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The use and ethical implications of artificial intelligence, collaboration, and participation in local Ibero-American newsrooms

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This study examined the use and ethical implications of Artificial Intelligence (AI), collaboration, and participation in 12 local Ibero-American news outlets across Brazil, Colombia, Ecuador, Spain, Mexico, Peru, and Portugal. Based on data from 138 questionnaires, the findings highlighted limited knowledge and technical expertise, along with serious ethical concerns. While journalists expressed positive attitudes toward collaboration with other newsrooms and audience participation, their practical implementation remained low. Regarding AI, there was broad consensus against its use in content production, even though adoption levels mirrored those of collaboration and participation. Ethical concerns surrounding AI were widespread, whereas collaboration was more frequently associated with enhancing journalistic quality. The analysis of country-level consistency revealed significant variations in innovation adoption. The findings emphasized the urgency of targeted training programs and specific ethical guidelines, as well as the need to advance research on hybridization in journalism to help local news media navigate the evolving media landscape.

KEYWORDS

journalism, artificial intelligence, collaborative journalism, participation, ethics, innovation, Ibero-America

1 Introduction

The advent of the ICT revolution has brought profound transformations to journalism, resulting in declining newspaper revenues, widespread journalist layoffs, and the closure of numerous media outlets (Abernathy, 2022). These changes have also transformed audience habits and forced shifts in media business models (Anderson et al., 2012; Benson, 2018; Christofolletti, 2019).

The crisis has been particularly acute for local media, where newspapers face significant challenges in modernizing technology and transitioning to digital platforms (Jenkins and Nielsen, 2020; Reuters Institute for the Study of Journalism, 2024), which contribute to the proliferation of news deserts (Jerónimo, 2024). The very concept of local

journalism has evolved, as it was traditionally rooted in geographical limitations tied to the distribution of print newspapers and the reach of local radio stations. In the digital age, such constraints no longer apply (Gulyas and Hess, 2024). This shift has led some scholars to propose the concept of “proximity journalism,” which emphasizes connections with communities defined not just by geography but also by cultural ties and shared values, including those of residents who have relocated but maintain cultural connections (Camponez, 2002; Jerónimo, 2015; Ramos, 2023).

One of the most pressing challenges in the transition to digital lies in adapting the business models of local newspapers, which remain heavily reliant on advertising revenues from the printed editions (Hindman, 2018); a key source of revenue for local newspapers—classified advertising—has been overtaken by dominant platforms such as Google and Facebook (Camponez, 2017). The limited online presence of local news further exacerbates the issue, with only 3% of U.S. internet use devoted to news consumption, and a mere 0.5% allocated to local news content (Hindman, 2018). The question, then, is how to foster innovation within a segment traditionally characterized by conservatism.

Olsen and Furseth (2023) argue that in Norway, the COVID-19 pandemic spurred local media to adopt innovative digital service journalism practices, strengthening their proximity to audiences. However, in other countries, local media in the interior regions continue to face barriers to innovation, particularly in technological modernization and creating stronger audience connections through digital tools (Jerónimo, 2017; Morais et al., 2020).

Within this context, local newsrooms have new opportunities at their disposal through the adoption of artificial intelligence, collaboration with other media outlets, and user participation. Often treated as separate production strategies, they are becoming increasingly interconnected and hold significant potential to expand production capacity and enhance content quality for local news media. Our approach thus aligns with recent studies that characterize journalism as a hybrid system—one that has developed new modes of news production beyond traditional organizational structures through assemblages of professionals, civic society, and technological events (Chadwick, 2017; Reese, 2022).

The advancement of technology and computational journalism is indeed a leading means of enhancing journalistic quality. However, for small media outlets to attain this level of quality and invest in AI, collaborative and participatory modes of production are essential. The Bureau Local project, a UK-based collaborative initiative that describes itself as a “people-powered network from the ground up,” exemplifies how this interrelation operates, demonstrating how technology, collaboration, and public participation—bringing together professionals and amateurs—can strengthen journalism (Park and Konow-Lund, 2023).

A fragmented approach that considers each strategy in isolation would fail to capture the broader picture of how local journalism evolves under structural pressures, particularly regarding the impact of technology and its challenging sustainability. It is the case of AI, already integrated into news organizations for audience engagement and analysis (Dhiman, 2023). It also plays an increasing role in investigative journalism, which remains the primary domain of collaborative reporting (Stray, 2021). The Invited Forum on Artificial Intelligence and Journalism highlighted that, given the contested nature of AI, “scholars now must find ways

to theorize journalism, media, and communication in both human–human and human–machine contexts” (Broussard et al., 2019, p. 682).

In this paper, we offer a methodological design to further advance the study of hybridization in local media. While previous studies have adopted a qualitative perspective (Park and Konow-Lund, 2023), our approach allows for the comparison of quantitative dimensions. This helps bridge an existing research gap. Direct comparisons of different modes of production using existing data are impossible to carry out rigorously due to inconsistencies in methodology, differences in scope, and varying levels of research in each field. By addressing these limitations, provide a more comprehensive picture of the current journalistic landscape.

2 Artificial intelligence

AI adoption has expanded globally (Ufarte-Ruiz et al., 2023; Lopezosa et al., 2024). In 2023, 85% of media organizations analyzed by Beckett and Yaseen (2023) across 46 countries had experimented with generative AI, albeit unevenly. Because of the advancements in data collection and sensor technology (Chan-Olmsted, 2019), AI optimizes the automation of news processes, including transcribing large volumes of video or audio content, identifying significant topics within these datasets, and personalizing content delivery. It also enables the creation of innovative audiovisual content, podcasts, and other storytelling formats (Trejos-Gil and Gómez-Monsalve, 2024). Common examples include financial reporting, sports coverage, and information dissemination during catastrophic events (De-Lima-Santos and Ceron, 2022).

In the U.S. local media context, the dominant category of AI use is content production, primarily text (69.6%), followed by multimedia (20.4%), translation (8.8%), and transcription (7.2%). Over 80% of journalists report having some knowledge of AI (Diakopoulos et al., 2024). Other applications at the local level include user experience enhancement, audience analytics, newsletters, website personalization, and content creation for social media platforms. Future AI-driven newsrooms organized around collaborative teams might pose a threat to certain jobs, while demanding new professional profiles (Caswell, 2023). Another source of friction is the use of journalistic content by generative AI companies (Jiménez Jacinto, 2023). At the beginning of 2025, *The New York Times* (2017) officially adopted AI tools in the newsroom, encouraging staff to use them for suggesting edits, generating headlines, and formulating questions for interviews (Weatherbed, 2025).

Concerns about the potential misuse of this technology have been increasing alongside with its implementation (Peña-Fernández et al., 2023). Gutiérrez-Caneda et al. (2024) examined the ethical concerns tied to both the technology itself—such as algorithmic bias—and its application in news production. Their research emphasized the importance of understanding the technology, potential job losses, and the need to reconcile divergent views on specific ethics codes. Recent data indicate that, despite its widespread use, only 20% of media outlets have established guidelines for using AI tools (Cano Orón and López Merí, 2024). The Charter on Artificial Intelligence, promoted by Reporters Without Borders (2023), advocates for best practices in information gathering, processing, and dissemination, as well as for strategically positioning media in relation to AI providers.

In “The Impact of AI on Local News Models Report” (Konrad-Adenauer-Stiftung USA and Medill School of Journalism, Northwestern University, 2024), based on discussions with over 25 local news and AI experts worldwide, potential benefits and risks of using AI in the local sector were outlined as follow (see Table 1).

Benefits included enhanced efficiency and improved storytelling capabilities, but the report also pointed to existing liabilities, including lack of ethical guidelines.

To address the specific challenges faced by local news media (Jerónimo, 2024; Napoli and Mahone, 2024), several initiatives have introduced tailored training and research programs to support the responsible adoption of AI. The “Local News AI” project, created in 2021 by the Associated Press (2021), has already trained over 200 newsrooms and issued a Scorecard, based on Beckett’s (2019) work, to provide a self-assessment tool for small media organizations.

Also in 2021, the London School of Economics (2021) launched a training program for local newsrooms in Europe, as part of its JournalismAI initiative. This program, designed to empower small news organizations to use AI responsibly, has reached over 100 journalists. A Spanish-language version, tailored for Latin American newsrooms with fewer than 100 employees, was introduced in 2024 (London School of Economics, 2024, para. 12). This version was intended for journalists with “a basic understanding of the potential of artificial intelligence and machine learning” and who worked at news organizations that had begun exploring how to use these new technologies.

With similar objectives, researchers from Germany, the Netherlands, and Norway launched the Towards Responsible AI for Local Journalism (2025) project, focused on developing AI-driven applications to support local journalism, a sector often in need of additional resources. Piasecki and Helberger (2023, para. 6) noted that “guidance on AI procurement could be particularly useful for local and regional media due to their more limited experience in implementing AI technologies within their organizational

structures and their distinctly unequal negotiation position. Smaller publishers are often “left out of deals” with big companies.”

2.1 AI usage in Ibero-American journalism

Task automation enables journalists to optimize their time and concentrate on investigative work. However, in Latin America, significant challenges persist, including limited infrastructure, restricted access to information and communication technologies (ICTs), low levels of digital literacy, and limited ICT adoption. Nevertheless, some progress has been made.

A study by Navarro Zamora (2023), involving 157 cyber-journalists from Peru, Argentina, Mexico, Colombia, and Costa Rica, found that 92% of journalists were unfamiliar with AI for journalism, with even higher percentages unaware of its applications across various journalistic genres. Contextual factors included the lack of AI-focused courses, workshops, or certifications in these countries, as well as economic challenges—especially for small media outlets with staff sizes ranging from 2 to 50—of acquiring such technology (99%). Nearly half of the respondents expressed significant expectations regarding the benefits of AI in journalism (Navarro Zamora, 2023).

These findings were aligned with those of the Latam Intersect PR Report (2023), which revealed that 82% of journalists in Latin America considered AI a useful tool for their work. Colombia showed the highest AI usage, with 37% of journalists using it at least once a week, compared to the regional average of 24.9%. However, a third of journalists in the region (32.6%) declared that they did not use AI at all. Among those who did, the primary applications included insight discovery and research (25.1%), translation (22%), text editing (16.8%), and text generation (13.6%).

According to the *Impact of AI on Local News Models Report* (2024), Ojo Público in Peru employed ChatGPT to analyze articles from various media outlets to identify and quantify gang-related criminal activity. Meanwhile, *La Nación* in Argentina has applied a natural language processing (NLP) AI model to generate visual graphics. In Ecuador, the Buen Vivir policy outlined a pathway toward building an information society that enhances productivity while promoting equal opportunities, citizen participation, digital inclusion, ICT literacy, and the reduction of the digital divide (Yaulema Zavala and Blanco Encinosa, 2017, p. 277).

3 Collaborative journalism

Bringing together newspapers and journalists from different locations to collaboratively produce articles, news, reports, and other content has gained significant momentum in the 21st century, though it has a long-standing history (DeRienzo, 2020; Mesquita and De-Lima-Santos, 2021; Jenkins and Graves, 2022).

Technology, according to Demeneck (2016), has encouraged a non-competitive culture among media outlets while simultaneously opening a stimulating discussion about professional identity, traditionally grounded in a sense of belonging. The internet has facilitated collaborative projects among journalists and media outlets globally, fostering a culture of content sharing (Konow-Lund et al., 2024). As Zanetti (2012) observed, the digital culture of sharing

TABLE 1 Benefits and perils of AI for local news media.

Benefits	Perils
Improve news outlets’ responsiveness with customers and consumers.	Exacerbate the loss of web traffic as search engines train on news content and answer search queries directly.
Help news organizations operate more efficiently.	Disrupt an already-ailing business model.
Allow for greater personalization of news and how it is delivered.	The lack of guidelines around its use could prompt ethical problems.
Inspire news organizations to rethink how best to serve audiences.	Introduce errors into stories that damage credibility.
Enable more effective targeting of marketing and advertising to consumers.	Lead to the replacement of journalists with machine generated content.
Create new tools to improve storytelling and to monetize content.	Limited resources could hamper small news outlets from capitalizing on its use.
Free up journalists for more original enterprise reporting	

Source: Konrad-Adenauer-Stiftung USA and Medill School of Journalism, Northwestern University (2024).

stemmed from peer-to-peer (P2P) technology, which enabled the exchange of audio, video, and other document files.

The financial crisis facing the media further incentivized alliances, as media outlets recognized the potential to achieve more with fewer human and technological resources (Ramos, 2023). In times of change, news media organizations have fostered meaningful collaboration, based on effective coordination, as seen in the ICIJ-led investigation of the Pentagon Papers (Westlund et al., 2020; Parra Valcarce et al., 2024). Nevertheless, the challenges have been considerable, such as establishing shared missions and goals, managing collaboration among different ownership structures, accommodating varied needs and funding models, addressing differing levels of familiarity with data reporting, and organizing tasks effectively (Parra Valcarce et al., 2024). At the local level, Jenkins and Graves (2022), in a study based on interviews, concluded that while collaboration was not a panacea for the challenges faced by local media, it offered several benefits. These included sharing technical and human resources, fostering connections, exchanging knowledge, offering mentorship, exploring new topics, and integrating data and multimedia elements.

Stonbely (2017), research director at The Center for Cooperative Media at Montclair State University, identified—after examining 44 projects in the U.S.—several characteristics and levels of cooperation in collaborative news projects. In separate newsrooms, journalistic production occurred independently and was shared only on an *ad hoc* basis. A co-created product, by contrast, was jointly produced by participants. Finally, an integrated product involved collaboration throughout the entire news production process (DeRienzo, 2020; Napoli et al., 2019; Stonbely, 2017). Key elements also included durability and scope. Continuous and open collaborations lacked a fixed deadline, allowing for sustained partnerships over time. Regarding scope, while projects remained at a regional level—such as the Vaza Jato dossier in Brazil and 889 Pages in Puerto Rico, both conducted in 2019 (Mesquita and De-Lima-Santos, 2021)—transnational collaboration was on the rise (Alfter, 2019).

Journalistic collaborations present distinct ethical dilemmas. Houston and Díaz-Struck (2024, para. 8) emphasized the importance of “underlying principles, elements, and rigorous requirements for evidence, accuracy, and fairness” in collaborative investigative reporting. As collaborative projects evolve (Alfter, 2019), the possibility of conflicts and differences in fundamental principles of human interaction remains present, including networking, idea development, team formation, work planning, and research—areas often constrained by miscommunication and time pressures. Additionally, fundamental differences in journalistic principles across participating organizations pose significant obstacles, affecting decision-making, editorial independence, and verification standards. Other complications are associated with the publication phase, particularly in adhering (or not) to embargo agreements (Becket, 2011).

3.1 The impact of collaboration in Ibero-America

Findings by Mesquita and de-Lima-Santos (2021), based on a survey of 120 questionnaires from news organizations in 15 Latin American countries, highlighted differences between Latin American

and Western media motivations for collaboration. In Latin America, collaborative efforts often focused on underrepresented, forgotten, or misrepresented communities and topics. A majority of newsrooms (90%) reported conducting collaborative journalism with other news outlets, while 45% collaborated with communities, 43% with freelance reporters, 36% with universities, and 31% with advocacy organizations.

Another study by Mesquita (2023, pp. 37–38), based on 36 interviews with members of organizations responsible for collaborative journalism projects, identified motivations such as social responsibility—often interpreted in activist terms—promoting diversity, and fostering connections with audiences in even the most remote areas: “One is connected with the idea of diversity and the feeling of belonging and representation; the other focuses on audiences and the democratic imperative of access to information.”

The Latin American Center for Investigative Journalism (CLIP) was established in 2019, founded by three renowned journalists: María Teresa Ronderos from Colombia, Marina Walker-Guevara from Argentina, and Giannina Segnini from Costa Rica. CLIP, which became a member of GIJN in 2021, serves as a hub for cross-border journalism in Latin America: “It was very clear to me that there was a vacuum in Latin America,” said Ronderos (Courchay, 2024, para. 6). Since its founding, CLIP has produced articles in collaboration with nearly 100 media partners across Latin America, Europe, the United States, Asia, and Africa.

4 User participation

The advent of the internet introduced a new perspective on audience participation in the construction of news (Wall, 2015). Prior to this, audience participation was limited to opinion pieces, letters to the editor, and similar tools (Singer et al., 2011). Even before the digital era, public journalism in the interior of the United States provided a novel form of interaction: readers were invited to decide which topics to cover. This approach, aimed at reversing declining newspaper circulation, sought to foster greater engagement from readers (Haas, 2012; Rosen, 1996). Initially, this practice spread through online forums, later expanding to blogs, social networks, citizen journalism platforms, and projects such as *OhMyNews* in South Korea (García de Torres, 2010; Deuze and Witschge, 2018).

The rise of self-media and citizen journalism compelled traditional media outlets to adapt their practices to the digital age, expanding opportunities for audience participation. Among the tools employed were readers’ blogs, comment sections, and polls, all designed to enhance interaction between media and the public (García de Torres, 2010; Domingo, 2011). Following Carpentier (2011), this shift represented genuine opportunity for participatory journalism, empowering citizens to make decisions rather than merely interacting in the comments section.

From the start, however, the integration of new participatory channels into the informational space created tensions within the system. Initially, many media outlets resisted participation, citing a lack of resources, a lack of understanding of the phenomenon, and professional perceptions of their roles (Lewis, 2012; Hermida and Thurman, 2008). The contributions of Gillmor (2004) and the concept of “citizen journalism,” combined with the poor quality of user contributions in comment sections, fueled the debate even as participatory spaces expanded into social networks. A study on

participatory strategies in 80 newspapers worldwide concluded with measures to counter the risks, such as establishing ethical guidelines for contributors, making editorial principles and terms of service transparent, ensuring user registration, promoting quality user-generated content, providing training, and defining clear legal bases for content reproduction (García de Torres, 2012).

Despite the lack of verification and professionalism certain participatory projects have demonstrated over time that citizen collaboration can be effective. One such example is the OTT app (short for “Onde TemTiroteio” or “Where Is There Shooting” in Portuguese), created by citizens in Rio de Janeiro to map urban violence in real-time. The app has become a reliable and an important source of images and data for local news outlets in the city (Grupillo, 2024). A similar case was observed in Chicago, where parents and digital activists, outraged by the local government’s decision to close schools, created an online platform compiling data to counter the government’s arguments. Local media engaged with the initiative, by utilizing its data for journalistic purposes, but without taking a leadership role (Heikka and Carayannis, 2019). García de Torres and Hermida (2020), after examining the practice of social reporter Andy Carvin, concluded that participatory journalism, when grounded in robust editorial practices, could integrate collaborative reporting with traditional journalistic values of accuracy, trust, and verification.

Audience participation began to decline as users gravitated toward collaborative platforms and social networks such as YouTube, Facebook, Twitter, Instagram, and TikTok. However, the weakening of clickbait-driven business models and the emergence of paywalls has ultimately revived participation as a strategic element linked to the concept of community (Journalism That Stands Apart, 2017).

4.1 The impact of participation in Ibero-American journalism

The “golden age” of media participation is generally placed between 2006 and 2010, when citizen journalism was on the rise and news media outlets swiftly integrated Web 2.0 tools.

During this period, participation tools in Colombian newspapers—based on a sample that included local media—, however, showed an uneven presence (Calderín et al., 2012). On the other hand, in Spain, local news outlets within the Vocento group appeared to be more advanced in employing Web 2.0 tools (Martínez Martínez, 2012). Similarly, in Mexico, the regional newspaper *El Imparcial* engaged in participation efforts alongside *El Universal* and *Milenio Diario*, with “no significant gap between national and local newspapers” in this regard (Sánchez Badillo, 2012, p. 271). In Peru, *Correo de Lima* was notable among regional cyber-newspapers for offering the most interactive options, while *El Tiempo* (Piura) distinguished itself with a pioneering collective blog initiative in northern Peru (Yezers’ka, 2012). In Portugal, Zamith (2012, p. 331) observed that UGC in the Portuguese press was limited, with regional newspapers displaying greater resistance to participation, “with a rather poor outlook across the five regional newspapers.”

A comparative analysis of 27 local media outlets in Argentina, Colombia, Spain, Mexico, Peru, Portugal, and Venezuela during the same period found that Twitter and Facebook had become key information sources for Ibero-American journalists. However, the study also highlighted challenges such as economic constraints, lack

of profitability, and difficulties in engaging with audiences and building communities (García de Torres et al., 2011).

Some years later, a study on the use of crowdsourcing by Ibero-American journalists (García de Torres et al., 2020) concluded that, while journalists were not entirely opposed to participatory models, collaboration remained framed within a traditional paradigm in which citizens were primarily viewed as sources rather than content producers. Ethical concerns and competition were identified as key factors limiting the use of crowdsourcing, particularly risks associated with sensitive user-generated content, defamation, the involvement of minors, and coverage of complex topics such as drug trafficking and terrorism. Nevertheless, open participation was highly valued by journalists in specialized areas and in certain stages of the news production process.

5 Materials and methods

Our main research questions were:

RQ1: What are the levels of knowledge, use and attitudes related to artificial intelligence, collaboration, and user participation in local Ibero-American newsrooms?

RQ2: What are the main ethical concerns?

The hypotheses, based on findings by Mesquita (2023), Mesquita and de-Lima-Santos (2021), García de Torres (2012), García de Torres et al. (2011), Navarro Zamora, 2023, and Jenkins and Graves (2022), were formulated as follows:

H1: Knowledge of and attitudes toward artificial intelligence were, respectively, more limited and more negative compared to collaborative journalism and user participation.

H2: Journalists have greater experience with artificial intelligence than with collaborative journalism, due to the widespread adoption of generative AI tools.

H3: Public service is a strong motivation for collaboration in Ibero-American newsrooms.

The study sample consisted of 138 journalists from 12 local newsrooms in seven Ibero-American countries with historical and cultural ties: Brazil, Colombia, Ecuador, Spain, Mexico, Peru, and Portugal (Yezers’ka, 2008; García de Torres et al., 2011). Most of these countries have experienced growth in digital journalism, facing similar challenges related to the impact of social media and artificial intelligence on news dissemination, verification processes, and audience relationships (Salaverría, 2016; Oller Alonso, 2017).

Regarding socio-demographic characteristics, 74 men and 64 women answered the questionnaire, ensuring a balanced representation. In terms of age groups, the respondents comprised 29 journalists under 25 years old, 71 journalists aged 25–45, and 38 journalists over 45.

By country, the distribution of journalists was as follows: 24 from Colombia, 18 from Ecuador, 29 from Spain, 13 from Brazil, 19 from Mexico, 22 from Peru, and 13 from Portugal. While the number of responses varied across countries, the overall sample was sufficient to identify general trends—the primary objective of the study—rather than to conduct country-specific comparisons.

The sample size was not only consistent with previous research on newsroom dynamics but was also substantial given the study's focus on local media. Regarding AI adoption, [Apablaza-Campos et al. \(2024\)](#) surveyed 154 participants across 14 Ibero-American countries. Similarly, within the same regional context, [Navarro Zamora, 2023](#) collected data from 157 participants from Peru, Argentina, Mexico, Colombia, and Costa Rica, drawing from an initial sample of 300 selected journalists. In terms of collaboration among local newsrooms, [Jenkins and Graves \(2022\)](#) conducted one of the few studies on this topic, analyzing three European initiatives: Bureau Local (United Kingdom), L'Italia Delle Slot (Italy), and Lännen Media (Finland). [Mesquita and de-Lima-Santos \(2021\)](#) collected 120 responses from news organizations of varying sizes across 15 Latin American countries to examine trends in newsroom collaboration. Similarly, [García de Torres et al. \(2020\)](#), using a snowball sampling approach via social media, gathered responses from 100 Ibero-American journalists regarding participatory practices.

Whenever possible, the study prioritized selecting a single newspaper per region, focusing on small outlets with both digital and print editions and a strong local orientation. We chose to administer the questionnaire directly within newsrooms as an alternative to open online surveys to improve response accuracy and participation rates ([García de Torres et al., 2020](#)). This approach also ensured that all respondents were actively working journalists within the selected media outlets, thereby minimizing self-selection bias and enhancing the credibility of the findings.

Fieldwork, however, presented several challenges, including disparities among news markets, journalists' reluctance to provide information in contexts of violence and persecution, and instances of denied access. Although the minimum sample size of 120 journalists was met, additional newspapers—sometimes a second or even third outlet—were included to strengthen the sample size within each country. In Ecuador, a second attempt was necessary to secure participation, while access was denied by two news outlets in Brazil and five in Portugal. Ultimately, the study incorporated the following newspapers (see [Table 2](#)).

A Tribuna (Vitória, Brazil): founded in 1938, it is part of a communications group that includes radio and television stations. It has an independent digital version, *Tribuna Online*, and 111,000

followers on Facebook. Renowned for its regional coverage and multimedia production, it holds a solid position in Espírito Santo.

O Município (Brusque, Brazil): established in 1954, it publishes daily in both print and digital formats. Ranked 38th in the 2024 Scimago Media Rankings, it has 144,000 Facebook followers. The outlet is part of a media group that also operates in other cities, such as Blumenau and Joinville, within the state of Santa Catarina.

El País (Cali, Colombia): with over 70 years in operation, it is a leading outlet in the Pacific region of Colombia. Its investigative unit spearheads impactful collaborative journalism projects. Ranked 6th in the 2024 Scimago Media Rankings, it has 989,000 Facebook followers. According to Comscore, it reached an audience of 5 million users in July 2023, making it the leading regional news outlet and the sixth most-read nationally.

El Mercurio (Cuenca, Ecuador): a century-old newspaper with national and international reach, it was founded in 1924 and launched its online edition in 1995. Ranked 5th in the 2024 Scimago Media Rankings, it has 528,000 Facebook followers. The outlet features two weekly supplements, *El Mercurito* and *Ellas y Ellos*.

Las Provincias (Valencia, Spain): established in 1866, it has been part of the VOCENTO group since 2000. As the digital leader in Valencia, it attracted 6.6 million unique users in March 2024. Ranked 54th in the 2024 Scimago Media Rankings, it has 223,000 Facebook followers. Its 2023 civic engagement initiative, "Tender Puentes," highlights its commitment to public service journalism.

Diario de Morelos (Morelos, Mexico): founded in 1978, is the leading print newspaper in the state. Ranked 35th in the 2024 Scimago Media Rankings, it boasts 1 million Facebook followers. Combining print, digital, and radio platforms, the outlet has a comprehensive approach to news dissemination. According to the National Registry of Print Media, it has an average daily circulation of 41,000 copies.

El Sol de Puebla (Puebla, Mexico): established in 1944, it is part of the Organización Editorial Mexicana (OEM). Ranked 45th in the 2024 Scimago Media Rankings, it has 1 million Facebook followers. The outlet modernized its digital platform in 2017, adapting to new audience preferences. It is the most prominent newspaper in the state. According to the National Registry of Printed Media, compiled by the Mexican federal government, it has a circulation of 32,336 copies, almost 25,000 in the capital of Puebla.

TABLE 2 Sample by country, region, city, and founding year.

Newspaper	Country	Region	City	Foundation year
<i>A Tribuna</i> (Vitória)	Brasil	Espirito Santo	Vitória	1938
<i>O Município</i>	Brasil	Santa Catarina	Brusque	1954
<i>El País</i>	Colombia	Valle del Cauca	Cali	1950
<i>El Mercurio</i>	Ecuador	Cuenca	Cuenca	1924
<i>Las Provincias</i>	España	Comunitat Valenciana	Valencia	1866
<i>Diario de Morelos</i>	México	Morelos	Cuernavaca	1978
<i>El Sol de Puebla</i>	México	Puebla	Puebla	1944
<i>La Jornada Zacatecas</i>	México	Zacatecas	Zacatecas	2006
<i>El Tiempo</i>	Perú	Piura	Piura	1916
<i>A Voz de Trás-os-Montes</i>	Portugal	Vila Real	Vila Real	1947
<i>Jornal do Fundão</i>	Portugal	Beira Interior	Fundão	1946
<i>Região de Leiria</i>	Portugal	Leiria	Leiria	1935

La Jornada Zacatecas (Zacatecas, Mexico): launched in 2006 as a franchise of the national newspaper *La Jornada*, whose national edition is included in its print version, it offers both print and digital versions. Linked to local government funding, it has 172,000 Facebook followers. It receives nearly 700,000 pesos (37,247 euros) through services and agreements, the majority of which comes from the state government.

El Tiempo (Piura, Peru): with over 108 years of experience, it leads the media market in northern Peru. *El Tiempo* was the first local media outlet in northern Peru to launch a website in 1997. Ranked 26th in the 2024 Scimago Media Rankings, it has 227,000 Facebook followers. The outlet caters to diverse audiences, offering a serious daily for socioeconomic groups and a popular version. The readership of the print edition of *El Tiempo* averages 17,200 per day, while its digital platform attracts 8,100 daily readers.

A Voz de Trás-os-Montes (Vila Real, Portugal): founded in 1947, it publishes weekly in print and daily online. Ranked 42nd in the 2024 Scimago Media Rankings, it has 90,000 Facebook followers. The newspaper invests in multimedia production and special editions, available in both formats.

Jornal do Fundão (Fundão, Portugal): a weekly print and digital newspaper based in Beira Interior. Ranked 40th in the 2024 Scimago Media Rankings, it has 45,000 Facebook followers. The publication focuses on local news and maintains a strong presence in its region.

Região de Leiria (Leiria, Portugal): founded in 1935, it has embraced digital innovation through podcasts, videos, and local services like restaurant and event guides. Ranked 13th in the 2024 Scimago Media Rankings, it has 97,000 Facebook followers. The outlet prioritizes digital transformation while maintaining its local roots.

To address RQ1 and RQ2, a Likert-scale questionnaire was designed, structured around three key areas of interest: artificial intelligence (12 questions), participatory journalism (5 questions), and collaborative journalism (seven questions). The design took into account that long questionnaires might lead to respondent fatigue, potentially reducing attention, and engagement. Journalists were asked to evaluate a total of 24 statements on a scale from 1 (“not at all”) to 5 (“a great deal”). The questionnaire included two open-ended questions to provide further insights related to RQ2 and RQ3: “Please indicate what ethical issues related to artificial intelligence should be addressed in a code of ethics” and “Add any other comments related to collaboration in journalism.” This mixed-methods approach strengthened the study by combining data-driven thematic analysis with statistical validation, offering a more comprehensive examination of the phenomena under study (Roger, 2015; Bryman and Bell, 2019).

The decision to use the Likert scale was based on its reliability and simplicity for measuring opinions, perceptions, and behaviors in empirical data collection and analysis (Dawes, 2008; Adelson and McCoach, 2010; Landaluce Calvo, 2024). This scale offers several advantages. It is easy to use and interpret, translating subjective opinions into measurable data, which makes it accessible for both respondents and analysts. It is versatile, allowing for the effective evaluation of multiple dimensions within a single phenomenon. It also reduces respondent bias by providing intermediate options, which help participants select more appropriate answers and avoid extreme responses. However, neutral options may limit insights, as participants may choose them to avoid making definitive choices; also, capturing subtle differences in opinions can be challenging, as the scale does not always reflect nuanced views.

The pre-test of the questionnaire revealed that the target group had limited knowledge of specific tools, prompting modifications to

enhance clarity to facilitate proper comprehension and precise responses. These adjustments included refining definitions of key terms—such as SEO and robotic journalism—to improve comprehension, introducing a blank response option in the AI section to prevent forced or inaccurate answers (Q17), numbering each question, clearly differentiating the sections, and revising the wording to accommodate the diversity of respondents. The questionnaire achieved a Cronbach’s alpha value of 0.968, which is considered excellent in statistical terms for internal consistency (Table 3).

The fieldwork was conducted between May and November 2023. In five countries, the questionnaire was administered and collected in person, whereas in two it was distributed via SurveyMonkey. All responses were ultimately recorded using SurveyMonkey.

Regarding data analysis and processing, all responses were downloaded into Excel for analysis and visualization. Of the original 146 responses, eight were excluded to ensure a more robust and reliable dataset. The response rate remained exceptionally high (excluding Q17), with a minimum of 133 responses per question in two cases, 137 in six, 136 in two, 135 and 134 in one case respectively, demonstrating strong engagement and the relevance of the topics addressed as well as the effectiveness of the fieldwork strategy. The mean was the primary reference metric to explore the quantitative data.

The open-ended question on AI, collaboration, and participation received 46 responses, 38 of which were directly relevant to the topic (27.5% of respondents). A second open-ended question, focused on AI, generated 109 responses (78.9% of the sample).

Given GT’s suitability for studying complex processes involving multiple individuals, we adopted an inductive approach (Khan, 2014). Open coding was applied manually, allowing categories to emerge directly from participants’ responses. The researcher’s expertise in qualitative analysis, supported by a PhD in Communication Studies, ensured consistency in coding and helped mitigate challenges commonly faced by novice researchers, such as refining research questions and selecting appropriate sampling methods (Backman and Kyngäs, 2002). An iterative process was followed to systematically refine and categorize emerging themes. This approach was chosen due to the novelty of AI and the limited research on collaborative journalism in local contexts.

To safeguard participant identity and ensure response confidentiality, anonymity was maintained at the individual level throughout the study. Additionally, to prevent the disclosure of sensitive information about the participating media organizations, data were presented in aggregate form, without country-level breakdowns. However, to gain insights into country-level variations, an ANOVA and a Kruskal-Wallis test were conducted to assess cross-country consistency. This approach allowed us to identify the topics that generated the greatest consensus and divergence.

In line with the principles outlined in the Declaration of Helsinki (World Medical Association, 2013), informed consent was obtained from all participants, ensuring adherence to the principles of respect for individuals, beneficence, and justice.

6 Findings

This section presents the results of the data analysis across three dimensions, addressing RQ1, RQ2 and RQ3. First, it explores journalists’ knowledge, usage, and attitudes toward AI, collaboration,

TABLE 3 Questionnaire.

Collaborative journalism
Q1. Do you have knowledge of collaborative journalism?
Q2. Have you produced pieces or projects with other journalists or media outlets from your group or company?
Q3. Have you collaborated on pieces or projects with journalists or media outlets outside your company or group?
Q4. Would you like to collaborate in the production of pieces or engage in journalistic projects with other media outlets?
Q5. Do you believe that collaboration between media outlets benefits journalism?
Q6. Would you collaborate with journalists from other countries to produce content or conduct journalistic projects?
Q7. Do you think collaboration between media outlets in local or proximity journalism will increase in the future?
Participatory journalism
Q8. Do you have knowledge of participatory journalism?
Q9. Have you produced journalistic pieces or projects in collaboration with users?
Q10. Do you support increased user participation in content production?
Q11. Would you like to produce more content in collaboration with users?
Q12. Do you feel prepared to collaborate with users?
Robotic journalism
Q13. Do you have knowledge of the use of artificial intelligence (AI) in journalism?
Q14. Do you know what SEO (Search Engine Optimization) is?
Q15. Have you improved the headlines of your pieces using SEO tools available on your editing platform?
Q16. Have you used ChatGPT or similar tools to write or improve a journalistic piece?
Q17. If you have done so, was the experience positive? (ATTENTION: Leave blank if the previous answer was "1").
Q18. Do you support journalists using ChatGPT as a source of information?
Q19. Do you support journalists using ChatGPT to write news articles?
Q20. Do you think the use of artificial intelligence by journalists should be regulated in some way?
Q21. Do you believe that an ethical code for the use of artificial intelligence would prevent its dishonest use?
Q22. Do you think the use of artificial intelligence in local newsrooms will increase in the future?
Q23. Do you feel prepared to face the ethical challenges posed by the use of artificial intelligence in journalism?
Q24. Do you think the use of artificial intelligence could lead to staff reductions in local news media?

The table does not include the conceptual explanation at the beginning of each section.

and participation. Second, it provides a qualitative analysis of a corpus of 147 textual responses originating from the two open-ended questions, identifying key themes through an inductive approach. A total of 78.9% of participants responded to the proposals for an AI Code of Ethics, while 27.5% provided general comments on the issues examined in the questionnaire. Finally, the section presents the results of the cross-country consistency analysis through statistical methods.

6.1 Levels of knowledge, use an attitude

The findings revealed a disconnect between knowledge, practice, and attitudes across the AI, cooperation and participation. Artificial intelligence showed the lowest levels of use and acceptance, particularly in relation to using generative AI to produce texts. Data clearly demonstrated that the newsroom adoption of relational capacities—those fostering human connection, such as collaboration and participation—was more widely accepted and, most importantly, more desired compared to the opportunities to produce content offered by artificial intelligence (Table 4).

Usage levels remained extremely low across all variables but were quite similar, signaling a rapid adoption of AI. Data on knowledge also suggested a notable interest in AI despite the negative attitude. While taking action on AI adoption seems imperative, our findings also indicated a missed opportunity to fully leverage the potential of collaboration and participation at the local level.

6.1.1 Artificial intelligence

Regarding AI, there was strong agreement on the anticipated growth of AI usage in local journalism (with 83% of respondents agreeing or strongly agreeing), the necessity of regulating journalists' use of AI (78.4%), and confidence in ethical codes as safeguards against unethical applications of this technology (70.5%). However, we also found significant opposition to using AI for writing and as a news source. Our results did not confirm Navarro Zamora (2023) findings, possibly due to differences in the sample composition, with the most distinctive characteristic of this study being the opposition to AI—an attitude that may be idiosyncratic to smaller newsrooms (Table 5).

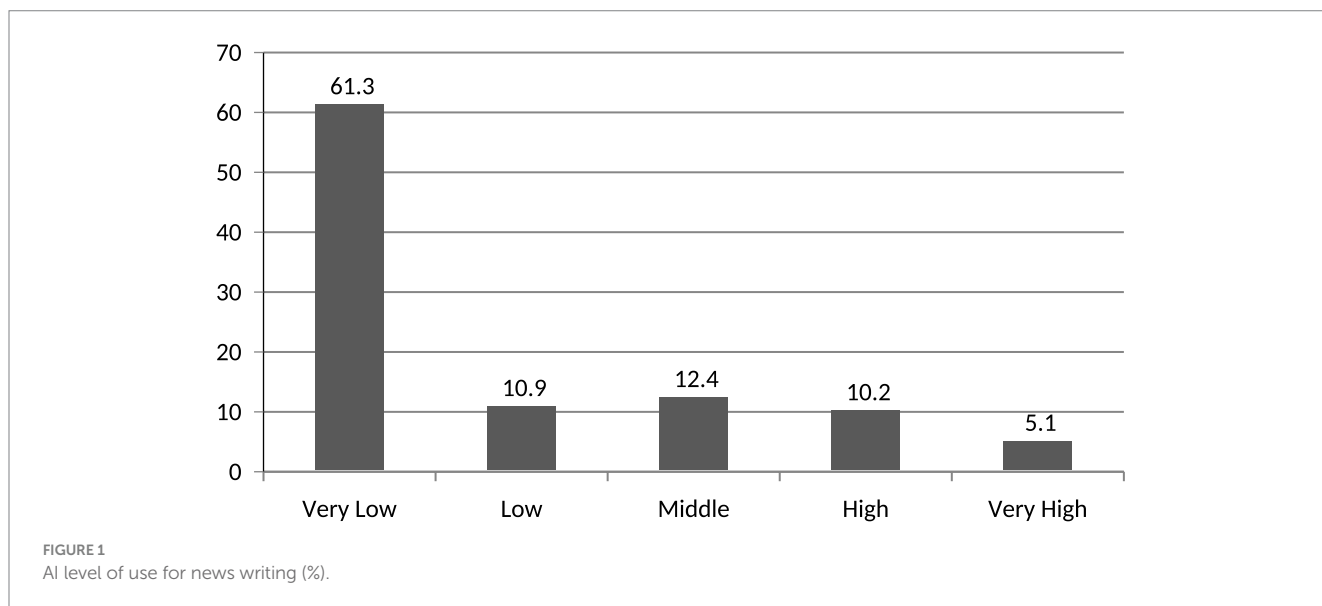
While the majority of journalists reported relying exclusively on traditional methods for news writing, our data suggest that generative

TABLE 4 Knowledge, use, and attitude (mean scores on a 5-point Likert scale).

Variable	AI	Collaboration	Participation
Knowledge	3	3	2.7
Use	1.8	1.9	2.1
Attitude	2	3.8	3.4

TABLE 5 AI in Ibero-American local newsrooms (mean scores on a 5-point Likert scale).

Question	Mean
Have you used ChatGPT or similar tools to write or improve any journalistic piece?	1.8
Are you in favor of journalists using ChatGPT to write news?	2
Are you in favor of journalists using ChatGPT as a news source?	2.2
Do you have knowledge of artificial intelligence in journalism?	3
Have you improved the headlines of your pieces with SEO tools from your editing platform?	3
If you have, has the experience been positive?	3.3
Do you know what SEO (Search Engine Optimization) is?	3.4
Do you feel prepared to face the ethical challenges?	3.4
Will the use of AI lead to staff reductions in local news organizations?	3.6
Would a code of ethics for the use of artificial intelligence prevent its dishonest use?	3.9
Should the use of AI by journalists be regulated?	4.1
Will the use of artificial intelligence in local newsrooms increase in the future?	4.2



AI has begun to permeate local newsrooms in Ibero-America. Overall, the use of generative AI tools for drafting or enhancing news remained very limited, with 61.3% of journalists stating they had never used such tools and only 5.1% reporting very high usage (Figure 1).

The findings indicated that nearly 25% of journalists had occasionally or somewhat used this technology. However, among those who had employed generative AI for writing or improving texts, only 15.6% considered the results to be optimal (see Figure 2).

Despite its low usage, 37.1% of journalists reported a substantial or high degree of knowledge about AI in journalism, suggesting a cautious approach to its implementation. In contrast, 32.8% of

journalists stated that they had little to no knowledge of AI, highlighting a significant gap in AI literacy within the sample. This gap may be attributed to factors such as age or lack of training. Knowledge of SEO among the surveyed journalists was also uneven; while 16.7% of respondents reported unfamiliarity with the concept, 45.1% indicated using it frequently to optimize headlines.

Although 46.7% of participating journalists indicated feeling fairly or very prepared to address AI's ethical challenges, 70.5% expressed support for the implementation of specific codes of ethics for this technology, a concern that already documented in previous research (Gutiérrez-Caneda et al., 2024) (Figure 3).

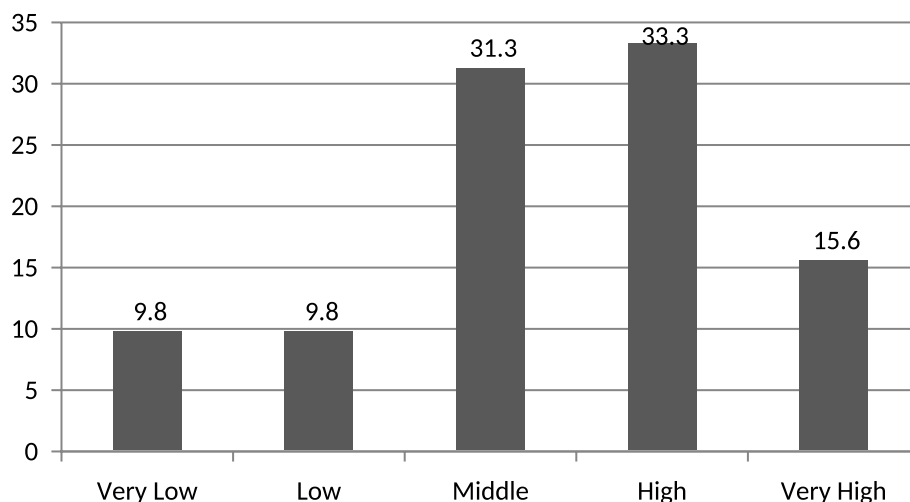


FIGURE 2
Level of satisfaction among journalists using AI (%).

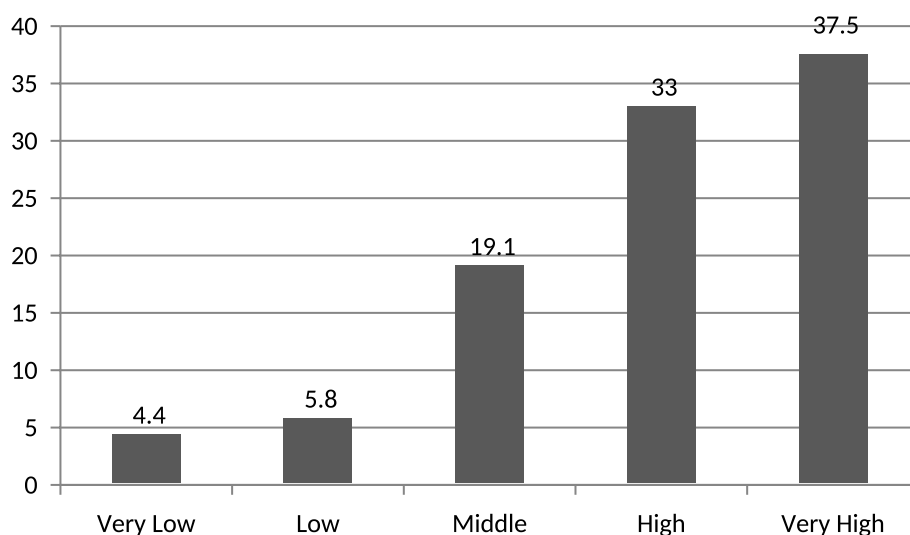


FIGURE 3
Would a code of ethics to prevent dishonest uses of AI? (%).

The gap between knowledge and declared usage was in line with journalists' attitudes: 64.8% expressed complete opposition to using tools like ChatGPT for drafting content. Notably, the percentage of those strongly in favor (2.9%) was even lower than that of frequent users. Only 14.8% of respondents expressed moderate or strong support for such practices (Figure 4).

Similarly low levels of support were observed for AI tools as sources of information: 35.3% expressed strong opposition, and a combined total of 62.4% showed little to no support. Thus, while the use of generative AI as a source was somewhat more accepted than for news writing, it still faced more resistance than approval, with only 17.2% of respondents somewhat or strongly in favor.

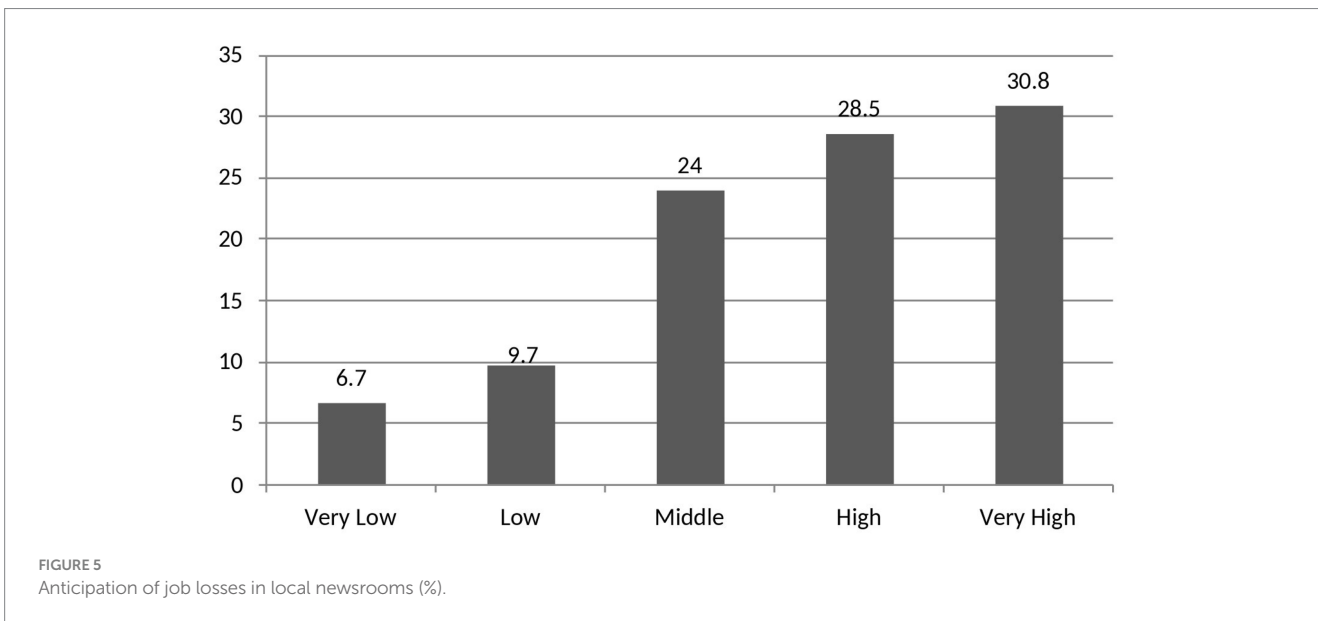
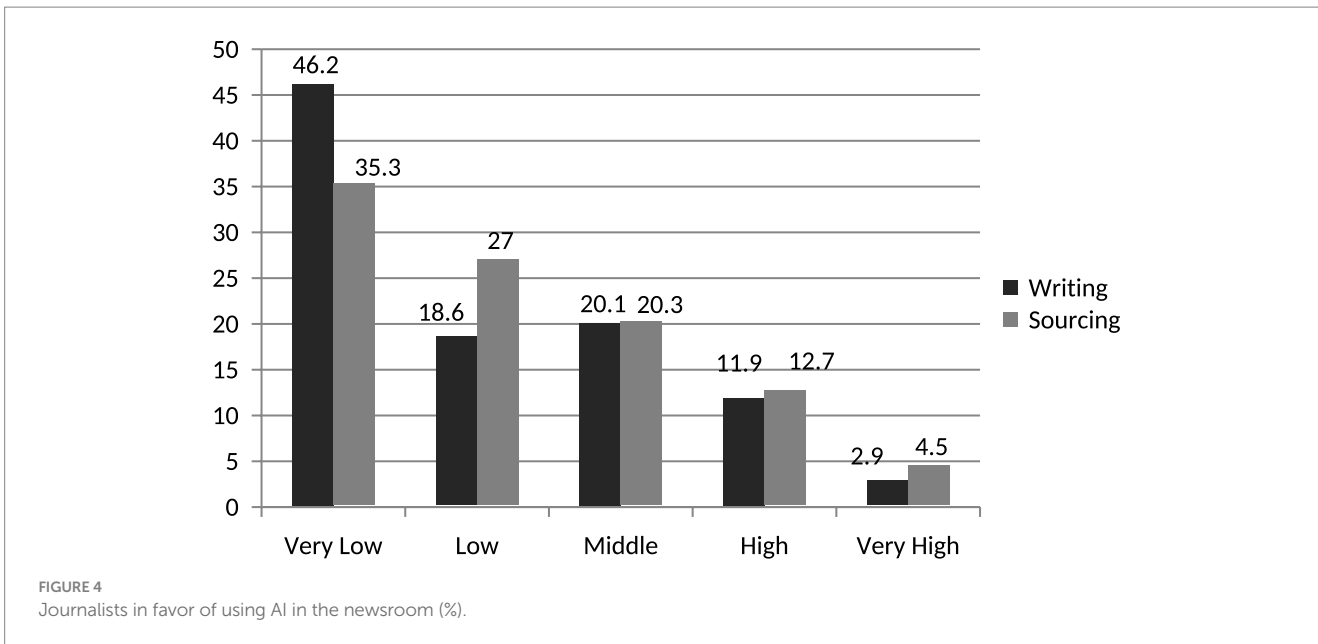
Moreover, most journalists anticipated a reduction in staffing due to the introduction of artificial intelligence in journalism. Only 6.7% considered the impact negligible, whereas nearly 60% expected a high

or very high impact. However, this "replacement" narrative is being challenged by leading media outlets (Fieiras Ceide et al., 2024) (Figure 5).

A majority of journalists in the study anticipated an increase in AI adoption in local newsrooms, with 50.7% expecting a very high impact and 32.3% a high impact, while only 16.8% predicted a moderate, low, or very low impact.

6.1.2 Collaboration

The most significant finding regarding collaboration was the stark contrast between the number of journalists with prior experience in collaborative journalism (1.9) and their willingness to engage in it (3.8). The most common form of collaboration occurred within the same media group, involving journalists and outlets from the same organization.



As shown in Table 6, collaboration was highly rated in terms of its benefits to journalism, reflecting a shift in perspective regarding the traditional focus on exclusivity, a defining characteristic of the sector; projects such as the Panama Papers (Parra Valcarce, 2016) may have contributed to the growing recognition of collaborative practices.

The type of collaboration that received the highest score was cross-border journalism (4.2), surpassing general collaboration (3.8). The preference for cross-border collaboration may be linked to the normalization of collaborative practices, as this type of partnership involves media outlets that do not compete for the same audience; however, the traditional paradigm still holds weight in practice.

As shown in Figure 6, the majority of journalists reported having little to no experience in collaborative journalism, with 81.6% indicating a low or very low level of experience (Figure 7).

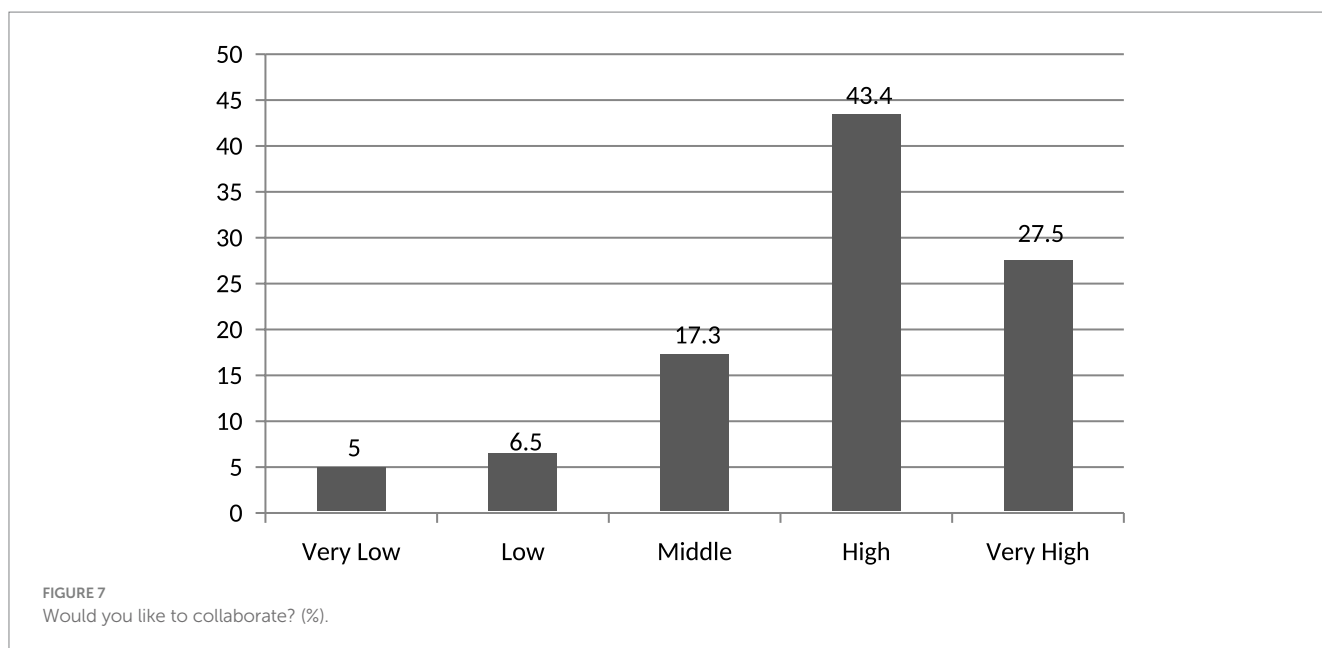
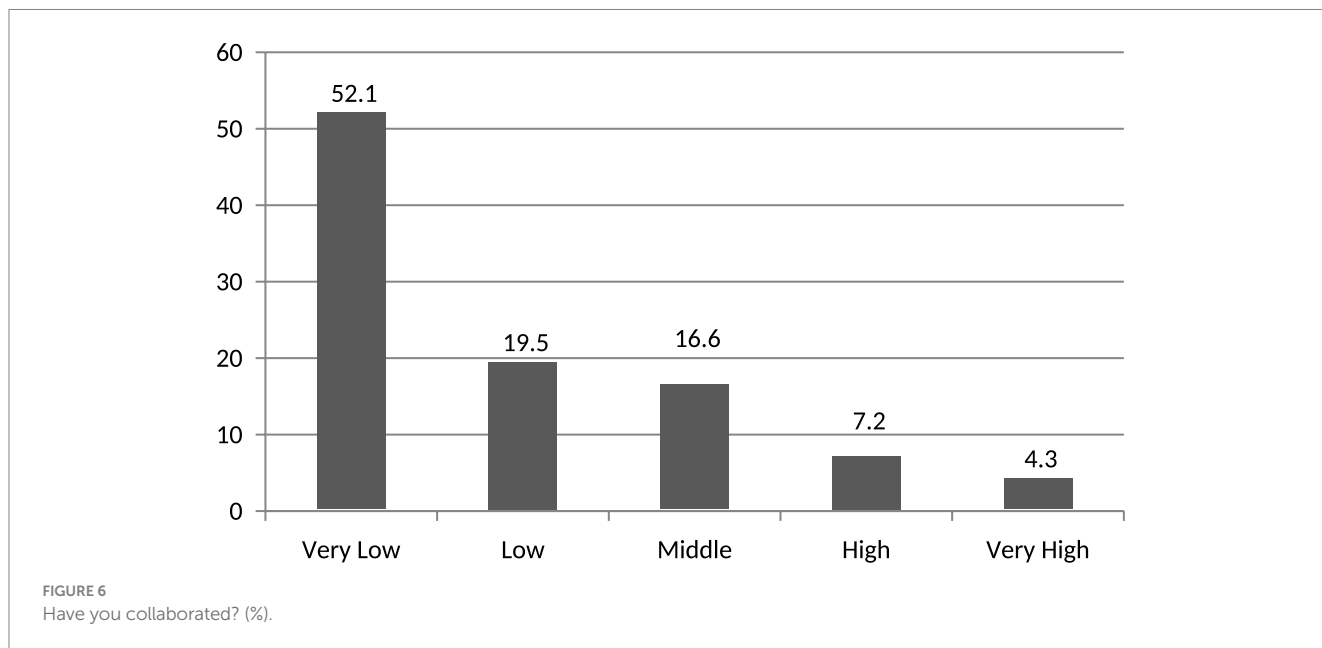
The limited experience contrasted sharply, as previously noted, with journalists’ attitudes toward collaboration with other media outlets or journalists outside their own collaborative group. The highest percentages were observed among those who expressed a strong desire to engage in such collaborations, with 70.9% indicating a high or very high level of interest.

6.1.3 Participation

Regarding participation, most journalists felt somewhat or fairly prepared to collaborate with users. It is important to mention that the questionnaire explicitly mentioned advanced participatory practices such as wiki formats for co-writing, crowdsourcing (where users provided information to develop multi-sourced reports), collaboration in the analysis of leaked documents and user-driven pre-publication text review in the introductory text to this section (Table 7).

TABLE 6 Collaboration in Ibero-American local newsrooms (mean scores on a 5-point Likert scale).

Question	Mean
Do you have knowledge of collaborative journalism?	3
Have you produced pieces or projects with other journalists or media outlets within your group or company?	2.7
Have you collaborated on pieces or projects with journalists or media outlets outside your company or group?	1.9
Would you like to collaborate on producing pieces or undertaking journalistic projects with other media outlets?	3.8
Do you believe that collaboration between media outlets benefits journalism?	4.3
Would you collaborate with journalists from other countries to produce content or undertake journalistic projects?	4.2
Will collaboration between media outlets increase in the future in local/ proximity journalism?	3.4



The level of knowledge about these practices, as shown in Table 5, was not particularly high, nor was their implementation, which remained low despite the local focus of the newspapers

under study and the relative ease of connecting with audiences through multiple formats, both digital and analogical. We also found a gap between the practice of collaboration and the

TABLE 7 Participation in Ibero-American local newsrooms (mean scores on a 5-point Likert scale).

Question	Mean
Do you have knowledge of participatory journalism?	2.7
Have you produced journalistic pieces or projects in collaboration with users?	2.1
Are you in favor of greater user participation in content production?	3.4
Would you like to produce more content in collaboration with users?	3.4
Do you feel prepared to collaborate with users?	3.3

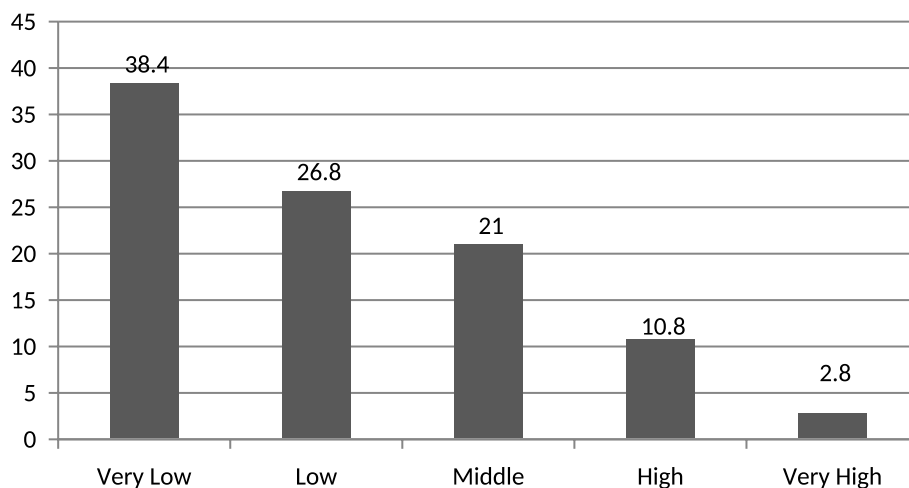


FIGURE 8 Have you co-produced pieces/projects with users? (%).

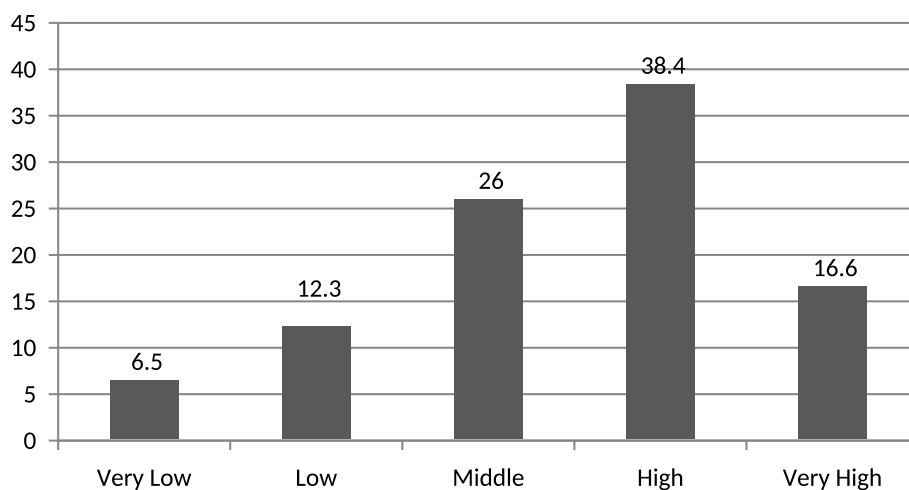


FIGURE 9 Would you like to co-produced pieces/projects with users? (%).

willingness to engage in it (with mean values of 2.1 and 3.4 respectively).

Our findings pointed to a desire to increase user participation. Lack of training (knowledge) appeared to be a primary barrier, though probably not the only one. This suggests educational programs would better prepare journalists to cope with participatory dilemmas by emphasizing the various types of

collaboration and how to effectively implement them in practice, resulting in a stronger community and user fidelity (Dimitrakopoulou and Lewis, 2022).

Previous studies have identified both a desire to acquire skills and build community, but a very low level of practical implementation over time (García de Torres et al., 2011; García de Torres et al., 2020). Data displayed in Figures 8, 9 highlight the slow progress in this area.

6.2 Qualitative analysis

This section presents the results of the analysis of 148 responses to open-ended questions.

In the analysis of the corpus of texts from 38 journalists' responses to the open-ended question, "Add any other comments related to collaboration in journalism," two clear parameters emerged: challenges and opportunities. The journalists' focus was primarily on "collaboration with other media/journalists," which received significantly more comments than collaboration with the readers/users or AI.

For the second open-ended question, "Please indicate what ethical issues related to AI should be addressed in a Code of Ethics," three main parameters were identified based on the volume of responses (109): broad general concerns, issues related to professional performance, specific concerns. Additionally, some respondents also highlighted the active role that journalists should play in addressing these ethical challenges.

Categories were derived inductively from the responses, rather than being predefined, ensuring that themes emerged organically from the data.

6.2.1 Overall challenges and opportunities

According to the respondents, collaboration posed three significant challenges: the need for effective organization (management), the impact on business models and media plurality, and the reluctance of media executives to collaborate (*There is nothing worse than rivalry among journalists trying to prove who is better*). Journalists also mentioned two ethical principles which could be undermined by collaborative practices: justice (*Collaborations within newsrooms must be genuine and human-centered to ensure everyone has equal opportunities to contribute through balanced workloads*), and respect (*National media outlets often come into regions to cover stories, using local journalists as guides while exposing them to risks, deceiving them, or exploiting their precarious working conditions*).

The benefits of collaborative journalism were mainly tied to survival amid the ongoing crisis in the media industry (sharing resources), quality (*Collaboration is critical for producing high-quality, in-depth investigations and ensuring impactful reporting*), covering topics with global impact such as climate change or endemic diseases, and covering national and regional topics. Commitment to the values and mission of journalism in society (*Collaboration should be geared toward helping and empowering communities*), an increased diversity in perspective, and a broader impact were also mentioned (*To enhance dissemination, I believe collaboration with journalists from different media outlets or nationalities is highly favorable, as it enables broader, more comprehensive reporting*).

In contrast, the views on AI and user participation—fewer in number—were predominantly negative. In the case of AI, concerns aligned with those presented in Section 5.2.2. Regarding participation, the responses emphasized the unreliability of third-party information and the risks posed by social media (*I'm surprised by participatory journalism. Would a radiologist allow a patient to interpret a diagnostic image?*).

Three journalists emphasized the role of universities and research centers in journalist training (*Academia should explain to students the advantages and disadvantages of these three types of journalism: collaborative, participatory, and robotic*), highlighting a possible gap

between academic instruction and the current demands of professional practice.

6.2.2 Proposals for an AI ethics code

The analysis of the 109 contributions (78.9% of respondents), some of them including various proposals, revealed a widespread trust in self-regulation and deep concern. In particular, we were able to identify four major issues.

Firstly, journalists underscored the importance of preserving the human touch and narrative pulse in journalistic creation (*We must strive to ensure that artificial intelligence does not replace the human factor—this is the ethical challenge*). AI, they argued, should neither replace reporters nor participate in news content production to safeguard journalism's humanistic essence and originality. Additional arguments included AI's lack of consciousness and its inability to interpret facts, which poses challenges to accuracy, as well as the necessity of preventing plagiarism. Some journalists perceived AI as a threat to credibility, expressing fears that it could lead to the "death of the journalist" by diminishing their relevance as a social figure (*Ensuring that AI does not become a factor driving mass layoffs in companies*). There was an urgent plea for a code of ethics to ensure that AI complements journalistic work without eroding human responsibility.

Secondly verification, because of the potential for AI to facilitate the creation of false content—both images and text—was met with a strong emphasis on verification and rigorous fact-checking. Journalists demanded a thorough review of content generated entirely by AI. The truthfulness of information was repeatedly cited as essential for preserving journalistic credibility and public trust. In particular, AI-generated images in journalism were associated with concerns that they could distort perceptions of events. Some participants stated that free-of-charge AI should be supervised to mitigate the risk of spreading false information.

Thirdly, journalists advocated for clarity and transparency in AI usage, ensuring that readers were explicitly informed about when and how AI had been used in content. Traceability was also mentioned, as journalists deemed it necessary for news pieces to clearly identify AI's role in their production, thus upholding responsibility and honesty toward readers (*The way readers will be informed when a text has been generated or assisted by AI*).

Fourthly, respondents expressed concerns about discriminatory bias in algorithms. Journalists emphasized the importance of objectivity, stressing that AI should not be used to manipulate public opinion or serve specific interests, thereby safeguarding journalistic integrity and editorial judgment (*It must not be used to damage reputations or to secure advantages that serve particular interests—whether corporate, political, or those of groups detached from the common good and the wellbeing of the most vulnerable populations. This is especially crucial for the dispossessed, the working classes, human rights defenders, environmental activists, and any other social movements engaged in legitimate protest*).

Beyond these four major issues, we were able to identify secondary issues pertaining to the field of professional practice. First, journalists expressed their concerns regarding the use of AI as a source, calling for clear boundaries on what AI could and could not do and advocating for restrictions on its professional access. Secondly, journalists mentioned intellectual property, emphasizing that while AI might assist in content creation, it was ultimately the author who provided essential material and information. Respondents called for clear definitions of intellectual property boundaries.

A few responses focused on specific areas such as writing, security, privacy, crime reporting, and health journalism, highlighting issues that should be addressed (*Could Artificial Intelligence enhance mechanisms for protecting journalists in hostile and violent contexts? Hopefully, it will*). General principles, such as social responsibility and self-regulation, were also mentioned in reference to journalists' obligations and their role in ensuring the responsible use of AI.

6.3 Country level consistency

As previously mentioned, to prevent the disclosure of sensitive information about the participating media organizations, data were presented in aggregate form, without country-level breakdowns. However, we were able to assess the impact of potential regional differences by conducting an ANOVA analysis. This assessment was limited to Spain, Peru, Ecuador, and Colombia, where fieldwork involved a single newsroom per country, to reinforce methodological rigor.

The analysis revealed significant country-level effects ($p < 0.05$, see Table 8), further confirmed by a Kruskal-Wallis test. Differences were observed in questions 1, 4, 5, 7, 8, 9, 11, 14, 18, 19, 20, and 22, with question 13 showing the most pronounced contrast [*Do you have knowledge of the use of artificial intelligence (AI) in*

journalism?"]. A regression analysis confirmed that country was a significant predictor of AI adoption, SEO knowledge, and ChatGPT usage, suggesting that national differences played a crucial role in shaping AI's impact on local journalism.

Mean values indicated greater familiarity with and higher expectations for collaborative practices in Latin American countries. However, when assessing the willingness to collaborate with international media, all respondents reported high values, exceeding 4, suggesting a general trend toward fostering cooperation among media organizations operating outside competitive markets.

Regarding artificial intelligence, differences emerged in both knowledge and perceptions of its impact. Nonetheless, concerns about the need to regulate AI remained consistently high across all countries, reflecting a shared apprehension about its role in the profession. While national differences were evident in AI knowledge and adoption, there was a common understanding of the importance of collaboration and ethical regulation, the latter being strongly reinforced by the qualitative contributions.

7 Conclusion

The negative attitude toward AI partially confirmed H1, which stated that knowledge of and attitudes toward artificial intelligence were,

TABLE 8 Statistical country differences.

Question	F-statistic	p-value
Q1	5.71478114	0.00126701
Q2	1.37104249	0.25682492
Q3	2.60452454	0.05676703
Q4	2.98159053	0.03558023
Q5	3.27460497	0.02475363
Q6	1.47787845	0.22598777
Q7	4.40727822	0.00614436
Q8	4.95278773	0.00316557
Q9	5.09405077	0.00266873
Q10	2.6211225	0.05561204
Q11	3.47632903	0.01928954
Q12	0.95744489	0.4165685
Q13	12.9061952	4.61E-07
Q14	5.47742869	0.00169304
Q15	2.63743993	0.05457526
Q16	4.05100241	0.00953632
Q17	0.27502315	0.84289788
Q18	4.12785001	0.00880822
Q19	9.11195731	2.70E-05
Q20	4.84565575	0.00365739
Q21	0.90386209	0.44271054
Q22	6.67557741	0.00041447
Q23	0.89759687	0.44580017
Q24	1.05330168	0.37345606

respectively, more limited and negative compared to collaborative journalism and user participation; however, the knowledge variable showed similar results. H2, which suggested that Journalists have greater experience with artificial intelligence than with collaborative journalism, due to the widespread adoption of generative AI tools, was also partially supported, as journalists reported only slightly more experience in collaborative journalism. Lastly, H3—stating that collaboration in Ibero-American newsrooms is driven by a public service motivation—was confirmed.

Our findings suggest that existing training initiatives aimed at supporting this sector are not effectively reaching the smallest newsrooms in the region. Expanding research and training programs to better align with local newsroom needs is essential to mitigating the rise of news deserts and enhancing the impact and quality of local journalism—an invaluable resource during major crises such as pandemics and other high-risk situations. The differences observed across countries indicate that fostering professional and academic cross-border collaboration would strengthen and expand beneficial dynamics within the region. The identification of country-level differences does not diminish the relevance of the aggregated findings; rather, it underscores the importance of considering both overarching trends and regional variations when analyzing the impact of AI, collaboration and participatory journalism in Ibero-American newsrooms.

The strong concern we identified regarding AI, combined with the support for specific ethical codes, suggests that local newsrooms perceive technology more challenging than human collaboration—including collaboration with other reporters and readers. This presents a serious handicap given AI's anticipated prominence across all phases of journalistic production in the future (Newman and Cherubini, 2025).

While small newsrooms may manage to keep pace with technological advancements, the real challenge lies in ensuring their effective and responsible implementation, as AI has already begun to permeate local newsrooms in the region. Collaboration, and therefore hybridization, is one of the solutions; however, for this to happen, media organizations must overcome their fear of competing in the same space or open themselves to collaboration with outlets from other regions. This, in turn, can improve the possibilities for AI to help identify opportunities to strengthen its relationship with the audience, especially younger generations.

Some practical steps that media organizations, journalists, and training programs may take to overcome these challenges involve different strategies tailored to their specific contexts. For small newsrooms, fostering intergenerational collaboration can be an effective approach, where younger or tech-oriented reporters take on a “train-the-trainer” role, sharing digital skills with senior colleagues. Establishing formal partnerships or associations at the regional level to jointly invest in opportunities has also proved effective; a notable example being AMDCOMVAL in Valencia (Spain), which brings together more than 50 hyper-local media outlets (García de Torres, 2017). Engaging in collaborative investigative projects, via Red PALTA or CLIP, would provide learning by doing along experienced partners. For local journalists, recommended steps are strengthening ties with academia; in fact, some participating media outlets expressed a willingness to receive further insights and training derived from this study. Additionally, affordable online courses, such as those offered by the Knight Center for Journalism in the Americas in Spanish and Portuguese, are valuable resources. Finally, training institutions could also contribute by designing

specific programs tailored to newsrooms with fewer than 40 journalists and updating curricula to address critical competencies.

Our research presents some potential shortcomings and limitations. First, the fieldwork was conducted in print media—albeit with digital versions—and focused on local outlets, as this was the object of study. Therefore, the findings cannot be generalized to other sectors or contexts. Additionally, regarding the quantitative section of the results, the Likert scale presents certain limitations that should be considered during questionnaire design and analysis, as responses may vary based on individual perspectives, leading to subjective interpretations. Regarding the future, further statistical analysis is needed to examine the interrelations between AI and other tools and methods that can enhance quality and amplify the impact of local media. Moreover, our findings highlight the importance of larger-scale, country-specific studies.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent from the (patients/participants or patients/participants legal guardian/next of kin) was not required to participate in this study in accordance with the national legislation and the institutional requirements.

Author contributions

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Conflict of interest

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Generative AI statement

The authors declare that Gen AI was used in the creation of this manuscript. GEN AI was used to check grammar and spelling.

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