AI & PUBLIC INTEREST JOURNALISM

MAPPING READINESS OF PAKISTANI INDEPENDENT DIGITAL NEWSROOMS

IRADA

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REPORT BY

IRADA

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Executive Summary

Around the world, generative Artificial Intelligence (AI) tools and technologies are leading to rapid disruption in most sectors and industries. The journalism and news media sector finds itself at the center of this disruption, both in terms of reporting on AI developments and being subjected to its impact. Reactions to AI among journalists range anywhere between cautious and enterprising, and responses by news publishers to AI companies have varied from content licensing agreements on one hand to copyright infringement lawsuits for the alleged use of news content to train AI models.

The Pakistani news media are not immune to the AI-driven changes playing out globally. This report examines the evolving relationship between AI and independent digital journalism in Pakistan, offering a receptive diagnostic of current usage, capacities and aspirations among small- to medium-sized newsrooms. Situated within the broader context of unequal technological access and economic precarity, the study argues that while AI is rapidly being adopted in journalism worldwide, its integration into editorial functions and news distribution strategies, such as through content automation and audience analytics among others, is scattered in the Pakistan digital news sector and constrained by resource scarcity, infrastructural limitations and linguistic exclusion.

The aim of this research is not to advocate for AI adoption as an end in itself, but to support its responsible, ethical and equitable integration as a means to strengthen editorial capacity, sustainability, and innovation in journalism.

The research adopted a sequential mixed-methods approach to collect data, combining an online survey of 37 digital news organizations with semi-structured key informant interviews of news executives. Drawing

on this mix of quantitative survey data and qualitative inputs, the report highlights the gulf between enthusiasm and readiness for adoption of AI at local newsrooms. The study notes that the majority of respondent news outlets are experimenting with AI but lack strategic support, training and localized tools to use AI tools meaningfully.

The findings from the survey reveal that AI usage is reportedly widespread — over 84% of surveyed outlets claimed using some form of AI — but largely shallow in terms of integration, often remaining limited to generative AI chatbot use. Tools such as ChatGPT, Canva, and free transcription services are being used, but mostly for low-barrier tasks such as translation, headline generation or editing captions. Use of AI for more complex or strategic functions, such as audience analytics, automated publishing, personalization or backend integration, remain rare. Only a handful of outlets reported using AI in any sustained or deeply embedded way, and just a third had formal editorial policies on AI use.

Capacity remains a major bottleneck. Although many newsrooms are already using AI, just over 90% of the respondents said they had low capacity to effectively use AI. Most newsrooms reported needing foundational editorial training on how to integrate AI into existing workflows without compromising journalistic values. There was also a strong demand for tools and training that could work in Urdu and regional languages, as well as for guidance on how to assess and select appropriate tools. Critically, many outlets described their adoption of AI as opportunistic rather than strategic, driven by trends or word-of-mouth rather than any internal roadmap.

Sharp infrastructural and linguistic divides seem to be shaping AI readiness in Pakistan's digital news media, according to the report's findings. Most tools are optimized for English, and to some extent Urdu, making them inaccessible to newsrooms producing in regional languages such as Sindhi, Pashto or Balochi. This language gap reinforces technological

marginalization for audiences and practitioners already underserved by national and global media systems. Regional outlets also face infrastructural limitations such as slow internet, outdated devices, and unreliable power. These conditions severely curtail access to cloud-based AI tools and these asymmetries generate a two-tier media system: one in which large Urdu or English dominant outlets have started to cautiously explore AI's potential while others appear to be structurally excluded from the conversation altogether.

Despite these challenges, AI is perceived by editors and media development experts interviewed for the research as having real potential particularly in areas, such as audience engagement and social media management. However, few newsrooms have operationalized these possibilities in any systematic way so far. Interviewees noted that AI is still seen more as a set of production hacks than as a tool for audience or editorial strategy. Where it is used effectively, it is often the result of individual initiative rather than institutional design.

At the same time, strong reservations remain around reliability, accuracy and ethical risks of AI use in journalism due to factual errors, cultural insensitivity and a lack of contextual understanding in generative AI chatbot outputs and AI-generated content.
The absence of editorial oversight, especially in low-resource environments, raises concerns about misinformation, bias, and the erosion of public trust. While AI tools are valued for their speed and efficiency, journalists remain wary of their limitations in dealing with politically sensitive topics or hyper-local contexts. There was broad agreement among the survey respondents and interviewees that human oversight of AI deployment for news is not just desirable, but essential. However, this consensus has not yet translated into formal protocols or ethical guidelines in most newsrooms.

The study's findings reinforce the need for a systemic shift for digital newsrooms to benefit from AI-driven opportunities. Across large and small outlets, interviewees agreed that newsroom-level innovation cannot succeed in isolation. Transformational change will require broader ecosystem support: formalized mentorship between large and small newsrooms, cross-sector collaboration between journalists and technologists, and long-term investments in shared infrastructure, training hubs, and language-specific AI development.

This report provides practice-based, future-oriented mapping of AI's place in Pakistan's independent digital journalism sector. Adoption is high, but strategic capacity is low. Enthusiasm is real but its impact remains minimal without investment, guidance and localization. AI is not yet reshaping newsrooms, but it could. To move from isolated use to meaningful integration, the sector requires not just access to tools that speak local languages or that can be modified efficiently, but an infrastructure of support: training that centers editorial values, leadership that sees AI as a sustainability strategy and a policy environment that protects innovation without compromising independence. Only through coordinated action can AI begin to serve the credibility, resilience, viability and public interest mission of independent journalism in Pakistan.

Chapter 1 - Introduction

1.1 - Background and Rationale

The integration of AI into journalism is no longer speculative — it is reshaping editorial workflows, content personalization, audience analytics, and newsroom operations across the globe — from automated news writing and real-time translation to personalized content delivery, audience segmentation, and data-driven editorial decision-making.

This transformation of the media industry is happening at a structural level, influencing not just how news is produced, but also how it is distributed, consumed, and monetized. For independent digital media in the Global South, including Pakistan, this transformation brings both unprecedented, albeit promising frontiers, and complex, challenging unknowns. As with most technological overhauls, the benefits of the shift in journalism due to AI integration are unevenly distributed. While large-scale international or mainstream media outlets may have the resources to experiment with and operationalize innovative AI systems, smaller independent platforms face numerous challenges in accessing, adapting, and ethically integrating such technologies.

In Pakistan, where the digital media ecosystem continues to evolve amid socio-political pressures, economic instability, and technological flux, this digital divide not only exacerbates existing power imbalances within the media landscape, but also raises pressing questions about journalistic autonomy, equity, and innovation. The 2022 regional study by UNESCO, Artificial Intelligence and the Future of Journalism in South Asia, identifies widespread lack of strategic planning, internal technical capacity, as well as institutional frameworks to support sustained AI integration. The need for context-specific diagnostics and targeted support is particularly acute in the Pakistani media sector. Without it, AI use may become another

top-down intervention that reinforces existing asymmetries rather than addressing them.

Pakistan's independent digital media sector has expanded in recent years. Local journalism has offered diverse voices and alternative narratives in a heavily saturated and politically charged media environment. Many of these independent digital-only news outlets, as is demonstrated ahead, operate with lean teams, minimal infrastructure, and uncertain business models. They are increasingly reliant on social media algorithms to distribute their journalism, exposed to rapid technological changes, and are vulnerable to information overload, audience fragmentation, and financial precarity. Within this high-pressure environment, AI has the potential to offer valuable tools for survival and growth: automation can help reduce manual workload; AI-driven audience insights can enable more strategic content targeting, a practice barely used in Pakistan at the moment, as this research will go on to show; and machine learning models can help detect disinformation or analyze emerging trends.

However, little systematic research exists on the current state of AI awareness, adoption, or aspiration within Pakistani independent digital newsrooms. Most studies and existing scholarship have focused on global trends or on large-scale traditional media, overlooking distinct challenges and capacities of digital-first, mission-driven news outlets in politically complex and infrastructurally limited contexts. Moreover, the assumptions embedded in AI tools — trained on Western datasets or developed primarily in Anglophone paradigms — may not align with the linguistic, cultural and ethical frameworks of Pakistani media practitioners and their audiences.

It is within this gap between global rapidly emerging technological trends and local operational realities that this study is positioned. This research seeks to offer a practice-based, participatory and diagnostic mapping of AI use and adaptability among independent digital media

platforms in Pakistan. Crucially, the study also functions as a technical needs assessment, aiming to identify the specific infrastructural, human resource, and strategic gaps that must be addressed to support more effective AI integration into Pakistan's independent digital media landscape. The study is grounded in the current, ongoing experiences of newsroom actors: digital journalists, independent media-startup owners, business managers, and editors. The research will inform the design of targeted capacity building training and it seeks to identify aspirations and constraints that shape decision-making in local digital newsrooms to understand the situation beyond merely identification of the tools currently in use inside the newsrooms.. Ultimately, the goal is not to merely promote the adoption of AI, but to ensure that its introduction is responsible, equitable, and facilitated to enhance the sustainability, credibility, and innovation capacity of public interest journalism in Pakistan.

Chapter 2 - Methodology

2.1 - Objectives of the Study

This research initiative by IRADA, with assistance from International Media Support (IMS), builds on an ongoing commitment to strengthen the capacity of Pakistan's digital public interest media.

The primary objective of the study is to inform the design and delivery of customized capacity-building training for independent digital media platforms. To achieve this, the research undertakes a dual-purpose investigation. First, is to map the current state of AI adoption across editorial, engagement, and operational domains, and secondly, to identify the technical and strategic needs that must be addressed for more effective and responsible AI integration within the independent media landscape in Pakistan.

The specific objectives of the study are to:

Map the current use of AI tools and technologies in independent digital newsrooms across Pakistan, including the types of tools adopted and the functions they serve.

Assess the key technical challenges and unmet needs that constrain or complicate the use of AI in newsroom settings.

Generate actionable insights that will directly inform the structure, content, and delivery format of two targeted capacity-building workshops

Contribute to a practice-based understanding of AI-readiness within a diverse range of Pakistani media organizations, enabling more strategic and responsive interventions in the future.

This study does not aim to evaluate the effectiveness of specific AI tools, nor does it prescribe a universal model for AI adoption. Rather, it seeks to understand the current landscape as it exists: complex, diverse, and rapidly changing; and finally, to identify the levers that may support its responsible and impactful evolution.

2.2 Scope

While the primary emphasis of the research is on small- to medium-sized independent digital platforms — the sample primarily draws respondents from the Directory of Independent Digital Media Outlets in Pakistan — the study also includes selected mainstream and international outlets whose resources and operational models are different from the independent sector. This broader inclusion is intended to present a more comprehensive view of the existing AI landscape in Pakistan and to identify emerging best practices, innovative use-cases and replicable strategies. Notable participants in this extended scope include senior editorial and management staff from organizations such as Independent Urdu, BBC Urdu, Hum Digital, and Nukta Digital - platforms that have demonstrated early experimentation with AI driven content production, translation tools, automated workflows and audience analytics. Including these actors enables the research to draw comparative insights across different organizational scales and mandates, and to inform capacity-building efforts with real-world examples from both peer and aspirational benchmarks. The following statements further clarify the scope of the study:

1. The research covers AI tools and technologies being used in content production, audience engagement, format experimentation, revenue modeling, and newsroom operations by independent digital media in Pakistan.
2. It includes perspectives from independent digital media platforms,

Digital Media Alliance of Pakistan (DigiMAP) members, and a select group of mainstream commercial outlets working in Urdu and regional languages.

3. Respondents include editors, cofounders, producers, newsroom managers, business related decision-making leads, and development professionals working on viable and sustainable media in Pakistan, providing insights across both editorial and technical functions.
4. The study is guided by a mixed-methods approach, combining a digital survey with qualitative key informant interviews. The research also draws subsequently from existing scholarship and ongoing studies on how emerging technology like AI is changing journalism.

2.3 Limitations

The following are the limitations of the study:

1. Due to limited time and access, the sample size of independent digital media outlets was constrained; while there is diversity in the linguistic, geographic and operational profiles, the sample may not fully capture the complete spectrum of AI experimentation or current use across Pakistan's digital media landscape. Similarly, due to time constraints, there was limited engagement with key informants from mainstream and commercial news organizations.
2. The research focuses on current and aspirational uses of AI but does not assess the technical performance or long-term outcomes of specific tools or interventions.
3. The rapid pace of technological change may mean that findings reflect the period of this study (summer 2025) and may evolve as AI tools become more accessible or affordable.
4. While there are meaningful overlaps between media and cross-sector actors, such as state institutions, tech companies, and AI developers, this research primarily centers on newsroom operations and actors. As such, broader ecosystem dynamics are not explored in depth, though they are recognized as important contextual factors.

2.4 Data Collection

The research report used a sequential mixed-method research design. The research is both diagnostic and practice-based; in that it aims to uncover existing challenges and opportunities for newsrooms, as well as centers the lived experiences of media practitioners within Pakistan's independent digital journalism ecosystem. This was intentionally designed keeping in view the aim to capture the current state of play as well as future-oriented priorities for responsible AI integration into digital newsrooms. The data collection was structured into two phases:

A survey was conducted to gather trends, perceptions, and baseline data on AI use in independent digital newsrooms. A structured digital questionnaire was used to capture both quantitative indicators and open-ended responses. The questionnaire was divided into four sections. The first section focused on current use of AI in the newsroom; this section explored how respondents use AI tools (if at all) across various newsroom functions such as content creation, audiovisual editing, translation, captioning, scheduling, audience engagement, data analysis, business operations or fact-checking, and which tools are used specifically. Keeping in mind the purpose of designing effective capacity-building interventions, this section also followed up the extent and nature of use with the current skill-level of the media organization in these areas. Respondents were asked to do this by rating their skills in using AI tools across the various functions as mentioned above. It was further inquired if there are dedicated users in the newsroom to carry out AI related tasks or not. This section also asked for open-ended responses to queries on the biggest challenges faced by newsrooms generally, and their overall experience of using AI.

The second section dived deeper into perceived benefits and challenges. This section sought open-ended perspectives on the potential advantages

and risks of using AI in digital journalism in Pakistan. It aimed to understand what are seen as opportunities (improved efficiency, reaching underserved audiences) and what are deemed as challenges (cost, trust, misinformation risks) associated with AI integration.

The third section focused on technical capacity and needs; it asked newsrooms what technical infrastructure and human resources are available to them to adopt and sustain AI technologies. It aimed to understand the gaps, limitations, and areas where additional support or investment may be needed to make AI tools viable.

The final section was dedicated to newsrooms' preferences on intervention design and what the future looks like to them, who in the newsrooms should specifically receive training and if there are specific AI tools or applications that newsrooms aspire to use.

The sample for the survey was composed of the independent digital media outlets listed in the Directory of Independent Digital Media Outlets in Pakistan. The questionnaire was shared with representatives of 54 outlets; 39 responses were gathered. The respondents from these news organizations included editors, co-founders and producers.

A series of key-informant interviews was conducted to gather in-depth strategic insights on the overall industry landscape, as well as qualitative information enabling deeper technical needs assessment.

The interviews were semi-structured, and explored four core dimensions: the strategic vision and editorial goals guiding the interviewees' organizational approaches to innovation, their current and aspirational use-cases for AI, technical barriers and resource limitation, and their preferences for training modalities and follow-up support, including focus, delivery format, and post-training engagement.

Chapter 3 - Integrated Analysis of Survey Findings

This chapter presents a comprehensive analysis of survey findings by integrating survey responses across questions to explore patterns, relationships, and trends across variables. Additionally, this chapter deepens its analytical process by comparing findings and results with existing scholarship and previous relevant studies on the intersection of AI and journalism.

3.1 - Current Use of Artificial Intelligence in the Newsroom

Around eight in every 10 independent digital media organizations surveyed for this study currently use AI in their newsroom operations, as shown in Figure 1.

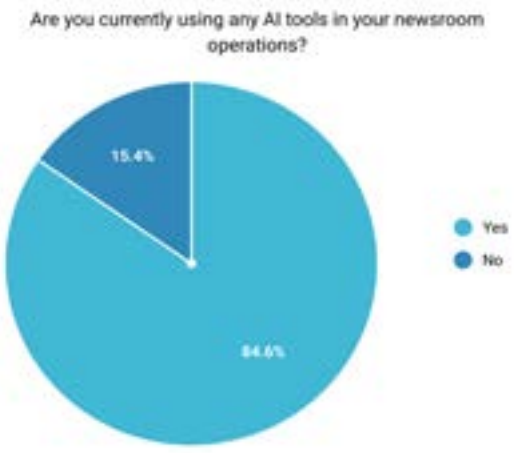

Figure 1 - Use of AI in Newsrooms

This suggests that the integration of AI in the newsroom is seen by digital media executives as essential. The small minority not using any AI tools at the moment may feel skepticism about AI's value, and face extreme technological and financial constraints, as well as lack of technical capacity. Of these six, three operate in the Khyber Pakhtunkhwa province, one in Gilgit Baltistan, and two in Islamabad.

Shams ur Rahman, editor and founder for Kohistan Times, said he does use ChatGPT on occasion but his primary aversion to using AI or integrating it into the newsroom operations was lack of trust in the information that AI generates.

Islamabad based Indus News is a Sindhi language outlet that does not use any AI tools for newsroom operations at the moment, but editor Zahoor Solangi said he is pursuing a better understanding of how regional language tools could benefit.

Saddia Mazhar is a Director at TheReporters.Pk, an investigative journalism outlet that does not use any AI in their newsroom at the moment. Saddia said lack of revenue is a major hindrance to their newsroom operations. She said while AI is already reshaping the way digital journalism is done, she said it also affects the authenticity of news.

Zubair Torwali runs WeMountains.com in the Khyber Pakhtunkhwa province and does not use AI because his newsroom has no paid staff. He is experimenting with using AI for translations but believes human oversight and quality control is essential regardless.

Collectively, these examples reveal that AI avoidance is less about resistance to innovation and more about structural exclusion; funding ecosystems, localized tools, and trusted implementation pathways. Additionally, the recurring skepticism of AI generated content is not isolated: global reports such as the Reuters Institute's Journalism, Media,

and Technology Trends and Predictions 2024 show that even in well-resourced newsrooms, concerns about AI's ability to maintain editorial integrity are widespread. For under-resourced outlets such as Kohistan Times or TheReporters.pk, these concerns are amplified further by limited institutional capacity to implement quality control mechanisms that could mitigate such risks. At the same time, other respondents reflect a readiness mindset even if practical adoption is currently stalled. This gap between willingness and implementation follows patterns seen in other Global South newsrooms as well, where strategic intent often outpaces infrastructure and support, a challenge highlighted in the ICFJ's 2023 Global AI in Newsrooms Survey.

The challenge of linguistic and regional inclusion in AI tools further complicates adoption. Zahoor Solangi's case at Indus News highlights a broader systemic issue: most generative AI models are poorly equipped to handle regional languages such as Sindhi, Pashto, or Balti, which limits the technology's utility for newsrooms serving those audiences. Research by Media Matters for Democracy (Pakistan) and UNESCO's AI and the Media in South Asia policy paper underscore that AI literacy and tool development in regional languages remain severely underfunded in South Asia. Meanwhile, small efforts such as Zubair Torwali's experimentation with AI-assisted translations suggests some outlets are testing niche use cases despite no staffing or financial support. These structural exclusions are further deepened when viewed through the primary languages that the surveyed organizations operate in.

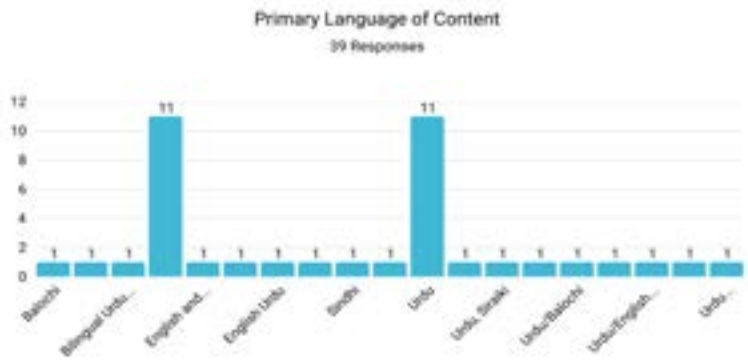

Figure 2 - Primary Language of Content

As Figure 2 shows, nearly a third of the 39 surveyed independent media organizations primarily produce content in English (11 organizations), followed equally by Urdu (11 organizations). nine organizations adopt a bilingual approach (mostly Urdu and English). Interestingly, three organizations use Urdu with Pashto, Balochi, and Seraiki, which are regional languages in which digital content is currently scarce in Pakistan as compared to English. Regional languages such as these, as well as Punjabi, comprise the content output of 17% respondents (or nine organizations). The skew toward the domination of Urdu and English is not only a reflection of audience targeting or content preference, but also an indication of the broader infrastructural and technological asymmetries in how AI technologies currently function in Pakistan, and for whom they are optimized when they are. The JournalismAI "Generating Change" report (2023) also emphasizes that newsrooms in the Global South struggle with AI tools that are not designed for or trained in local languages, limiting their utility in multilingual contexts. In Pakistan, this creates a two-tiered AI landscape: one where Urdu and English outlets may begin cautiously experimenting with AI, while regional language outlets are largely left behind, not by choice, but by a lack of tool relevance and accessibility. AI tools, whether for transcription, translation, summarization, or content generation, are overwhelmingly optimized for global or national languages,

leaving regional language content creators technologically marginalized. This two-tier AI landscape is further reinforced by the fact that five of the six outlets currently not using AI tools operate with newsroom teams of fewer than five people, highlighting how limited human and technical capacity compounds linguistic and infrastructural exclusion.

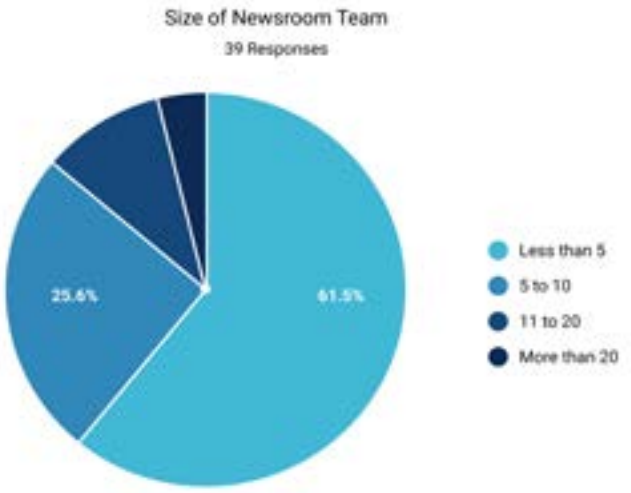

Figure 3 - Size of Newsroom Team

Of the 39 respondents surveyed, only one independent digital media platform has a team of more than 20 staff members. A staggering 24 out of the 39 news organizations, almost two-thirds of the total, have team of fewer than five people. Despite the encouraging sign that 18 out of the 24 outlets with teams of fewer than five people are using AI tools, their adoption tends to be surface-level and constrained by necessity rather than strategy, as will be demonstrated further when examining how newsrooms are employing certain AI tools.

With lean teams, there is a higher barrier to dedicated tech roles such as AI engineers, or data scientists. A direct implication of this is that most outlets in the sample are limited to off-the-shelf tools such as ChatGPT and lack the technical and human resources to adopt custom AI workflows.

AI strategies requiring training data, workflow re-design or internal automation, such as CMS integration, are likely to remain inaccessible to micro-outlets. This reinforces the current, exclusionary nature of AI readiness in Pakistan's independent media. Even when adoption exists, it is rarely translating into transformational newsroom innovation, leaving structural barriers; technical, financial, and linguistic, firmly in place. But upon closer examination of the areas in which AI tools are being used in the surveyed newsrooms in this study, it is seen that this exclusionary nature of AI readiness and adaptability in Pakistan's independent media landscape has little to do with the size of the newsroom team.

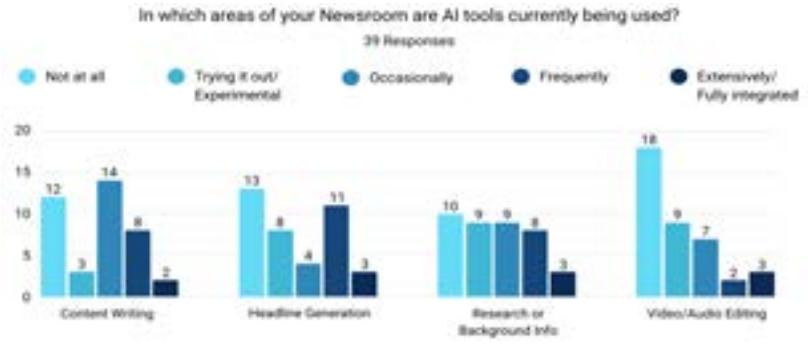

Figure 4a - what newsrooms are using AI for

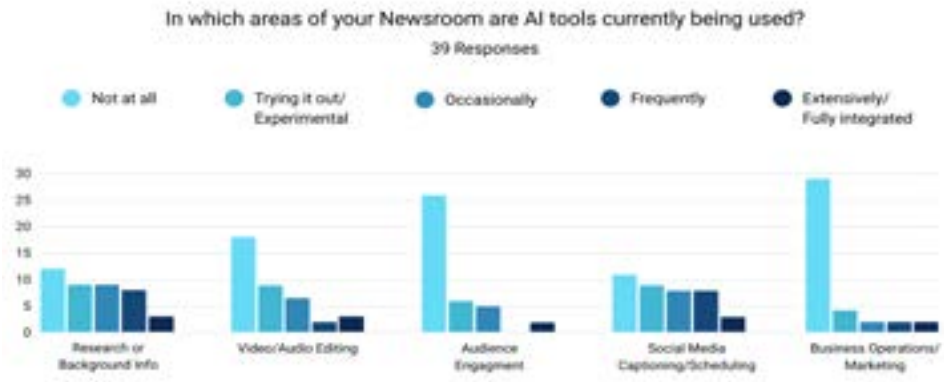

Figure 4b - what newsrooms are using AI for

As seen in Figures 4a and 4b above, the distribution of AI usage across newsroom functions reveals that adoption is concentrated in narrow, low-barrier tasks, with very few outlets demonstrating deeper or systemic integration. For instance, content writing shows the most balanced spread, with 14 outlets using AI occasionally and eight frequently, but even here, 12 outlets report no use at all, and only two have fully integrated it. Similarly, for headline generation and research or background information gathering, the data suggests some traction (11 and eight outlets use them frequently, respectively), but fully integrated use remains limited to just three outlets in each category. These figures indicate that AI tools are being used primarily to augment basic tasks rather than transform editorial strategy or add journalistic depth.

Tools that are freely available and simple to adopt, such as those for video/audio editing or social media captioning, see surprisingly low uptake: 18 outlets don't use AI at all for editing, and only two use it frequently. Social media scheduling shows a slightly more positive spread (eight occasional and frequent users each), but again only three have fully embedded it. Areas with potentially high strategic value, such as audience engagement or business operations, exhibit negligible adoption: 26 and 29 outlets, respectively, report not using AI in these domains at all. This strongly suggests that while experimentation exists, AI remains on the periphery of newsroom operations, rarely shaping business models or long-term engagement strategies. These usage patterns make it clear: structural constraints like lack of training, workflow integration, and sector-specific tooling are inhibiting transformative AI use, even when the tools themselves are accessible.

It can be seen that the most common tools being used by local newsrooms are for language translation (22 out of 39), image generation (18) and content generation (16 out of 39). These reflect lightweight use-cases that require minimal customization and are easiest to plug into existing editorial cycles. In contrast, more advanced or strategically transformative

tools such as news automation (used by 4 outlets only), content recommendation systems (1 outlet), and tools for audience engagement (7 outlets) remain largely untapped. Another study observes that Pakistani journalists generally perceive AI tools like ChatGPT as helpful for drafting or ideation, but not yet reliable enough for tasks requiring deep verification or audience-facing strategy.

This pattern aligns with global trends observed in the JournalismAI "Generating Change" report (2023), which found that while 85% of surveyed news organizations had experimented with generative AI tools, their application in newsroom workflows remains limited, particularly in the Global South, due to challenges such as language barriers, infrastructural limitations, and a lack of context-aware tools. Similarly, the International Center for Journalists' (ICFJ) "State of Technology in Global Newsrooms" report (2019) underscores a significant training gap, with only 5% of newsrooms offering AI-related training despite 42% of journalists expressing interest. These findings suggest that the shallow adoption of AI in Pakistan's independent media is not an isolated phenomenon but part of a broader global pattern where structural barriers impede the transformative potential of AI in journalism.

A 2024 study (Zamir, A., & Ahmed, M. 2024) examining AI integration in three of Pakistan's largest mainstream outlets — Dawn, Jang, and Express — examines a broader trend that is equally visible across independent digital media outlets: despite growing interest, AI remains at the margins of newsroom operations. Even in well-resourced newsrooms, the research found low AI literacy, infrastructural limitations, and a lack of strategic direction were significant roadblocks to more holistic adoption. As the findings of the current study suggest, if AI is being used at all in these independent digital-first outlets, it is to supplement editorial functions rather than reimagine broader workflows or strategy. Similarly, as figure 5 shows below, only 12 of 39 respondents (less than one third) have editorial policies on AI use.

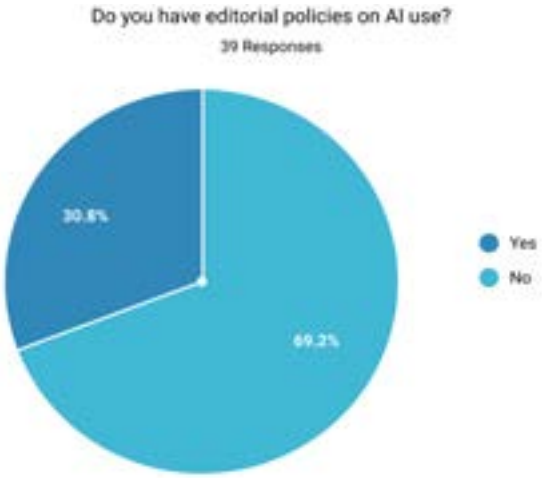

Figure 5 - editorial policies on AI

Building on these usage trends, the question of who within newsrooms is currently using these tools adds an important layer of insight into the nature of AI Integration and adoption.

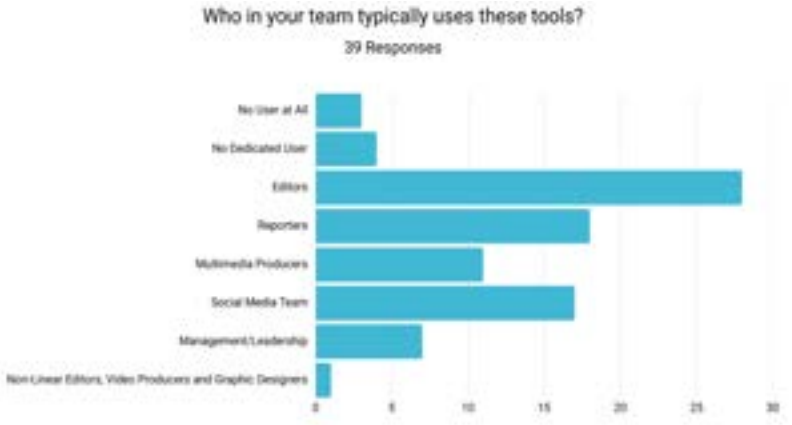

Figure 6 - who uses AI tools in these newsroom teams

According to the data, AI usage is heavily concentrated among editors. Twenty-eight (28) out of 39 newsrooms reported that editors are primary

users of such tools, followed by reporters (18 out of 39) and social media teams (17). It remains an important consideration here that most of the surveyed teams are quite small, with founders and editors often undertaking most of the operational roles. Even so, the limited involvement of multimedia producers (11 out of 39) and non-linear editors or video personnel supports the earlier observation that even readily available tools for video generation, editing or transcription, often seen as 'low-hanging fruit' in the global AI integration narrative, are not being systematically leveraged in Pakistan at the moment. In fact, as the 2024 Media Development Investment Fund report on AI in South Asia noted, "newsrooms in resource-constrained environments are often limited not by tool access, but by the absence of trained human capital and organizational buy-in."

Notably, management and leadership teams among the survey respondents appear marginally engaged (seven out of 39) suggesting that AI is not yet being viewed as a strategic imperative at the decision-making level. The disconnect between strategic leadership and ground-level implementation poses a critical bottleneck: without managerial investment, pilot-use rarely matures into institutional change. Lack of dedicated tech personnel or misalignment with long-term organizational goals reaffirms that AI's current use in Pakistani independent digital newsrooms is primarily functional and editorial, not structural or deeply transformative. It remains heavily reliant on the initiative of individual editors or content creators rather than embedded into newsroom workflows. Until AI is reframed from being the occasional time-saving tool to a strategic resource, its usage will remain fragmented, reflecting both the limitations and the potential of Pakistan's digital media ecosystem.

3.2 - Perceived Benefits and Challenges

Before AI can be integrated in Pakistan's digital media ecosystem in a way

that it may begin to offer real, sustainable value to these newsrooms, it must also contend with the foundational challenges that shape (and limit) the way journalism is practiced across the country. These challenges are not abstract or hypothetical; they are immediate, structural and deeply embedded in the daily workflows of newsrooms both large and small. Open-ended resources gathered in this study reflect that the most urgent problems are not about whether AI can enhance journalism, but whether core operations can function reliably in the first place.

For many, the primary barrier is resource scarcity. As one respondent from Pamir Times, a volunteer-run community platform put it: "The lack of full-time editorial staff and technical resources… results in delays in verifying information, editing stories to meet journalistic standards, and publishing content in a timely manner."

This is a sentiment that is heard across the board. From limited human resources and overburdened teams to a shortage of skilled editors and AI-literate staff, newsrooms are often running on low resources, as confirmed through this study. Some are actively avoiding hard news altogether, not due to lack of interest, but because the editorial load and reputational risks are too high without sufficient support. Others point to a lack of infrastructure, particularly in regions such as Khyber Pakhtunkhwa and Gilgit Baltistan, away from urban centers. Slow internet speeds, poor connectivity in remote areas, and restricted access to AI or multimedia tools due to financial constraints make even basic reporting and publishing a logistical challenge. As one respondent summarized: "Internet speed is the biggest problem and takes up way too much of the time. Of course, AI processing times are also a hurdle."

In many cases, AI tools remain aspirational rather than operational. Though there is growing interest in adopting AI to enhance video editing, automate transcription, or optimize content for digital platforms, these ambitions are consistently held back by limited training opportunities

and unaffordable or inaccessible subscriptions. One participant noted the "unavailability of helping staff", while another explained that even basic AI tools are out of reach due to organizational budget constraints. Some outlets shared frustration with fragmented digital workflows — editing, publishing, analytics and engagement tools that don't integrate, further burdening lean teams. In tandem, audience insight gaps persist. Newsrooms are unsure what content their audiences actually want and lack the capacity to track or respond to those preferences: "Unclear what stories the audience wants, or how they consume them… Multiple platforms for writing, editing, media, analytics, publishing—none of which talk to each other," one respondent stated.

These qualitative insights suggest that while AI could theoretically alleviate some of these pain points, it is not a silver bullet particularly in under-resourced environments. The perception among many journalists is that AI adoption cannot outpace the need for basic infrastructural and human investments. This reality is reflected in wider research, as well. A 2023 report from Media Matters for Democracy found that although AI has the potential to support journalism in Pakistan, the absence of localized tools, weak digital infrastructure, and insufficient training has collectively stifled uptake. As this chapter explores, the perceived benefits of AI (such as speeding up editorial work, improving audience targeting or streamlining repetitive tasks) are frequently acknowledged by journalists in their qualitative responses. However, they are at the same time accompanied by a sobering awareness of real-world constraints: AI is seen less as a revolution and more as a missed opportunity until deeper structural issues are addressed.

Emerging Benefits: Efficiency, Creativity and Accessibility

Despite infrastructural and capacity-related challenges discussed earlier, the perceived benefits of AI in newsroom workflows are tangible for many

journalists and organizations who have begun to integrate these tools into their routines. Where they can be applied, AI tools are seen not only as time-saving instruments but also as creativity partners and efficiency enablers.

This section of the survey focuses on the question, “What benefits have you experienced (or expect to experience) by using AI tools?"

The most frequently cited benefit across responses is saving time, or efficiency. Time is a valuable commodity in high pressure, under-resourced newsrooms. From speeding up transcription and translation to summarizing dense reports, journalists repeatedly highlighted how AI has helped reduce routine burdens: ""The thing which requires at least 1 hour is now done in some seconds," one respondent noted, while another described AI as “a cheap service… available 24/7," with the potential to “reduce managerial and staff burden."

This aligns with a broader pattern as noted earlier as well: journalists in Pakistan's independent digital media ecosystem are using AI to automate mundane tasks. This creates the opportunity to free up time for more complex editorial work, such as investigative reporting or creative scripting. Others emphasized how AI is enabling more multitasking and output consistency, describing it as a tool that helps them “work on multiple tasks at a time" while also ensuring fewer grammatical or stylistic errors in the final copy.

Beyond efficiency, AI is increasingly perceived as a creative support system. Respondents pointed to AI's role in helping brainstorm ideas, improve headline generation, enhance SEO, and even identify trends from social data. As one newsroom puts it: “AI tools offer benefits like faster content creation, improved accuracy, easier transcription, trend detection, and more time for investigative work."

For some, AI is also enhancing editorial precision and tone consistency, helping ensure articles are more polished and publication ready. This includes tools for grammar correction, style matching, and voice alignment, particularly useful for teams working with multiple or diverse contributors or translating content across languages.

Significantly, geographically focused newsrooms, such as Hazara Express News, also view AI as a potential gateway to audience expansion through translation and accessibility. They noted that AI-powered tools helped them reach a wider audience by "making content accessible in different languages spoken in the region" and expect AI to help 'create accessible formats of content' in the future.

More broadly, there is cautious optimism about AI's role in shifting editorial labor toward impact-driven journalism. One respondent warned that while AI enhances productivity, "relying solely upon it without active and sufficient human oversight is counterproductive". This nuanced view underscores emerging consensus: AI is not a replacement for editorial rigor, but a collaborator that augments human capacity when integrated thoughtfully and responsibly.

Persistent Challenges: Accuracy, Local Relevance, and Editorial Oversight

When asked the question, "What challenges or concerns have you faced with regards to AI integration?", the widespread concerns remained accuracy, ethics, and editorial integrity, especially when working in low-resource environments with regionally specific needs.

Across responses the most commonly cited challenge was the accuracy and reliability of AI-generated content. Respondents in the survey repeatedly pointed to "factual errors", "erroneous content", or AI outputs

that were inconsistent, overly generalized, or lacking in necessary local nuance. This concern is especially acute in sensitive or hyper-local contexts. As one newsroom from Khyber Pakhtunkhwa put it: “The big challenge with AI [is its] limited knowledge about our local issues of KP and Tribal Districts. Trust and misinformation are also big challenges with AI."

Others have added to this, warning that tools often “lack the value that a human can add" or “miss cultural nuance or context," particularly when generating stories in regional languages or dialects. One respondent stated, “AI will not help with everything", suggesting a lack of confidence in AI's adaptability to their specific editorial needs.

Beyond factual errors, a number of responses also flagged “AI Hallucinations" — content generated with confidence but no grounding in real-world data — as a recurring risk. This is compounded by a border unease about authenticity and editorial dilution. Journalists in the survey worry that over-reliance on AI can compromise both the “human element" and the local voice in their reporting, especially where tools prioritize SEO over storytelling.

Ethical concerns also emerged strongly, particularly around bias, transparency, and potential misuse. Several respondents expressed apprehension that AI may reproduce or amplify existing societal biases or obscure the source and veracity of the content: “It's difficult to differentiate whether AI-produced content is factual or a part of it is hypothetical," one respondent noted, raising questions about editorial responsibility and the legality of using AI-generated material without clear attribution.

A consistent theme was also the need for human oversight. While AI can support newsroom workflows, respondents emphasized that it must be coupled with strong editorial judgement, rigorous verification and ethical awareness. As one user cautioned: “Training staff to use AI effectively is a

time commitment, and there is still need for human oversight to maintain editorial standards."
In addition to editorial risks, several operational and structural challenges were flagged. These included:

- Cost barriers: Respondents noted the high cost of subscriptions and lack of access to paid tools limited integration and experimentation or sustained use.
- Privacy and data safety: Concerns were raised about how AI platforms handle internal newsroom data or sensitive information.
- Technical knowledge gaps: Journalists frequently described a lack of training, unfamiliarity with effective prompting or the time it takes to learn AI tools.
- Unclear platform impacts: One newsroom mentioned uncertainty around "how Google's algorithm treats AI-refined content" reflecting wider industry debates about search visibility and algorithmic penalties.

Finally, some responses reflected broader existential concerns, from job displacement to manipulation of narratives. While not always backed by direct experiences, these anxieties suggest that trust in AI, both within newsrooms and with audiences, is still tenuous, particularly in regions where editorial credibility is hard-won and fragile.

3.3 - Technical Capacity and Needs

This section explores the self-identified capacity levels of the surveyed newsrooms from Pakistan's independent digital media industry in context of using AI effectively for newsroom operations, alongside the resources and support they say they need the most. Drawing on the final section of the survey tool, this chapter examines the current readiness of newsrooms to integrate AI into workflows beyond cursory measures. This chapter

also highlights where interventions, upskilling, investment and capacity building are most urgently required.

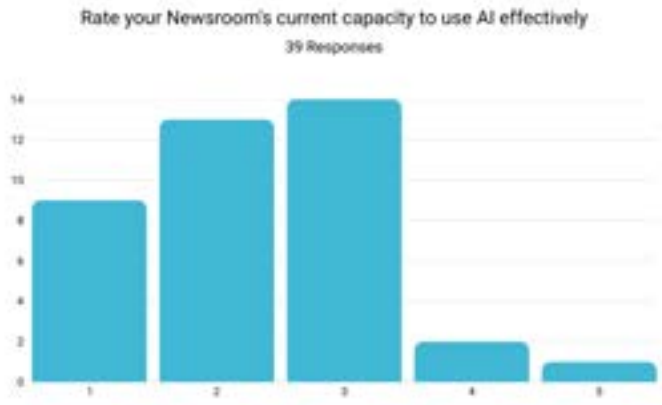

Figure 7 - current capacity to use AI effectively in newsrooms

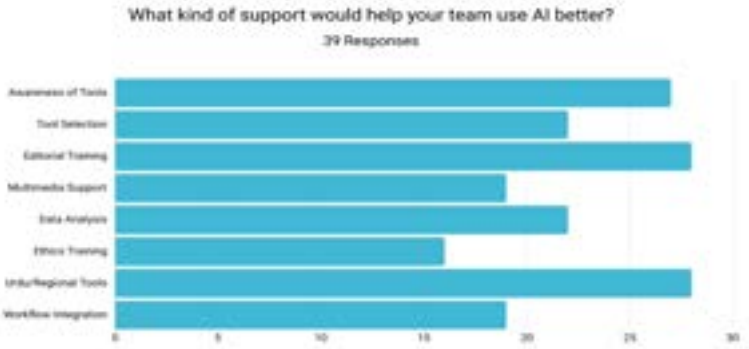

Figure 8 - what kind of support newsrooms believe would allow them to use AI better

The survey questions asked respondents to a) rate their newsroom's current capacity to use AI effectively on a scale from 1 (lowest capacity) to 5 (highest capacity) as seen in figure 7 and b) what kind of support they believe would help teams use AI better as seen in figure 8. The results reflect both the enthusiasm for AI integration and the real-world limitations that many independent newsrooms in Pakistan face.

The findings above reveal a striking paradox: while a significant majority

of the small independent digital newsrooms in Pakistan that have participated in this survey (81% according to earlier survey data) have begun using AI tools in their operations, their self-assessed capacity to do so remains remarkably low. 92 percent of all respondents rated themselves between 1 and 3 on the 5-point scale shown above, with nearly a quarter placing themselves at the very bottom. Only three respondents gave themselves a rating of 4 or 5, indicating advanced competence. This discrepancy suggests that although AI tools are being integrated into daily workflows, they are often used in limited or ad havoc ways for surface level tasks such as translations , summarization, and basic editing rather than through deeper, strategic incorporation. The data signals an urgent need to distinguish between casual usage and effective, empowered use. Adoption may not equate to understanding, and without meaningful capacity building, many newsrooms may find themselves reliant on tools they do not fully control or comprehend. And this risk is clearly reflected in figure 8 where we observe a strong desire for editorially and linguistically relevant integration of AI.

The two most frequently cited support needs are editorial training and Urdu/regional language tools, each selected by **72%** of respondents. For many of these newsrooms, editorial decision making is still a deeply human-led craft, and there is widespread recognition as observed in earlier data also that AI must serve journalistic values rather than undermine them. The call for editorial training reveals a demand not just for technical upskilling, but for journalism-first AI literacy. The need is about how to use the right tools to sharpen angles, verify facts, accelerate newsroom processes without compromising integrity, and navigate the epistemological implications of synthetic content.

Similarly, the urgent demand for Urdu and regional-language tools reflects the multilingual reality of Pakistan's digital media ecosystem, where English-first interfaces alienate both producers and audiences. Newsrooms want tools that can read, write, translate and generate in their

own language, not just in translation but with a sensitivity to idiom, tone and cultural nuance that current AI offerings fail to meet.

Closely tied to these needs is the issue of awareness and access. Despite already using AI in their workflows, nearly **70%** of respondents identified "awareness of tools" as a key area of support, suggesting that many journalists may be unaware of the full spectrum of AI technology available to them or lack a framework for evaluation of tool relevance and fit. When combined with the **56%** of respondents who requested support for tool selection, a picture emerges of fragmented knowledge and uncertainty. Journalists and editors appear to be adopting tools opportunistically rather than strategically, often based on peer recommendations, social media trends, or incidental exposure, rather than a grounded understanding of capabilities or limitations. This creates fertile ground for tool fatigue, superficial integration and even unintended misuse. These findings indicate that there is a crucial need for trusted intermediaries: local experts, training hubs, or curated repositories, internal or external, that can help newsrooms navigate the fast-evolving AI landscape with contextual clarity and journalistic focus.

As respondents move beyond surface-level engagement with AI, questions of integration into newsroom workflows and back-end operations begin to surface but not as strongly as may be expected. Data analysis and workflow integration ranked lower among support needs of the respondent news organizations, **56%** and **49%** respectively selecting these options. This suggests that either the potential of AI to streamline news production and deepen reporting through structured data work is not yet well understood or that these more complex transformations might be perceived as beyond the reach of small, under-resourced newsrooms. Most of the outlets in this study operate under tight budgets, with minimal or absent technical staff and little margin for experimentation. In such settings, time, attention and staff bandwidth are limited and advanced operational redesigns seem remote and even irrelevant. Yes this de-prioritization also represents a lost

opportunity. AI's most impactful uses in journalism — automated tagging, recommendation engines, analytics-driven audience insights — require systemic integration. Without this, AI remains a collection of disconnected tools rather than a cohesive infrastructure for better journalism.

The relatively low demand for ethics training, selected by only **41%** of the respondents, may at first appear to be a warning sign, especially given the rise in misinformation, algorithmic bias and synthetic content. However, it is more accurately understood as reflective of current maturity levels of AI engagement in these newsrooms. When journalists are still grappling with basic tool awareness, language constraints and editorial usability, abstract discussion of ethics stand to take a backseat. This is not a dismissal of ethical concerns. As we saw earlier under perceived challenges, ethical integration into journalism remains a distinctly high priority. The low demand for ethics training then reflects that most respondents likely feel they are not yet in a position to misuse AI; they're still merely learning what they can do. Even so, this points to future vulnerability. As tools become more powerful and integrated, and as AI-generated content starts playing a larger role in public discourse, such as seen in the May 2025 India-Pakistan armed conflict, the absence of foundational ethical training could create both reputational and journalistic risks. Thus, ethics should not be framed as an advanced concern to be addressed later but as a necessary part of building fluency and trust in early-stage adoption.

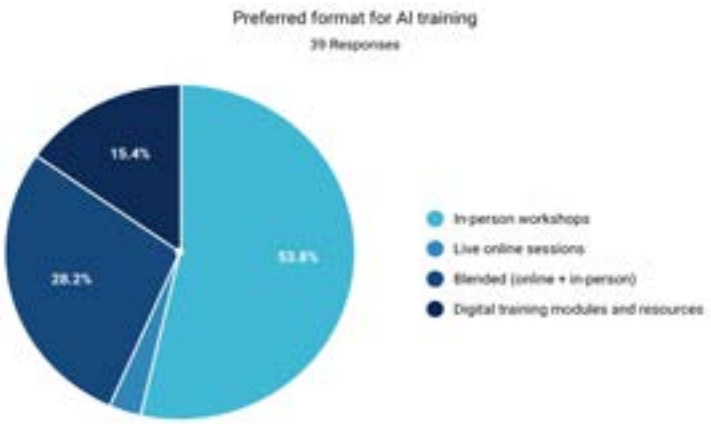

Figure 9 - preferred format for training on AI

When we consider the respondents' preferred formats for training on AI, it is observed that over half the respondents **(54%)** indicated a clear preference for in-person workshops, followed by **28%** who favored a blended model that combines both online and offline modes. Only **15%** preferred fully digital training modules while a mere around **3%** opted for online sessions.

Figure 10 - who from newsrooms should attend the training courses

Figure 10 reveals that editors are seen as the top priority for receiving AI training, with **62%** of respondents selecting them as potential trainees. Reporters follow closely at **44%,** while the "whole team" option was

selected by **33%,** suggesting a significant number see AI training as a newsroom-wide need. Other staff categories were far less emphasized: the social media team **(26%)**, leadership/senior management **(21%)**, tech/multimedia staff **(18%)**, and a small margin **(3%)** said training could go to anyone depending on the need. The hierarchy of these selections shows a clear editorial focus, with less emphasis on strategic or technical roles, suggesting that newsrooms are framing AI training primarily as an editorial intervention rather than a structural or systemic one.

Considering that the majority of respondents prefer in-person training workshops to effectively integrate AI into the newsrooms, it is clear from the data above that the people who need AI training, especially editors and reporters, benefit most from formats that are dialogic, hands-on and relational. The nature of their roles requires space for discussion, collective judgement and scenario-based learning, none of which are easily captured in passive or digital-only formats.

Yet the findings also reveal structural gaps and potential silos. The relatively low prioritization of leadership, tech and multimedia staff suggest that AI is still being treated as a content-production tool rather than a workflow-wide transformation. This could lead to weak integration of AI systems into backend infrastructure or long-term strategy. Without the leadership involved, capacity building efforts risk being short lived or unsustainable. Without technical staff engagement, editors and reporters may lack the support to meaningfully implement what they learn. This compartmentalized approach is especially risky in Pakistan's independent digital media ecosystem, where resources are stretched and survival frequently depends on lean innovation and adaptability. A newsroom that invests only in editorial knowledge without the scaffolding of technical and managerial alignment may face friction in actual tool deployment or policy formation.

All these insights gain deeper meaning when situated within the structural

realities of Pakistan's independent digital media sector. These newsrooms operate under immense pressure: political instability, censorship, surveillance, platform dependency, and the constant struggle to sustain financially. Teams are lean, workflows are hybrid and improvised, and resource scarcity is a daily reality. In this landscape, AI offers a double-edged proposition. On one side, it promises speed, automation and reach, potentially enabling these media organizations to do more with less. On the other hand, without proper support it could accelerate burnout, dilute editorial voice or even create new vulnerabilities to disinformation and manipulation. The call for language-sensitive tools is not merely about usability, it's also about technological shift. Similarly, the call for editorial training is about protecting the core craft of journalism amid the influx of machine-generated content. These newsrooms are not passive adopters; they are actively seeking to shape the terms of engagement with AI but need systemic support to do so.

What emerges is a nuanced and layered picture of AI integration in Pakistan's independent digital media ecosystem: adoption is high, capacity is low, interest is strong and support is uneven and often misaligned with actual needs. Interventions that simply provide access to tools will miss the mark.

Instead, what is required is an ecosystem-level response, one that begins by acknowledging these newsrooms' specific constraints and aspirations and then builds a localized infrastructure for support. This includes investing in Urdu and regional language models, creating contextual editorial training programs, establishing AI ethics curricula rooted in journalism practice, and enabling knowledge-sharing networks that allow newsrooms to learn from each other. Ultimately the goal should be to move beyond simply to equip newsrooms to use AI more efficiently; rather to empower them to shape it in ways that strengthen their work, their editorial independence, and their relationship with the communities they serve.

Chapter 4 - Survey-based Technical Needs Assessment

This chapter brings together insights from the survey to conduct a targeted technical needs assessment against the backdrop of workflow realities as outlined by the respondents from Pakistan's independent digital media ecosystem.

1. Current capacity is low, but interest is high.

- Most respondents rated their AI capacity as low (1-3 out of 5) but expressed strong interest in training and support. This signals high motivation for learning despite limited exposure and institutional preparedness

Recommendation: Design tiered, newsroom-friendly capacity-building programs that acknowledge existing constraints and build progressively, from foundational literacy to strategic integration and follow-through over time.

2. Editorial training is top priority, but not just for skills

- Strong demand for editorial training **(72%)** indicates that newsrooms don't just want to integrate AI, they want to do it well. This reflects a deeper call for journalism-first AI literacy, where AI is evaluated through editorial values, not just utility.

Recommendation: Develop training grounded in journalistic principles, with practical use-cases and critical reflection. Focus on how AI impacts sourcing, verification, attribution, and editorial judgement.

3. Trusted intermediaries are needed

- Respondents showed a lack of confidence in selecting or integrating AI tools. Several referenced a need for guidance or even 'helping staff'. Fragmented digital systems editing, publishing, analytics compound this uncertainty.

Recommendation: Develop or support intermediary structures (fellowships, support desks, labs, experts) that offer contextual help with tool selection, troubleshooting, and implementation. These can serve as trusted bridges between AI developers and under-resourced editorial teams.

4. Ethics and Disinformation Risks are under-recognized but critical

- Ethics training scored lower **(41%)** than others, yet concerns around trust, misinformation, and editorial dilution surfaced repeatedly in qualitative responses. In an environment where credibility is fragile and audiences are skeptical; ethics must be treated as foundational.

Recommendation: Embed ethics into every stage of AI literacy training. Use newsroom-relevant examples such as correction, AI generated summaries, annotating machine-generated quotes, and transparent attribution to build ethical reflexes early in adoption.

5. Language constraints are deep and exclusionary

- Around **72%** requested support for Urdu or regional language tools. This reflects the systemic marginalization of non-English media creators by most AI platforms. Regional language outlets, already operating on the margins, are doubly disadvantaged by tool incompatibility and infrastructural gaps (slow internet, outdated devices, etc.)

Recommendation: Invest in the development and dissemination of AI tools that are compatible with Urdu and regional languages. Also provide translations of key training materials and ensure regionally sound, language-accessible support channels.

6. In-person training is strongly preferred

- In-person training **(54%)** and hybrid options **(28%)** were much more popular than fully online formats. This preference reflects the relational nature of trust-building, the need for live troubleshooting and the challenge for self-guided learning in high-pressure

environments.

Recommendation: Structure AI capacity-building around in-person workshops held in regional hubs with follow-up digital support. Foster cohort-based peer learning environments that are culturally and linguistically tailored.

7. Editors and reporters are seen as primary learners but leadership is absent

- Editors **(62%)** and reporters **(44%)** were identified as key audiences for training. Leadership participation was notably low **(21%)**. This gap reveals why many AI experiments (or overall newsroom innovation roadmaps at large) remain superficial; without editorial and strategic alignment, adoption doesn't stick.

Recommendation: Design parallel training tracks for newsroom managers and editors-in-chief. Provide strategic briefings that frame AI as a sustainability and mission-alignment issue, not just a content hack. Additionally bring funders, donors and media owners into the conversation. Without their investment and prioritization, innovation remains fragile and short-lived.

8. Workflow integration is essential but overlooked

- Around **49%** of the respondents asked for support with integrating AI into daily workflows, yet respondents repeatedly noted that current processes including transcriptions, translations, editing, audience analysis and publishing, remain siloed and exhausting. Fragmented tools and poor infrastructure (slow internet, unaffordable subscriptions, weak devices) make existing friction deeper at every step.

Recommendation: Support newsrooms in conducting workflow audits. Provide ready-to-use integration templates (for example how to use speech-to-text tools in multilingual reporting). Prioritize solutions that reduce, not add, editorial labor.

9. Tool awareness and selection are major barriers

- Lack of AI awareness **(70%)** and uncertainty around AI tool selection **(56%)** at news organisations remain major inhibitors. This is compounded by budget constraints, with several respondents citing the cost of even basic subscriptions as prohibitive.

Recommendation: Create a dynamic, localized AI tools library for newsrooms that is curated for relevance, accessibility and pricing. Include demos, reviews from peer outlets and cost-benefit assessments tailored to lean teams.

10. Whole-team approaches are rare, but necessary

- Only **33%** of the respondents called for whole-team training, reflecting ongoing silos between editorial, technical and managerial staff. This results in scattered experimentation and implementation where AI use is isolated to certain individuals and never institutionalized.

Recommendation: Offer cross-functional training tracks that bring editors, producers and tech leads together. Use simulation-based learning or shared newsroom experiments to foster collaborative innovation.

11. Peer learning from larger outlets is a missed opportunity

- Many smaller outlets expressed uncertainty in navigating AI without guidance. Learning from more resourced peers can be a powerful and efficient approach to confidence and experimentation.

Recommendation: Create cross-newsroom exchange programs. Pair independent digital media outlets with larger, more established players (national or international) for mentorship, tool testing, and workflow demos in similar editorial values.

12. AI is not yet viewed as a strategic imperative

- While there is excitement around specific tools (transcription, video editing), these are mostly viewed as time-saver and not levers for

strategic transformation. This is often a result of survival-mode operations, where long-term thinking is deprioritized.

Recommendation: Frame AI as part of broader sustainability planning. Help outlets envision how AI could enable deeper community engagement, story diversity, or regional presence rather than just faster content.

13. AI won't fix structural gaps without investment

- Many respondents saw AI as a "missed opportunity" due to lack of infrastructure: no support staff, unreliable internet and non-integrated systems. Even cheap, accessible tools widely in use across sectors, often seen as globally low-hanging fruit, are rarely used due to bandwidth and budget issues.

Recommendation: Pair AI integration programs with infrastructure support: device subsidies, internet access packages, and editorial staffing investments.

14. One-off training is not enough

- Short-term or one-off training workshops fail to create lasting impact. Without continuity and effective follow through, initial momentum fades and rarely translates into sustained capacity or institutional change.

Recommendation: Anchor all training programs in long-term support systems: follow-up sessions, mentorship programs, community help forums can act as pathways into future collaborations. Build an ecosystem, not just an event.

Chapter 5 - Beyond the Survey: Qualitative Perspectives on AI Readiness

This chapter presents the qualitative component of the research, based on semi-structured interviews with editors and newsroom executives from commercial and mainstream digital media organizations. The aim was to understand not only what AI tools are being used, but how decisions are being made, why certain opportunities or barriers exist, and what support systems are needed to help independent newsrooms thrive in the evolving media landscape.

5.1 Amber Rahim Shamsi - Pakistan Editor, Nukta

Question: What are your views on the current nature and scope of using AI in the newsroom?

Amber: As a newly launched digital newsroom built during the AI boom, we approached AI not as an optional add-on but as a core part of our operational model. From the start, we envisioned AI as a way to enhance content creation, streamline workflows, and maintain a lean, agile structure. Unlike legacy newsrooms, our goal has been to move fast and stay efficient without expanding the team unnecessarily. To support that, our website backend—built on RebelMouse—was designed with AI capabilities from the outset, including tools for SEO optimization, headline generation, summarization, and automated bullet points. These backend efficiencies allow us to maintain steady output with a small team.

We're also gradually expanding our use of AI into multimedia. While we haven't fully implemented AI-driven video workflows yet, we currently use Avid for video processing and plan to subscribe to its AI-based features in the near future. This will allow us to generate curated videos directly from raw footage. Alongside that, we're exploring AI-generated visuals

and graphics to support a consistent visual identity without needing a full-time design team.

Our approach to AI is also shaped by the composition of our team. We've brought in talent from major outlets like Dawn, Geo, and Express, many of whom come from Urdu language or television news backgrounds. These reporters bring strong field reporting skills, but writing in English to a specific editorial standard can be a challenge. AI has helped bridge that gap by improving grammar, polishing drafts, and aligning written pieces with the AP style we follow. It plays a practical role in raising the baseline quality of copy across the board. However, we're deliberate about its limitations: for example, we do not use AI for fact-checking, as we see that as an ethical red line. The risk of errors and potential trust issues with our audience are too high.

Similarly, we approach AI with caution when it comes to research. Personally, I'm wary of using it in this area, given the risks of outdated information or hallucinated content. While we occasionally use AI to help assemble background or context pieces, everything it generates has to be carefully checked, which often undercuts any time-saving benefits. Since efficiency is core to our strategy, we avoid workflows that introduce more verification steps than they remove. In this sense, AI is most useful to us as a writing assistant - for standardization, copy-editing, and captioning, not as a reliable research tool. For that, we continue to rely on experienced journalists who can bring in nuance and contextual accuracy that AI simply can't replicate.

Question: In your experience of hiring for the newsroom, keeping AI-use related skills in mind, have you found digital journalists to be in the know as far as these tools are concerned or have you needed to train them?

Amber: In terms of familiarity with AI tools, it's been a mix across the

newsroom. Some of the younger staff especially those who were already working on websites, came in with a baseline understanding of AI applications and were relatively comfortable using them from the start. Older team members, including senior editors and some video editors, had less exposure initially, but picked things up quickly over the past few months. We haven't had to conduct formal training programs, but we've found that most staff adapted well through on-the-job learning, supported by ongoing guidance from leadership.

That said, editorial oversight remains a crucial concern. While younger team members tend to be more tech-savvy, there's sometimes a tendency to over-rely on AI outputs, especially without fully understanding the context or critical nuances that the technology might miss, such as key events or cultural sensitivities. This is where editors have had to step in more actively. We've implemented internal guidelines, particularly around AI-generated visuals and historical representations, to ensure transparency and ethical use. For example, when creating content on India-Pakistan tensions, for example, we make it clear whether images are AI-generated, derived from existing visuals, or reconstructed interpretations; audience trust hinges on that clarity.

AI is also deeply embedded in our visual workflows. Around 70% of our content is video-based, and tools like Canva, with built-in AI for text support and layout design,- are used regularly. However, even in graphic design, editorial input is essential. AI can speed up creative output, but without editorial review, there's a real risk of stylistic or factual missteps. This balance between creative efficiency and editorial rigor is something we continue to navigate carefully, ensuring that the final output aligns with our standards and values.

Question: In the context of Pakistan, do you think the digital and tech infrastructure is enabling or hindering innovation in the newsroom?

Amber: That's a really interesting question. On one hand, we all recognize that Pakistan is still very early in its AI journey; we're nowhere near where the rest of the world is. There are no real AI experts here, and yet, you don't necessarily need to be a deep technical expert to start using it meaningfully. Still, there are significant sectoral and business barriers that make it difficult for independent media to innovate freely. The overall media environment over the last 7 to 10 years has been extremely challenging, especially for smaller, independent outlets.

Before I joined Nukta, I worked as a director at the Centre for Excellence in Journalism at IBA, where we visited around seven newsrooms across Pakistan to understand how they were using AI. That was about a year ago, and the space has evolved rapidly since. I've noticed much greater adoption now, though it's still largely limited to things like copy editing and image or video generation. There's so much more potential that remains untapped, especially in areas like audience analysis, content personalization, and social media listening.

At Nukta, for example, while we're not using AI for publishing just yet, we do use it for sentiment analysis and data monitoring to gauge how our content is performing and how audiences are responding. But we're also a new outlet, so our focus is mostly on optimizing current output. We don't have the kind of legacy archives or content repositories that older institutions have. In contrast, legacy newsrooms are sitting on decades of material — archives that could be digitized, structured, and used to power bots or personalized news products. Imagine if someone wanted to know the timeline of India-Pakistan conflicts: a newsroom like Dawn could easily train a system to pull and serve that information. But that isn't happening.

There are major missed opportunities in the legacy space. In my view,

many of these organizations either lack resources or lack vision. When we visited big and small newsrooms, what stood out was how siloed and inefficient many of them were. For example, at Dawn, their English and Urdu news platforms, website, and radio channels all function separately with no integration. At Jang, archival material is literally stored in a physical warehouse, and you have to file a special request to access it.

By contrast, we built integration into our workflows from the start. We use tools like Avid, which allows real-time coordination between teams in Pakistan and our headquarters in Dubai, to share and process video content more efficiently. Integration, in our view, isn't about being in the same building or using the same phone line, it's about designing the right systems and training workflows. That's where many established newsrooms are falling behind: they're still thinking in physical terms, not digital. And while the tech itself isn't prohibitively expensive, the lack of vision and training is what really holds innovation back.

Question: Is Nukta's young and tech-savvy newsroom workforce involved in the decision-making process on how to effectively integrate AI into the newsroom?

Amber: No I wouldn't say that they are.

And why do you think that is?

Amber: Primarily because many of the key decisions around AI and digital tools at Nukta were made even before the current team came on board, including myself. That said, the organization is far from static. Our social media team, which includes a lot of younger staff, now plays an active role in recommending tools and platforms, particularly for publishing,

sentiment analysis, and data tracking. We currently use Amplify for those functions, and input from across the team continues to inform how we refine and expand our toolkit.

One of the advantages we have is a relatively young and tech-forward leadership. Our CEO, Kamran Khan, is very interested in innovation, and the broader leadership, finance and operations included, is digitally fluent and open to experimentation. Most are in their 30s and 40s, and they've witnessed the digital transition firsthand, which shapes their openness to change. Ideas do filter upward effectively and there's genuine receptiveness to trying new things, like our current plans to expand Avid's functionality for faster video publishing with automated subtitles.

At the same time, some tools like social media listening software are still on the wish list. I've been advocating for one, and while we haven't implemented it yet, I see it as crucial for timely, context-rich reporting. To really respond to fast-moving conversations, especially online, you need to be listening as much as you're publishing.

Question: What types of external support, whether training, partnerships, mentorship, or funding, would be most valuable in helping your newsroom meaningfully adopt and leverage AI more effectively?

Amber: I'd approach this in two parts. First, it's essential that any external support, especially training, starts by understanding what tools newsrooms are already using. It's not helpful to introduce tools that teams won't realistically adopt due to cost or compatibility. Too often, trainings are designed in a generic way and end up being attended by individual journalists or reporters, rather than decision-makers. As a result, there's often a disconnect between what is learned and what actually gets implemented in the newsroom. This is especially true in larger media

organizations where internal decision-making is more hierarchical and less responsive. In contrast, smaller teams like ours at Nukta have the advantage of being more agile. Feedback from younger staff does get filtered up, and leadership tends to be younger, digitally fluent, and open to innovation. But that's more a function of organizational size and structure than age alone. Second, training should focus not just on introducing new tools, but on helping teams use existing ones more effectively. For us, video is a major priority. We deal with a large volume of raw footage, and curating and editing it remains labor-intensive. While our younger team members are fast and efficient with tools like CapCut, we still rely on craft editors to finalize much of our video content. If we could automate some of the more repetitive or basic aspects of that workflow, it would significantly improve efficiency. So support around video processing, AI-assisted curation, and multimedia production would be particularly valuable.

At the same time, I think one of the biggest gaps, especially for younger staff, is around ethical literacy and critical thinking when using AI. Younger journalists are often quicker to adopt new tools and are generally more comfortable with them. But they also tend to be less critical of AI-generated content. There's a real need for training that helps them identify when AI is hallucinating, when key information is missing, and how to spot inaccuracies, especially when using AI for copy or research. Ethical concerns and fact-checking protocols need to be built into AI training from the start, not as an afterthought. It's not just about learning to use AI, it's about learning how to question it.

5.2 - Zeeshan Haider, Editor BBC Urdu

Question: To what extent and for what functions is AI being used in the BBC Urdu newsroom currently?

Zeeshan: At BBC Urdu, our focus right now is on understanding the

appropriate and responsible use of AI in digital journalism. I see two contrasting trends. Some newsrooms are reducing their workforce by relying on automated translations, which leads to fewer people being involved in content production. However, when ethics and editorial standards are taken seriously, especially in Urdu journalism, the tools currently available are not yet strong enough to be used independently without human oversight.

At BBC, AI is used primarily as a time saving tool, but never without editorial review. For example, we have developed our own machine learning based translation tool, which is currently in beta testing. The goal is to understand how much time is being spent on individual translations and how that time can be better used. While some organizations publish AI generated translations without any review, we do not. We are using automation to create more space for original journalism, not to replace people with machines.

In addition, AI is used for data analysis. Our analytics team, not the editorial team, uses AI tools to study audience engagement, behavior, and social media trends. This includes profiling based on age, preferences, and content types, helping us shape our strategy for both social platforms and our website.

AI also supports our fact checking and verification work. The BBC has a dedicated verification unit where AI assists in verifying claims and checking content, always in combination with human editorial judgment. The key principle across all use cases is that AI is a support system, not a replacement.

Question: The resources available to BBC Urdu are starkly greater in comparison to local, independent digital media outlets in Pakistan. How

do you see the country's tech and digital infrastructure for local, Pakistan-based outlets?

Zeeshan: To be blunt, Pakistan's digital media is still in its infancy. What we refer to as digital media today is something the BBC began investing in over 20 years ago, but local business owners in Pakistan are only now beginning to see it as a viable future and largely because it is a cheaper business investment compared to running a television channel, with potentially higher returns.

You are right to point out that the BBC has more resources and better technical infrastructure. It is not a fair comparison with local outlets. When you look at how most major newsrooms in Pakistan operate, you will see that until very recently, they were essentially functioning as extensions of their TV operations. Content was being repurposed for digital platforms without a dedicated digital strategy.

Only now are people beginning to consider that digital journalism needs to be treated as a separate, independent domain. As for AI, its presence in local newsrooms is still very minimal. Perhaps a little bit in fact checking or image generation, but there is no meaningful or structured planning around AI. In my view, it will still take a few more years before we see serious efforts to integrate it across newsrooms in Pakistan.

Question: For all its political instability, Pakistan remains a heavily legislated country. A national AI policy is in the works, initiatives on a state level have been coming and going. What does a conducive policy framework look like, one that viably evolves independent journalism in the age of AI?

Zeeshan: No matter how strong or well-intentioned a national AI policy may be, it will have little real impact unless private business owners and newsroom decision makers see a financial benefit in integrating AI effectively. Until AI adoption makes clear business sense, it is unlikely to gain serious traction. At best, the state can play a role in making certain tools or resources available, but beyond that, its involvement should be minimal.

Newsrooms in Pakistan are not heavily taxed, so fiscal pressure is not the big issue. Yes, the state should focus on facilitating independent actors, including freelancers. But apart from that, I do not believe it is the state's role to create any policy frameworks for independent journalism, because doing so would risk compromising editorial independence.

Where the state does have a critical role is in regulating misuse. In a country like Pakistan, where informal and freelance work is widespread, policy should aim to support those working outside institutional structures. More importantly, the state must take a firm position against the use of AI as a tool for propaganda. Unfortunately, we have already seen examples, on both sides of the border in India and Pakistan, where AI is being used to advance political agendas. The greater priority, in my view, is not how the state supports the right use of AI, but how it prevents its misuse.

Question: Who stands to benefit the most and who stands to get left behind in the context of integrating AI into independent media in a sociopolitical landscape such as Pakistan's?

Zeeshan: Pakistan's media landscape is shaped by a mindset where business owners often prefer to spend less rather than invest wisely. My concern is that AI will be used as an excuse to downsize teams, instead of using it to enhance efficiency and make better use of newsroom time.

The goal of AI should be to support editorial work, not to replace it. There is also a cultural dimension. We need to think carefully about how much we allow AI to influence our work without letting it take over. It should remain a tool that facilitates original journalism, not a machine that does journalism on its own. The danger is especially serious because AI is easily weaponized for propaganda, and when that happens, the burden on journalists only increases. We have seen this before. When TV journalism expanded, many print journalists were shifted into broadcast roles, and now they are being pushed into digital journalism. But we never took the time to unlearn and relearn. The version of digital journalism I started with is now obsolete. I have had to grow and increase my capacity to work with emerging technologies, while still holding on to my core editorial values. Anyone who fails to do that is at serious risk. In particular, it is the mid-career journalist who stands to lose the most if they do not evolve. If they cannot let go of outdated methods and accept that a new learning curve is necessary, they will be left behind. At the same time, if they are willing to adapt, they also stand to benefit the most.

Question: In terms of what training and capacity building support looks like for independent digital media outlets in Pakistan, what should be centered?

Zeeshan: The training courses we have designed at BBC, and the ones we are rolling out for our teams, are built around a core idea: helping people understand why AI integration matters. One of the biggest barriers is a mental block, a belief that AI is not relevant to their role. That resistance, or even uncertainty about whether they need to engage with AI at all, has to be addressed first.

Training should also be grounded in the practical realities of newsroom work. It needs to reflect the lived experiences of journalists, not just present

abstract theories. Practical tools, such as those for fact checking, should be introduced within the specific contexts in which they are needed.

Short, one-off training sessions are not enough. In my view, these programs need to run over a longer period, at least a few weeks. They should also be designed for smaller groups so that participants can engage deeply and come out with a solid understanding. The goal is to equip them well enough so that they can then share their learning with others in their newsroom. Finally, training must be built around local case studies and real-world use cases, so that both challenges and opportunities feel tangible and directly applicable.

Question: And for business owners and newsroom decision makers, how may they be incentivized?

Zeeshan: Business owners and newsroom decision makers need to understand that AI integration is not just about increasing revenue, it is about survival. Television is on the decline, and the future of journalism lies in digital transformation. While this understanding is not entirely absent, it only exists in fragments. Training programs must include specific, tailored demonstrations for business owners and investors. These sessions should clearly show, from a sustainability perspective, why it is in their best interest to take AI integration seriously. The message needs to be direct and practical, this is not a trend, it is the direction the industry is moving in, and failure to act could mean being left behind.

5.3 - Haroon Rashid, Editor Independent Urdu

Question: How is emerging technologies such as AI shaping digital media and independent journalism around you?

Haroon: There is still a great deal of uncertainty around how to meaningfully integrate AI into daily newsroom outputs. We're seeing a flood of generative AI tools, apps and modules that can, for example, create entire videos or generate graphics from just a URL. We've experimented with some of these, but it's all still in a very early, exploratory phase. We're not yet clear on when or how to use them effectively. At times, they work, such as for basic graphics. For instance, we needed a visual on Indian Prime Minister Modi and the impact of the recent Indo-Pak conflict on his political standing, and Chatly produced something reasonably usable.

But when it comes to more complex tasks, our limited prompt engineering capacity becomes a barrier. The current approach is somewhat trial-and-error, more of a hit-and-run method, and the actual utility remains marginal for now. We've also used AI for translations, but the results are inconsistent. Translation quality tends to be poor, and adapting the output to our specific editorial style adds another layer of complexity. So, while the tools exist, integrating them into professional workflows in a consistent and efficient way remains a challenge.

Question: Who do you think stands to benefit the most from increasing use of AI in independent digital journalism? Who could be harmed the most?

Haroon: We're seeing a growing use of AI-generated content among independent content creators who operate outside of editorial guidelines or institutional oversight, and this is where the risk is most visible. Much of this content appears politically motivated, or in some cases, may even be

planted by specific actors for influence or manipulation. AI is increasingly being used for political point-scoring and narrative control. In contrast, established journalistic organizations have their credibility on the line, so they tend to approach AI use with greater caution and responsibility. The stakes are higher for them, which is why their integration of AI tends to be more measured, aligned with standards, and guided by editorial judgment.

Question: What risks do you foresee, or associate, with AI generated content becoming more common in the overall digital ecosystem and in newsrooms?

Haroon: As long as there is transparency around the source of content, the use of AI-generated material can be manageable. The problem arises when transparency is lacking, when it's unclear who created a piece of content, why it was created, and for what purpose. There also needs to be greater openness around how AI systems function. For example, social media platforms already use AI extensively, but in most cases, users have no idea where the information they're seeing originates from.

Over the past two decades, we've seen that the most harmful content tends to be anonymous. Even on social media, ideally only officially verifiable or registered entities should have been allowed to create accounts, but this was never enforced. The opacity extends to algorithms as well. A lack of transparency, and in some cases outright secrecy, means that those who intend to misuse AI tools can do so without scrutiny. That said, responsible organizations are also using AI productively and ethically.

The consequence of a vague, unregulated approach is that misuse becomes a matter of individual intent. To mitigate this, mechanisms for authenticity and verification must be embedded into AI tools from the development stage itself, not as an afterthought, but as a foundational

design feature.

Question: What is the conversation on AI-usage like in your newsroom at Independent Urdu?

Haroon: There's a strong sense of excitement in the newsroom because AI is new technology and it clearly makes certain tasks much easier. At the same time, there are real concerns about the impact on jobs. For instance, we have a team of translators, and the worry is that they could become redundant. Personally, I am thinking about how we can retain and redeploy them, because AI should not come at the cost of people's livelihoods. Ideally, we should be using the same people more effectively rather than replacing them outright.

We expect our translation workflow to be fully optimized with AI within the next six months. But once that is in place, the same questions arise in other areas. If AI can generate videos, do we still need a full video desk? If it can create graphics and illustrations, what does that mean for our design team? These are the kinds of questions we need to answer before committing fully to AI adoption.

Question: To what extent is your younger, more digitally and tech savvy newsroom staff involved in the decision-making process as far as integrating AI for news content and workflows is concerned?

Haroon: We're a relatively small newsroom of about 30 to 35 people, and most of the team is much younger than I am. Still, I sense a shared uncertainty around AI across the board. As an organization, we haven't yet trained our staff in how to use or integrate AI effectively, and I haven't seen younger team members come forward with suggestions or input

either. Everyone seems to be observing developments rather than actively engaging with them. There's also confusion around which tools to adopt, especially when it comes to distinguishing between free and paid options. We haven't yet arrived at a clear decision on which app or platform is the right fit for us, and that's a conversation we really need to have.

Question: Do you have an AI policy at the moment?

Haroon: No, we don't, but we do mention the extent to which AI tools have been used on anything we publish.

Question: You are a predominantly Urdu platform. How can localization, local contextualization and linguistic relevance be facilitated for countries in the global south with large non-English speaking audiences?

Haroon: The main challenge is the overwhelming pace and frequency at which AI tools are being introduced. We do not have a research wing, and what we really need is someone dedicated full time to tracking these developments, someone who can identify which tools and apps are relevant and help us think through how to localize them. Right now, that kind of structured support is completely missing, both within our organization and at the government level. The first step, really, is to be absolutely sure about which tool is the right fit for us. Only then can we meaningfully work on localizing it.

Question: Is it correct to then assume that your priority for the way forward is to have dedicated technical and human resources that understand the changing tech ecosystem?

Haroon: Absolutely. What we need is someone who can closely track

changes in the tech landscape and assess their relevance for our organization. Ideally, this would be a dedicated role, perhaps even an AI editor, who can design and adapt workflows across different functions. Having a resource person who understands both the technology and the specific needs of the media industry could be a guiding force in helping us integrate AI meaningfully and strategically.

Question: You said the organization has not been able to train the team as of yet on integrating AI. What does the right kind of support look like for you?

Haroon: For us, the priority areas are translations, graphics, and video editing. We need support that helps us understand how to adapt or remodel existing apps for our specific newsroom needs. But institutionally, we have not yet settled on which tools are the right fit. On top of that, the process of procurement adds another layer of complexity, once a tool is selected, it has to go through a formal corporate approval process, and even then it can take a long time before it is installed across systems. There are also concerns around data security. We worry about the risk of internal information being exposed or leaked, especially when integrating external tools. Recently, we were offered some support on AI, but we were not able to figure out how to safely and effectively integrate that support into our existing internal setup. These are the kinds of issues that need to be resolved before we can move forward meaningfully.

5.4 - Momina Mindeel, Media Development and Viability Expert

Question: From a viability and sustainability point of view, what would you say is the strongest use-case for AI in independent digital journalism in Pakistan?

Momina: If we're talking about the most viable and sustainable use-case for AI in independent digital journalism in Pakistan, I would say it's audience engagement but not in the narrow sense of tracking analytics or improving retention. What I mean is, using AI to actually build long-term, meaningful relationships with audiences. This is something our digital media has consistently struggled with, and as a result, we've seen very low levels of credibility and trust. That's a core weakness and it's also where the greatest opportunity lies. AI can help newsrooms understand their audiences more deeply, not just what they're clicking on, but what they care about, what conversations they're trying to have, and where they feel left out. Tools like aggregators, social listening, and trend analysis can allow newsrooms to identify emerging concerns and involve the audience early in shaping the coverage. This isn't about chasing virality, it's about figuring out how to create editorial spaces where audiences feel they belong, and where they're invited to carry the conversation forward. In the long run, that kind of relationship is what will drive sustainability because it creates loyalty, and loyalty is what opens the door to alternative revenue models, whether it's memberships, donations, or simply sustained engagement that makes monetization more viable.

The second major use-case for AI is social media management. Most digital newsrooms in Pakistan are stuck in a very basic, static model: posting links, using the same templates, sharing in Facebook groups, with little innovation or adaptation. AI can help break that pattern by enabling

smarter, more dynamic strategies: tailoring content to different platforms, repackaging stories in engaging formats, and identifying real-time trends or conversations that newsrooms can tap into meaningfully. Social media should be a space for interaction, not just distribution, and AI can help make that shift, which is crucial for both audience growth and long-term sustainability.

Question: Who do you think stands to benefit the most from increasing use of AI in independent digital journalism? Who could be left behind?

Momina: We are in a critical moment as a country, where we need to find safe and effective ways to prevent censorship and surveillance from silencing the voice of independent journalism in Pakistan. In that sense, we all stand to be left behind, as often happens with emerging technologies in environments like ours. More than anyone, it is the general public that is at risk of being excluded. Digital spaces in Pakistan are already marked by harassment and persecution, often orchestrated by unknown or state aligned actors. This is a crucial time. Some independent digital outlets have begun experimenting with creative approaches using generative AI to report on issues that challenge segments of the status quo, and if done well, that kind of innovation could benefit both media practitioners and the audiences they serve. But for now, I believe the status quo stands to benefit the most because they have the resources to engage with this emerging tech, and they have. Outlets and audiences have not yet meaningfully engaged with AI to fully understand how it can also be used to harm them. It is vital to understand the intersection between media and technology at this stage. Historically, there has been a disconnect between these two sectors in Pakistan. That disconnect needs to be addressed, the conversation needs to shift, and most importantly, there needs to be meaningful follow through on these inter sector dialogues.

Question: Are you suggesting that any impactful way forward for AI integration would require a broader, ecosystem-level change?

Momina: One hundred percent. Any meaningful integration of AI into journalism in Pakistan requires a broader, ecosystem-level shift. I say this not only as someone observing from the outside, but as someone who has conducted trainings and worked closely with journalists and newsroom actors. The reality is that expecting individual newsrooms to lead transformative change in AI adoption is nearly impossible when many are still fighting for their basic survival. We need to move beyond routine NGO style, jargon heavy training modules. The solutions must be rooted in the lived realities of small, independent outlets. One important step is to create pathways for smaller newsrooms to learn from larger ones, through shared infrastructure, mentorship, and editorial partnerships. Knowledge sharing should not be incidental, it should be formalized and sustained.

Additionally, we need long term institutional support, not just project based funding. This includes resourcing for research and development units within newsrooms, or shared AI support teams that smaller outlets can access. There should also be cross sector bridges, where technologists, journalists, and legal experts collaborate on designing tools that are safe, accessible, and responsive to local threats. Lastly, independent media should have a seat at the table in any policy discussions around AI. Without that, the risks of exclusion and misuse will only deepen.

Chapter 6 - Risks, Readiness and Roadmaps

This chapter draws on interviews with editors and media experts to explore how AI is being integrated into independent digital newsrooms in Pakistan. It highlights uneven adoption, ethical tensions, and the need for strategic support. While some outlets are innovating with AI in content and audience engagement, most face structural barriers. The chapter distills key insights into findings and offers practical recommendations for newsrooms, media developers, and policymakers.

6.1 - Key themes across interviews

a. Varied Maturity of AI Adoption

Nukta and BBC Urdu illustrate structured AI integration, with AI embedded in workflows for editing, visual production, and analytics. Nukta, being newer, is more agile in embedding AI from inception, while BBC Urdu exhibits deliberate experimentation with in-house machine learning for translation and verification. Independent Urdu is still in an exploratory phase, using AI sporadically for translations and visuals, facing both resource and clarity gaps.
Momina Mindeel's perspective reinforces the view that most independent outlets remain under-resourced and under-prepared for strategic adoption.

b. Editorial Caution vs. Technical Enthusiasm

All editors emphasized a cautious approach to AI, especially for sensitive functions such as fact-checking, research, and translation due to reliability and ethical concerns. Younger staff

are more comfortable with AI tools, but editors report overreliance and underdeveloped critical judgment among them, necessitating strong editorial oversight.

c. Disparities in Infrastructure and Strategic Vision

News executives stress that infrastructural and archival limitations hinder innovation in legacy organizations.
The lack of dedicated AI roles or research support is a barrier, which results in trial-and-error approaches with unclear ROI. Vision and leadership matter as seen in Nukta's relatively young and tech-savvy leadership that enables faster experimentation; without leadership and process agility, news organizations may remain stuck in procurement delays and unclear decision-making processes.

d. Ethical and Political Risks

All interviewees highlighted the risks of AI-driven misinformation, manipulation, and opacity, especially in politically sensitive contexts. Particular attention was directed to how AI can be weaponized in surveillance-heavy, low-transparency media environments like Pakistan.

e. Absence of Ecosystem-Level Supports

Some interviewees stressed that newsroom-level transformation is unlikely without broader structural change. The lack of shared infrastructure, sectoral bridges, or locally relevant policy frameworks is a recurring bottleneck.

6.2 - Key Findings

1. AI Integration is Incremental and Uneven.
While certain digital-first organizations are embedding AI into editorial and visual workflows, most independent media remain in a low-capacity, trial-and-error phase.

2. Younger Staff Are Comfortable but Require Ethical Literacy.
Newsrooms report enthusiasm among junior staff, but also the risk of overdependence on AI-generated outputs without adequate editorial discernment.

3. Multimedia and Social Media are Priority Frontiers.
There is consensus on the potential for AI to support video production, graphic design, and social media strategy, but capacity and localization remain key hurdles.

4. Structural Constraints Are More Pressing Than Technical Ones.
Lack of vision, internal bottlenecks, and poor integration, not high costs or technical complexity, are the biggest obstacles to effective AI use.

5. AI Use Exposes Newsrooms to Political and Ethical Risk.
Without transparency, verification systems, or policy protections, AI use could deepen public distrust, or worse, facilitate state or non-state propaganda.

6. Training Remains Fragmented and Unfit for Purpose.
Current training initiatives are generic and rarely reach news decision-makers. There is widespread consensus that they must be contextual, critical, and continuous.

7. Localization and Language-Specific Tools are Lacking.
Urdu-language platforms may struggle with prompt engineering, translation accuracy, and lack of tools that support non-English content generation.

6.3 - Recommendations

A. For Independent Newsrooms

- Designate AI focal persons or editors
  Create a dedicated internal role (e.g., AI Editor) responsible for tracking, testing, and scaling AI use-cases aligned with newsroom priorities.

- Embed ethical guidelines early
  Develop internal protocols for transparency, particularly for AI-generated visuals, translations, and research assistance. These should be audience-facing where relevant.

- Focus AI integration on priority use-cases
  Prioritize AI in areas such as video editing, captioning, social listening, and basic design. Avoid overreach into sensitive editorial areas until verification workflows are stronger.

- Pilot shared tools through collaborations
  Partner with other outlets to experiment with pooled infrastructure, e.g., shared translation engines, verification databases, or social listening tools.

B. For Media Development Organizations

- Shift training from tools to strategy
  Offer long-term, cohort-based training focused not only on using tools but on identifying strategic fits, managing risks, and training others.

- Create a resource pool of localized tools
  Support the development and maintenance of open-access tools tailored to local language, audience, and political context needs.

- Mentorship and shared infrastructure models
  Facilitate structured partnerships between advanced and less-resourced outlets to share AI expertise, especially for experimentation with multimedia and analytics.

- Support organizational change, not just upskilling
  Provide guidance on workflow redesign, role restructuring, and editorial governance to support sustainable, ethical AI adoption.

C. For Policymakers and Regulators

- Avoid overregulation and prevent misuse.
  Rather than dictating newsroom AI usage, policy should focus on preventing weaponized AI use, e.g., deepfakes, bot-driven misinformation, through transparent verification standards.

- Safeguard freelancers and informal actors
  Extend digital safety, intellectual rights, and procurement support to non-institutionalized media actors, who are often early adopters yet highly vulnerable.

- Include independent media in policy formation
  Ensure any AI governance frameworks are co-developed with journalists, technologists, and civil society to remain responsive to ground realities.

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