pre-training question was: "At what level do you estimate your capability to use the following tools and methods?" (1 — no experience, 5 — expert). The post-training question was: "To what extent did the training improve your ability and knowledge in the following areas?" (1 — did not improve at all, 5 — improved significantly). Although the two questions are phrased differently, we treat them as comparable here since a high post-training improvement score reflects a substantial self-reported gain in ability relative to the respondent's own pre-training baseline. See the Appendix for the complete survey questionnaires.

29. Comparison covers the nine skill questions common to both surveys. The before-survey is based on N=53 respondents for every question; after-survey sample sizes range between N=41-50.

of 4.26 for the question "To what extent do you believe that the tools, skills, and content provided in the workshop will improve your journalistic work in the future?" Additionally, 60% of respondents (30 of 50) named at least one specific tool or skill from the workshop that they intend to apply immediately in upcoming investigations or in their routine journalistic work.

Figure 1: **Digital Journalism Skills Before and After the Newsroom Workshop**
(Score range 1-5)




In the flagship training course, participants also reported both high reliance on digital platforms and clear skill gaps prior to participation (see Figure 2). Before participation in the course, participants' overall self-assessed skill level was 3.2 out of 5 (N=14), indicating a modest confidence in digital and investigative capabilities.[30] Moreover, only 14% (2 out of 14) had ever participated in any relevant formal training in Israel or abroad, excluding the newsroom workshop conducted as part of this project.

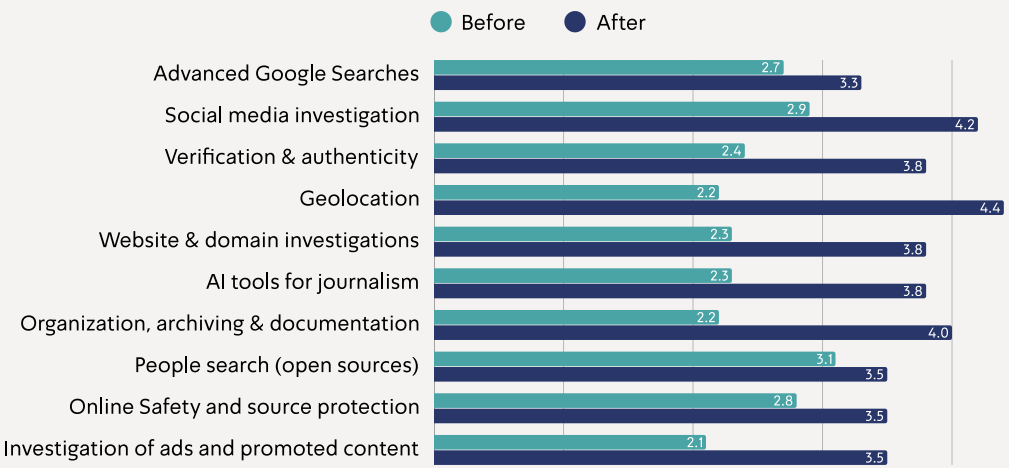
Following the flagship training course, participants reported a notable improvement in their digital investigation and verification skills.[31] **Across the**

30. This figure is based on participants' responses to the question: "At what level do you assess your ability to use digital investigation tools and methods?"

31. Comparison covers the ten skill questions common to both surveys. The before-survey is based on N=14 respondents, and the after-survey on N=12.

**ten specific skill areas measured both before and after the training, the average self-assessment score increased from 2.50 before the training to 3.84 after the training**. The most substantial improvement was observed in **geolocation** skills, which increased from 2.21 to 4.42 (+2.20). Significant gains were also evident in **organization, archiving, and documentation** (2.29 to 4.00, +1.71), use of **AI tools for journalism** (2.29 to 3.92, +1.63), **website and domain investigations** (2.36 to 3.83, +1.48), **verification and authenticity checking** (2.43 to 3.83, +1.40), and **investigation of ads and promoted content** (2.14 to 3.50, +1.36). Smaller yet meaningful gains were noted in **social media investigation** (2.93 to 4.17, +1.24) and online safety and source protection (2.79 to 3.58, +0.80). The most modest changes were in **advanced Google searches** (2.71 to 3.33, +0.62) and **people-search skills** (3.14 to 3.58, +0.44). Importantly, participants also expressed strong confidence in the future relevance of the skills they acquired in the course, with an average rating of 4.33 for the question "To what extent do you believe that the tools, skills, and content provided in the workshop will improve your journalistic work in the future?"

Figure 2: **Digital Journalism Skills Before and After the Advanced Flagship Course**
(Score range 1-5)



**Overall, across the newsroom workshops and flagship training programs, participants reported clear improvements in digital investigation and verification skills, with significant gains in both confidence and technical ability**. Participants also identified areas requiring deeper coverage, particularly the use of AI in investigations and working with databases. While the training proved effective in strengthening journalists' reported use of digital tools, the findings also highlight the need for continued, more advanced training in rapidly evolving areas. Given the pace of technological change, ongoing learning and refresher programs are essential to sustain progress and ensure journalists remain equipped to meet emerging challenges.

# 4. Conclusion



Disinformation poses a significant and persistent challenge to contemporary information ecosystems, undermining the reliability of public discourse and the ability to establish shared factual foundations. In such environments, strengthening journalistic capacity is essential not only to improve reporting and investigative practices but also to maintain public trust in credible information. In Israel in particular, structural vulnerabilities and capacity gaps in digital verification skills amplify the spread of false information. These dynamics are further intensified by fragmented media landscapes, high reliance on digital platforms, and uneven access to reliable information.

**The findings from ISOC-IL's Digital Desk program demonstrate a practical capacity-building model that can be adapted to other media ecosystems facing similar challenges.** By integrating international expertise, local knowledge, and sustained peer networks, the program illustrates how structured training initiatives can strengthen journalists' ability to navigate complex information environments. Pre- and post-training survey data further indicate that the program produced considerable improvements in participants' self-assessed digital investigation and verification skills, suggesting that even targeted, relatively short-term interventions can strengthen journalists' practical confidence and capacity. In this sense, the program provides a practical learning model for newsrooms, CSOs, and policymakers seeking to strengthen verification capacity and support a more resilient and trustworthy information environment.

**More broadly, the study highlights the critical role of civil society in addressing information disorder.** The Digital Desk program shows how CSOs can bridge structural gaps and constraints by providing specialized expertise, fostering cross-sector collaboration, and supporting professional skill development. These findings underscore the importance of a multi-stakeholder approach, in which civil society, journalism, and other independent actors work together to strengthen the integrity and resilience of the information environment.

This approach is especially important in small media markets, less-resourced information environments, and conflict-affected societies, where news organizations must operate under significant resource and capacity constraints while also responding to various disinformation challenges, efforts to cast doubt on verified reporting, and an overall fragmented information environment.

In such contexts, disinformation is not only a professional challenge for journalists but also part of a broader challenge to democratic resilience. It makes journalism more difficult precisely when reliable reporting becomes more necessary. This model underscores the important role of CSOs in strengthening journalism during periods of information disorder and democratic vulnerability, particularly by supporting investigative capacity and helping journalists adopt the new methods, tools, and verification practices. The model presented here can therefore be useful for other similar yet distinct contexts, particularly where journalistic institutions are expected to defend credible information under conditions of limited resources and heightened democratic vulnerability.

Still, persistent skill gaps among Israeli journalists underscore that meaningful capacity-building requires sustained, long-term investment rather than occasional training sessions. Progress in reducing these gaps is also constrained by limited resources, uneven knowledge, political and legal barriers, and a broader erosion of civic trust, all of which limit what such interventions can achieve in the near-to medium-term. Strengthening journalistic capacity must therefore be understood as an ongoing, systemic effort that requires continuous collaboration, investment, and adaptation to an evolving information environment.

# 5. Appendix:
## Pre- and Post- Training Survey Questionnaires

### Appendix A:
Newsroom Workshop Survey Questionnaires (English Translation)

#### A.1 Pre-Workshop Survey

1. **In what media outlet do you work?** *(open text)*
2. **Role** *(open text)*
3. **Gender**
   - » Female
   - » Male
   - » Other
   - » Prefer not to answer
4. **Years of experience in journalism** *(open text)*
5. **What are your coverage areas/beats?** *(select all that apply)*
   - » General news
   - » Politics
   - » Security/defense
   - » Social issues — welfare and education
   - » Economy and business
   - » Planning and real estate
   - » Technology
   - » Culture and entertainment
   - » Science and health
   - » Sports
   - » Other: _____

6. **How often do you use social media and AI tools professionally as part of your journalistic work** (gathering information, analysis, translation, investigation, publishing, etc.)?

   » Daily

   » Several times a week

   » Less than once a week

   » Don't use social media at all

7. **Which tools, platforms, and social networks do you use as part of your journalistic work?** (you may select more than one)

   » Twitter/X

   » Facebook

   » Instagram

   » TikTok

   » Telegram

   » ChatGPT

   » Gemini

   » Claude

   » Grok

   » NotebookLM

   » Pinpoint

   » Other: _____

8. **How would you rate your skill level in the following tools and methods?** *(1 – no knowledge/skill at all, 5 – very high level of knowledge/skill):*

   **8.1 Advanced Google search techniques** — advanced search commands (such as site:, inurl:, filetype:)

   **8.2 Investigation, information search, and ongoing monitoring within social networks**

**8.3 Verification and authenticity checking of content and information** (e.g., reverse image/video search and identifying fake AI-generated content)

**8.3 Geolocation —** using maps and visual/forensic information to locate a place

**8.4 Investigating websites and domains**

**8.5 Searching and examining details of ads and sponsored/promoted content on networks** (social media and website advertisements)

**8.6 Using AI tools for routine journalistic work, investigations, and verification**

**8.7 Searching for information about people** (social media accounts, phone numbers, etc.) using various tools and open-source databases

**8.8 Using digital tools for processing and analyzing data and large amounts of information**

**9. To what extent are you interested in receiving tools and knowledge about online safety, privacy, and source protection?**
*(1 — Not interested, 5 — Very interested)*

**10. Have you previously participated in formal training on the use of digital search and investigation tools online?**

» Yes (in Israel, in person or online)

» Yes (abroad, in person or online)

» No

» Other: _____

**11. Is there a particular topic, investigation/search method, or digital tool that you would like to learn about?** *(open text)*

## A.2 Post-Workshop Survey

1. **What are your coverage areas/beats?** *(select all that apply)*
   - » General news
   - » Politics
   - » Security/defense
   - » Social issues — welfare and education
   - » Economy and business
   - » Planning and real estate
   - » Technology
   - » Culture and entertainment
   - » Science and health
   - » Sports
   - » Other: _____

2. **To what extent do you believe that the tools, skills, and content provided in the workshop will improve your journalistic work in the future?**
   *(1 — Will not improve it at all, 5 — Will improve it a great deal)*

3. **To what extent did the workshop improve your ability and knowledge in each of the following areas?**
   *(1 - Did not improve at all, 5 - Improved a great deal)*

   **3.1 Advanced Google search techniques**

   **3.2 Investigation, information search, and ongoing monitoring within social networks**

   **3.3 Verification and authenticity checking of visual content and information** (e.g., reverse image or video search)

   **3.5 Geolocation** — using maps and visual information to locate a place
   Investigating websites and domains

   **3.6 Searching and examining details of ads and sponsored/promoted content on networks**

3.7 Using AI tools for routine journalistic work, investigations, and verification

3.8 Organizing, archiving, and documenting digital findings

3.9 Searching for information about people (social media accounts, phone numbers, etc.)

3.10 Tools and knowledge for online safety, privacy, and source protection

4. **Is there a tool or skill learned in the workshop that you intend to apply immediately in upcoming investigations or in your routine work?** *(open text)*
5. **What did you feel was missing from the workshop?** *(open text)*
6. **Any additional comments?** *(open text)*

## Appendix B:
The Flagship Training Course Survey Questionnaires (English Translation)

### B.1 Pre-Course Survey

1. **In what media outlet do you work?** *(open text)*
2. **Gender**
   - » Female
   - » Male
   - » Other
   - » Prefer not to answer
3. **Years of experience in journalism** *(open text)*
4. **What are your coverage areas/beats?** *(select all that apply)*
   - » General news
   - » Politics
   - » Security/defense
   - » Social issues — welfare and education
   - » Economy and business
   - » Planning and real estate
   - » Technology
   - » Culture and entertainment
   - » Science and health
   - » Sports
   - » Other: _____

5. **Have you previously participated in formal training on the use of digital search and investigation tools online?**
   - » Yes (in-house training — "the Digital Desk")
   - » Yes (in Israel, in person or online)
   - » Yes (abroad, in person or online)
   - » No
   - » Other: ____

6. **How often do you use social media and AI tools professionally as part of your journalistic work** *(gathering information, analysis, translation, investigation, publishing, etc.)?*
   - » Daily
   - » Several times a week
   - » Less than once a week
   - » Don't use social media at all

7. **Which tools, platforms, and social networks do you use as part of your journalistic work?** *(you may select more than one)*
   - » Twitter/X
   - » Facebook
   - » Instagram
   - » TikTok
   - » Telegram
   - » WhatsApp
   - » Bluesky
   - » Other: _____

8. **At what level do you assess your ability to use digital investigation tools and methods overall?** *(1 – No experience, 5 - Expert)*

9. **How would you rate your skill level in the following tools and methods?** *(1 – no knowledge/skill at all, 5 – very high level of knowledge/skill):*

   **9.1 Advanced Google search techniques —** advanced search commands (such as site:, inurl:, filetype:)

   **9.2 Investigation, information search, and ongoing monitoring within social networks**

   **9.3 Verification and authenticity checking of content and information** (e.g., reverse image/video search and identifying fake AI-generated content)

   **9.4 Geolocation —** using maps and visual/forensic information to locate a place

   **9.5 Investigating websites and domains**

   **9.6 Searching and examining details of ads and sponsored/promoted content on networks** (social media and website advertisements)

   **9.7 Using AI tools for routine journalistic work, investigations, and information verification**

   **9.8 Organizing, archiving, and documenting digital findings and information gathered online**

   **9.9 Searching for information about people** (social media accounts, phone numbers, etc.) **by using various tools and open-source databases**

   **9.10 Data journalism —** using digital tools to analyze and process data

   **9.11 Tools and skills for online safety, privacy, and source protection**

10. **Have you experienced digital harassment or threats during the course of your journalistic work? If so, what kind?** *(open text)*

11. **Is there a particular topic, investigation/search method, or digital tool that is important for you to learn about during the course?** *(open text)*

12. **What aspects or issues of digital protection, safety, or device and source security would you like to learn about during the course?** *(open text)*

13. **Is there an investigation or project you would like to develop as part of the course?** *(open text)*

## B.2 Post-Course Survey

1. **What are your coverage areas/beats?** *(select all that apply)*
   - » General news
   - » Politics
   - » Security/defense
   - » Social issues — welfare and education
   - » Economy and business
   - » Planning and real estate
   - » Technology
   - » Culture and entertainment
   - » Science and health
   - » Sports
   - » Other: _____

2. **To what extent do you believe that the tools, skills, and content provided in the training will improve your journalistic work in the future?**
   *(1 — Will not improve it at all, 5 — Will improve it a great deal)*

3. **To what extent did the training improve your ability and knowledge in each of the following areas?**
   *(1 — Did not improve at all, 5 — Improved a great deal)*

   **3.1 Advanced Google search techniques**

   **3.2 Investigation, information search, and ongoing monitoring within social networks**

   **3.3 Verification and authenticity checking of visual content and information** (e.g., reverse image or video search)

   **3.4 Geolocation** — using maps and visual information to locate a place

**3.5 Investigating websites and domains**

**3.6 Searching and examining details of ads and sponsored/ promoted content on networks**

**3.7 Using AI tools for routine journalistic work, investigations, and verification**

**3.8 Organizing, archiving, and documenting digital findings**

**3.9 Searching for information about people** (social media accounts, phone numbers, etc.)

**3.10 Tools and knowledge for online safety, privacy, and source protection**