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Perceptions on the use of AI in Basque journalism and the integration of AI into media

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ABSTRACT

Introduction: This study analyzes how Basque journalism has adapted to the use of artificial intelligence (AI), focusing on tools like ChatGPT and their impact on the profession. Developed in collaboration with the Basque Association of Journalists (AVP, for its initials in Spanish), the study aims to understand how AI is transforming journalistic work, the opportunities it offers, and the concerns it generates among professionals in the sector. **Methodology**: Data were collected using a semi-structured, self-administered questionnaire distributed online. A total of 504 interviews were collected, which are representative of gender and media diversity. **Results**: Digital media and freelance journalists are the leading users of AI, with over 40% using it weekly; radio and television show lower adoption rates. ChatGPT and Canva are the most widely used tools, though 43.5% of respondents do not use AI tools at all. The biggest problem is the lack of training, which is present in 86% of journalists and limits their equitable integration, exacerbating gender inequalities. **Discussion**: The incorporation of artificial intelligence in Basque journalism represents a significant transformation. Media outlets are beginning to explore its use, and professionals are demanding training. This is happening in a context of opportunities and ethical and professional challenges that have yet to be addressed. **Conclusions**: The findings underscore the urgent need for enhanced training and improved access to tools to optimize AI integration in journalism.

Keywords: Artificial intelligence, Basque journalists, media, professional gap, AI training, AI skills.

1. INTRODUCTION

The field of journalism has undergone many changes to adapt to technological advances and new ways in which audiences consume information (Carlson et al., 2021; Langer & Gruber, 2021; Newman & Cherubini, 2025). The latest major revolution comes from generative artificial intelligence (AI), which has automated news writing and created content with minimal human intervention (Franganillo, 2022; Brennen et al., 2020).

All news organizations must adapt AI technology and adopt new algorithms that allow them to work with large volumes of data and tell new stories (DalBen Furtado, 2020). Publishers in the Basque Country are no exception. Several studies have examined the evolution of journalism in the Basque Country. These investigations demonstrate how the field has evolved since the beginning of the 21st century. At that time, digital access to information was in its infancy, and only half of Basque professionals surveyed had email access at work in 1998 (Cantalapiedra et al., 2000). Since then, the internet has emerged, and different generations of journalists have faced challenges in adapting to new routines and audiences shaped by social media and the widespread use of multimedia content (Pérez-Dasilva et al., 2021; Ganzabal Learreta et al., 2021).

This professional restructuring has also profoundly affected newsrooms, where precarious working conditions (Gutiérrez-Cuesta et al., 2022) and the same gender gap evident in society at large are apparent (Parratt-Fernández et al., 2023). Despite the increasing feminization of the media (Peña-Fernández et al., 2022), older female journalists in the Basque Country lack the digital skills of their male colleagues and younger professionals (Ganzabal Learreta et al., 2023).

These studies have provided a comprehensive view of the profession's current state and the ongoing need for adaptation among professionals in the Basque Country. Basque journalists' adoption of AI requires a new analysis, as there is barely enough time to fully grasp the new ways of creating and distributing content through social media. A detailed examination should analyze the key skills needed to practice the profession with this new technology, its impact on the profession, limiting factors, and the ethical challenges that may arise from its use. It should also address the potential gender gap.

In this context, generative AI is one of the most influential innovations in journalism today. It is a subdiscipline of AI that creates original content from existing data (Asociación de la Prensa de Madrid[1], 2023). Its rapid advancement has transformed the communications industry (Parratt-Fernández et al., 2021) by taking over functions previously exclusive to journalists (Sivira Camacaro, 2025). Consequently, media outlets have begun to integrate AI into their news production strategies, prioritizing its use in tasks such as natural language processing, trend detection, and automated text generation (Canavilhas, 2022).

An increasing number of studies are addressing the impact of AI on European (Ufarte Ruiz & Murcia Verdú, 2024) and Spanish (Mondría Terol, 2023; Parratt-Fernández et al., 2021, 2024; Túñez-López et al., 2018; Ufarte Ruiz et al., 2023) media outlets, as well as how journalism professionals are adapting to this new technological reality. For example, the study by Mayoral Sánchez et al. (2023) analyzes the implementation of AI in 88 Spanish media outlets and confirms its expansion. However, it also identifies challenges related to reputation and profitability. Mondría Terol (2023) includes testimonies from professionals at media outlets such as *El País* and RTVE and from companies such as Prodigioso Volcán. These testimonies highlight obstacles such as a lack of technical training and resistance to change. Sánchez-García et al. (2023) also denounce this slowness and reluctance to incorporate AI into journalism. Martínez-Navarro (2025), through interviews with journalists, emphasizes the importance of focusing on non-automatable tasks as a strategy to mitigate the impact of automation. In the field of disinformation, Peña-Fernández et al. (2023) have conducted research examining how journalists confront this phenomenon with the help (or risk) of AI.

However, the integration of AI into journalism is not a recent phenomenon but rather an ongoing evolution over the last few decades (Peña-Fernández, Meso-Ayerdi et al., 2023), which is currently in its prime (Mayoral Sánchez et al., 2023). As early as the mid-2000s, computational journalism (Thurman et al., 2017) was being discussed, also referred to as automated, algorithmic, or robotic journalism by some authors (Graefe, 2016). Thus, chatbots (Veglis & Maniou, 2019) and stock market or sports information (Canavilhas, 2022) are among the most widely used automated applications by the media to date. However, other authors are not so optimistic, pointing to AI's still-limited reach in the media (García-Orosa et al., 2023; Graefe et al., 2016). Nevertheless, the emergence of new generative AIs, such as ChatGPT, Midjourney, Dall-e, and Stable Diffusion, has marked a turning point by extending its impact to the media and general public.

Some research focuses on automation and generative AI—that is, algorithmic processes that transform data into narrative texts and news with limited or no human intervention (Carlson, 2015). AI can transform existing models by acting as a content creator rather than just a mediator of human communication (Guzmán & Lewis, 2019; Peña-Fernández et al., 2023). This can lead to the automatic generation of information with minimal human input, or even the creation of synthetic media where journalists are unnecessary (Ufarte Ruiz et al., 2023). Nevertheless, these synthetic media are not envisioned as future companies, but rather as a trend toward disaggregation (Ufarte Ruiz et al., 2023). Some authors, such as Barrat (2013), even predict the end of the human era.

Algorithmic operations enabled by this technology have made information distribution increasingly personalized and interactive. This is achieved through the regulation of user comments, alerts, and recommendations (Carlson, 2017) or social media moderation that excludes inappropriate content (Diakopoulos, 2019). Furthermore, this intelligence is being applied to various media marketing strategies, such as analyzing digital newspaper paywalls and audience metrics (Simon, 2024).

However, other studies downplay the implementation of AI, suggesting that it be used in a supervised and transparent manner and from a complementary rather than a replacement perspective (Lopezosa et al., 2023). This allows all the characteristics of AI automation to be leveraged and made profitable in relation to routine

[1] Madrid Press Association

and repetitive tasks. Consequently, journalistic work can focus on creative and interpretive tasks that require critical and even ironic thinking, ultimately improving the profession (Calvo Rubio & Ufarte Ruiz, 2020). Using AI in journalism requires new methodologies that prioritize human decision-making and processes, promoting a combination of technical knowledge and critical thinking skills (Becker et al., 2025). This interdisciplinary approach requires collaboration among communication professionals, AI engineers, and ethics and linguistics experts to ensure responsible and ethical journalism (Lopezosa et al., 2023; Sanahuja Sanahuja & López Rabadán, 2022; Ufarte Ruiz et al., 2021; Ventura Pocino, 2021).

Therefore, it is essential to feed AI high-quality data, as poor design can generate biases of all kinds. Furthermore, public trust in the media can be affected by the use of this technology if transparency measures are not implemented (Carabantes, 2023; Cheng, 2025; Martínez-Navarro, 2025; Ufarte Ruiz et al., 2021). In this context, it is crucial to analyze how journalists perceive and adapt to AI in their daily work. According to Martínez-Navarro (2025), research reveals two predominant attitudes toward AI: acceptance and resistance. These attitudes are conditioned by the fear of losing control and the automation of key tasks. The author expresses concern that the automation of news creation will lead to uniformity and diminish the richness of diverse viewpoints.

It is necessary to review journalism education at universities and adapt its content to this new reality. Journalism education increasingly requires reinforcing fundamental journalistic principles alongside technological training. This suggests implementing specific AI courses within the journalism degree program (Lópezzosa et al., 2023; Marta Lazo et al., 2020; Sivira Camacaro, 2025). There is a consensus on the need for robust training that integrates the ethical and competent use of AI to prepare students for effective and responsible professional practice (Calvo Rubio & Ufarte Ruiz, 2020).

However, Sivira Camacaro (2025) points out that university-level AI training for journalists has significant shortcomings. Many professors admit to having limited knowledge of the subject, which negatively impacts the quality of teaching (De Vega Martín, 2022). Therefore, universities should prioritize updating their curricula to incorporate specific modules on AI that address both its technical applications and ontological implications (Sivira Camacaro, 2025).

Furthermore, one of the biggest concerns about integrating AI into the business world, including newsrooms, is its potential impact on employment and the possibility of a significant job crisis (Das et al., 2023; Kelly, 2023). This danger, along with financial difficulties and a lack of profitability, is one of the reasons for the slowness, mistrust, and lack of understanding the media cites when implementing this technology (Salaverría & de Lima-Santos, 2020). However, some argue that AI will not negatively impact the job market for journalists (Ufarte Ruiz et al., 2023) and may free journalists from repetitive tasks, enabling them to focus on more creative, valuable work (Peña-Fernández, Meso-Ayerdi et al., 2023). Nevertheless, journalists will be required to have technological skills, proficiency in media platforms, and a general understanding of artificial intelligence. Otherwise, job placement will be limited (Fieiras-Ceide et al., 2022).

Overall, academic literature agrees that implementing artificial intelligence in journalism significantly reconfigures the professional role. There are potential benefits in terms of efficiency and automation, but also significant ethical, educational, and labor challenges. Specifically in the Basque Country, a detailed examination is needed to analyze how professionals are adapting to this new reality, the advantages and difficulties they see in their daily work, and the limiting factors, ethical challenges, and potential gender gap that may result from its use.

2. OBJECTIVES

These are the general objectives (GO) with their corresponding specific objectives (SO):

OG To analyze the degree of adoption of artificial intelligence (AI) in Basque journalism, as well as the factors that condition it, the inequalities in its use, and the professional perceptions about its ethical, labor and training implications.

- SO1: To examine how the type of media and the availability of training influence the integration of AI in the media.
- SO2: To identify barriers and inequalities in the training and use of AI, with special attention to gender gaps and limiting factors such as lack of resources or ethical debate.
- SO3: To explore journalists' perceptions of the current and future impact of AI on the profession, in relation to the skills required, occupational risks and ethical challenges.

3. METHODOLOGY

This research builds upon a 2021 study on the digital profiles of Basque journalists (Pérez-Dasilva et al., 2021). Since then, the democratization of artificial intelligence (Seger et al., 2023) has significantly transformed access to and use of these tools, enabling organizations and individuals to utilize them without specialized equipment. This new reality justifies updating the analysis and evaluating the impact of AI on the journalism profession three years after the original study. This work is the result of the US23/10 research project, which was funded by the University of the Basque Country and carried out in collaboration with the Euskal Kazetarien Elkartea (EKE) – the Basque Association of Journalists (AVP in Spanish).

Data was collected using a self-administered, semi-structured questionnaire distributed online (see attached). This questionnaire combines predefined questions with the flexibility to allow respondents to provide more open and detailed responses. Alternatively, the questionnaire could have been administered by telephone, but no one requested it. Previous studies on the journalistic profession and survey design were referenced in its preparation, such as:

- Annual Report on the Journalistic Profession (Valera & Ropero, 2023).
- Without Journalists, There Is No Journalism: The Social Dimension of Generative Artificial Intelligence in the Media (Peña-Fernández, Meso-Ayerdi et al., 2023).
- Digital Profiles of Basque Journalists and Dialogue with Audiences (Pérez Dasilva et al., 2021).
- The American Journalist in the Digital Age: Another Look at U.S. News People (Weaver et al., 2018); or
- Designing and Using Research Questionnaires (Rowley, 2014).

In this regard, the questionnaire was designed in accordance with the methodological principles recommended in the academic literature (Boynton and Greenhalgh, 2004; Singh, 2017), ensuring that the questions are clear, relevant, and structured in a way that allows for the collection of valid and reliable data. In addition, a pilot test was conducted with a subset of journalists to assess the clarity and relevance of the questions prior to their general implementation.

The company CPS Estudios de Mercado y Opinión (CPS), which has extensive experience designing and executing sociological studies, provided consulting services for data collection. The company collaborated in conducting the pretest, which identified potential ambiguities or comprehension difficulties in the questions,

and in carrying out the fieldwork to ensure the quality and representativeness of the process. The 24-question survey combined single-response and multiple-response items (Likert scale from 0 to 5 points). The surveys were conducted anonymously and in accordance with professional data collection standards, which reinforced the reliability and consistency of the obtained results. Furthermore, all participants were informed that the information collected would be used exclusively for research purposes and would not be used for commercial intent. Ethics committee approval was not sought for this study.

The initial objective regarding the selection of journalists was to achieve 50% gender representation and ensure they worked in all three historical territories. This latter point was expected to result in a proportion similar to that of the overall population of the Basque Country by province. With this in mind, the first step was to contact media outlets, both large and small, in Bizkaia, Gipuzkoa, and Araba, and distribute the link to their staff to encourage them to complete the questionnaire. Second, journalists from various media outlets were sought out through different publications, and they were contacted directly and asked to participate. Third, the search expanded to include companies and public institutions in the Basque Country, focusing on journalists in communications departments and press offices. Some emphasis was placed on identifying journalists working in Araba, as its sample size was slightly lower than its potential representation. Finally, during the last phase of fieldwork, there was a greater focus on targeting women specifically, as the sample size was significantly lower than the initial objective. Based on these contacts, 504 interviews with journalists were conducted between April 12 and May 29, 2024. This ensured a diverse and representative sample of professionals working in the media in the Basque Country. The sample includes 221 journalists with more than 20 years of experience in the media, 108 with 10 to 20 years, 71 with 5 to 10 years, and 104 with less than 5 years. In terms of geographical origin, most participants were from Bizkaia (263), followed by Gipuzkoa (164) and Araba (77).

In the Methodology section, it should be noted that AI was used to assist with drafting and revising this manuscript. Specifically, ChatGPT (GPT-4-turbo, March 2025) was employed as a support tool to enhance the text's clarity and optimize its structure. However, the authors made all argumentative and editorial decisions and supervised, edited, and validated the generated content.

Table 1. *Questionnaires completed*

Questionnaires completed	**Column labels**			
Row labels	**Man**	**Woman**	**Other**	**Grand Total**
Press (print and web, including web versions of print media)	115	82	2	199
Radio	54	29		83
Television	35	34		69
Digital (digital natives, social media, etc.)	34	32		66
Other	38	49		87
Grand Total	**276**	**226**	**2**	**504**

Source: Elaborated by the authors

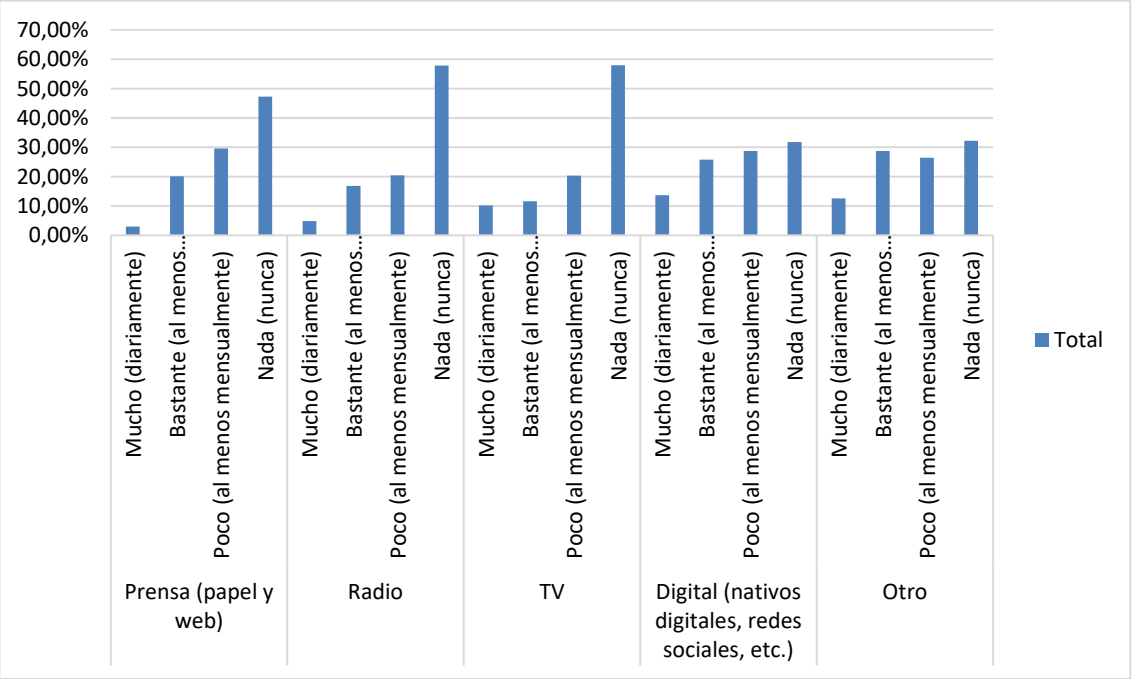
4. RESULTS

Since the data collected is self-reported, the results should be interpreted as subjective perceptions and not as objective measurements of AI use.

4.1. The Adoption of AI in Basque Journalism

Figure 1 shows that AI implementation varies by media outlet type. It is more common in digital media and outside traditional media categories. Expressing the values as a percentage of the total within each media category reveals that digital natives and the "Other" category (agencies and freelancers) are the most frequent users of AI, with over 40% using it weekly or more often. In digital media, 28.79% use AI monthly and 31.82% never use it. Print media is also an area where AI has an impact. However, there is a higher proportion of occasional users (29.65% monthly) and a high rate of non-use (47.24%). This indicates that most have not yet integrated AI into their daily work. Radio and television have the lowest adoption rate: nearly 58% of journalists have not integrated AI into their work. In these audiovisual media, nearly 22% report using AI weekly or more.

Figure 1. *Differences in AI use according to media type*



Source: Elaborated by the authors

Conversely, Table 2 shows that ChatGPT is the most widely used AI tool among Basque journalists, followed by Canva. However, adoption varies significantly depending on the type of media outlet. Digital media outlets lead in AI adoption, with a higher proportion of their journalists using ChatGPT (59.1%) and Canva (56.1%). The "Other" category (freelancers, agencies, etc.) also has relatively high adoption rates, particularly for Canva (47.1%) and ChatGPT (66.7%).

Traditional media outlets (print, radio, and television) demonstrate more moderate adoption of these tools. Print media stands out, with 27.1% using Canva and 28.6% using ChatGPT. This surpasses radio, where 33.7% use ChatGPT and 25.3% use Canva. Television registers the lowest percentages: 29% use ChatGPT, and 21.7% use Canva.

Furthermore, AI tools for image generation are used infrequently (DALL-E and Midjourney are used by only 5.1% and 2.6% of journalists, respectively), suggesting that AI in Basque journalism is primarily used for text generation and basic graphic editing.

Finally, the research reveals that 43.5% of surveyed journalists do not use any AI tools. This lack of use is particularly prevalent in radio (59%) and television (58%), suggesting a lower level of artificial intelligence

integration in these media. In contrast, only 19.7% of digital media journalists say they do not use any AI tools, confirming their greater willingness to incorporate these technologies.

Table 2. *What AI tools or platforms do you use in your work?*

AI Tool	Press (Print and Web)	Radio	TV	Digital (Digital Natives, Social Media, etc.)	Other	Grand Total
ChatGPT	57 (28.6%)	28 (33.7%)	20 (29%)	39 (59.1%)	58 (66.7%)	**202 (40.1%)**
Google Gemini	13 (6.5%)	10 (12%)	9 (13%)	6 (9.1%)	7 (8%)	**45 (8.9%)**
DALL-E	8 (4%)	3 (3.6%)	2 (2.9%)	9 (13.6%)	4 (4.6%)	**26 (5.2%)**
Midjourney	5 (2.5%)	1 (1.2%)	1 (1.4%)	1 (1.5%)	5 (5.7%)	**13 (2.6%)**
Canva	54 (27.1%)	21 (25.3%)	15 (21.7%)	37 (56.1%)	41 (47.1%)	**168 (33.3%)**
Other	34 (17.1%)	5 (6%)	6 (8.7%)	11 (16.7%)	18 (20.7%)	**74 (14.7%)**
None	98 (49.2%)	49 (59%)	40 (58%)	13 (19.7%)	19 (21.8%)	**219 (43.5%)**

Source: Elaborated by the authors. The table is based on the percentage of the total for each type of media, not on the absolute number of users.

However, the use of AI tools in Basque journalism extends beyond ChatGPT, Canva, and Midjourney. Many journalists also use specialized tools for translation, transcription, and content editing. In the multilingual Basque environment, the frequent use of translation and proofreading services (16 mentions) stands out, particularly those related to Basque and Spanish, such as DeepL, Itzultzaile neurala, Google Translate, Elia Elhuyar, and Xuxen. This data reflects the importance of AI-powered translation in Basque journalism. Conversely, Copilot is one of the most popular options for content creation outside of conventional applications like ChatGPT or Canva, with 11 mentions. Similarly, the analysis of the "Other Tools" section includes transcription software such as Happy Scribe, Trint, GoodTape, Accurate AI Transcriptions, and Turboscribe. Text generation programs like QuillBot and Perplexity also appear. Similarly, the other options include a moderate presence of AI-powered video editing and graphic design tools, such as Adobe Firefly, Adobe Express, Premiere, Google's CapCut, and Pinpoint. Other AI tools mentioned include Leonardo AI and Stable Diffusion for image generation and Moises for separating audio tracks.

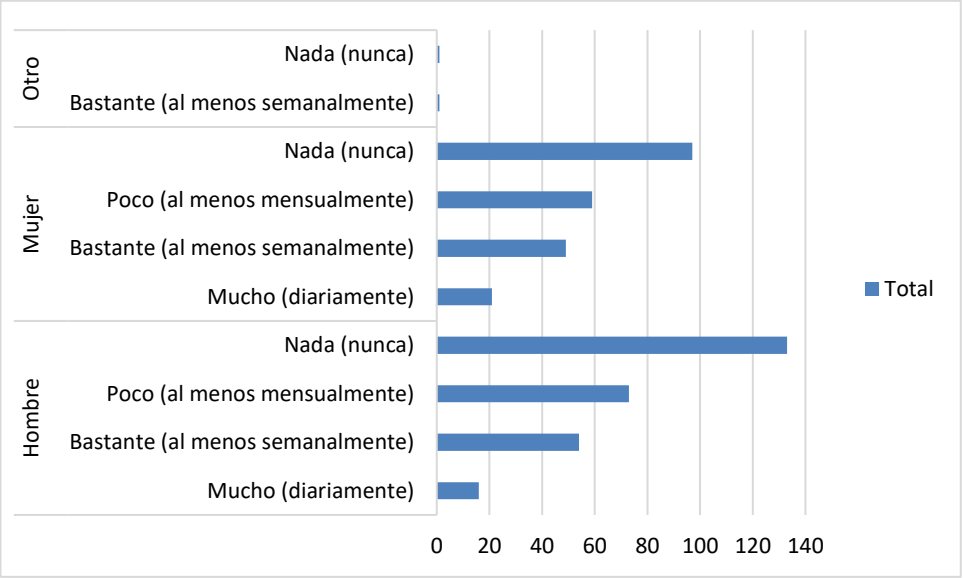
4.2. Gender Gap in the Use of AI in Basque Journalism

There does not appear to be a significant gender gap in terms of AI training. The percentage of women with training (15.9%, or 36 out of 226) is similar to the percentage of men with training (12.7%, or 35 out of 276). However, the percentage of journalists who have received AI training is low overall (just over 14%). Therefore, the problem is not a gender gap, but rather a widespread lack of training.

However, a clear difference exists in terms of usage (n = 273) (Figure 2), with female journalists using AI more frequently than men. According to the collected data, a higher percentage of female reporters use AI daily (9.3% vs. 5.8%) and weekly (21.7% vs. 19.6%). Furthermore, a higher percentage of men have never used AI (48.2% vs. 42.9%), suggesting that they are more resistant to adopting AI in journalism.

Among the 273 journalism professionals who use AI, differences are observed according to task (Table 3), suggesting that AI reinforces the segmentation of roles in journalism to some extent. In this respect, women appear to focus more on writing and text editing, such as content creation (47.3% vs. 31.5%), copy editing (53.4% vs. 49%), and data analysis (28.7% vs. 23.8%). Conversely, men tend to favor multimedia and fact-checking (fact-checking: 19.6% vs. 14.7%; video/graphics editing: 32.9% vs. 27.9%; and subtitling: 28.7% vs. 24.0%).

Figure 2. *Use of AI in journalistic work according to gender*



Source: Own elaboration

Table 3. *Tasks in which AI is used according to gender*

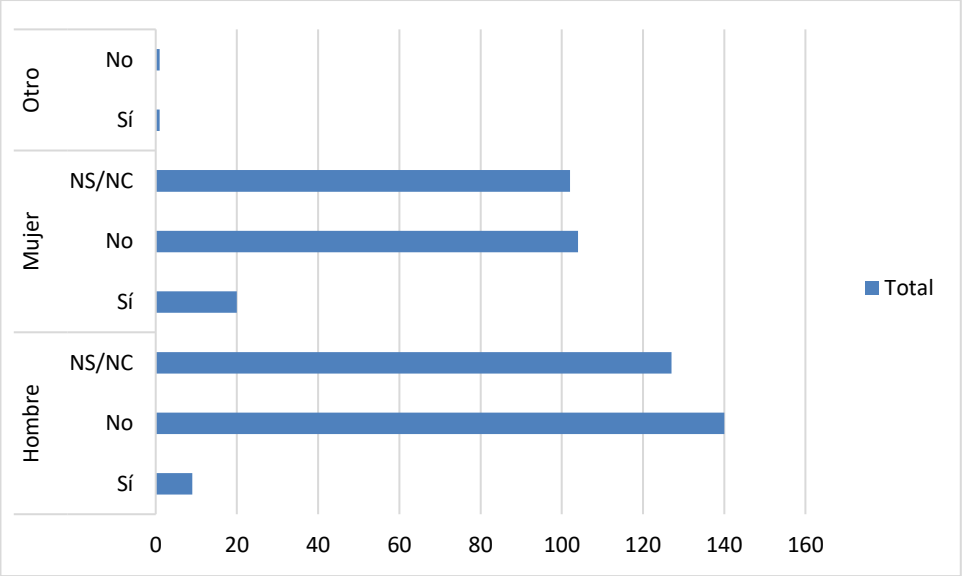
Task	Men (%)	Women (%)
Machine translation	84.6% (121)	86.8% (112)
Thematic queries	53.8% (77)	56.6% (73)
Data analysis	23.8% (34)	28.7% (37)
Content generation	31.5% (45)	47.3% (61)
Data verification	19.6% (28)	14.7% (19)
Style correction	49.0% (70)	53.4% (69)
Video/Graphics editing	32.9% (47)	27.9% (36)
Music creation	6.3% (9)	4.7% (6)
Audio transcription/translation	44.8% (64)	40.3% (52)
Creating subtitles	28.7% (41)	24.0% (31)
Other uses	5.6% (8)	3.1% (4)

Source: Elaborated by the authors

The study also reveals a subtle gender gap in how people perceive differences in writing when working with AI (Figure 3). The data show that female journalists are more likely than male journalists to perceive discrimination or specific barriers related to AI (8.8% vs. 3.3%, respectively). In contrast, most men do not identify AI as a gender issue, which suggests a possible lack of awareness of gender bias in its application in journalism. However, the majority (almost half in both cases) do not perceive differences (46% vs. 50.7%), and a large proportion have no clear opinion (45.1% vs. 46%).

Furthermore, a few respondents indicated that AI "leads towards the male gender" (three mentions from men and four from women). Additionally, it is noted that women are underrepresented in AI-generated texts, and this technology reproduces the sexism present in other communication tools. This bias could be related to the data used to train the AI or the way its algorithms are designed.

Figure 3. *Perceived gender differences in writing when working with AI*



Source: Elaborated by the authors

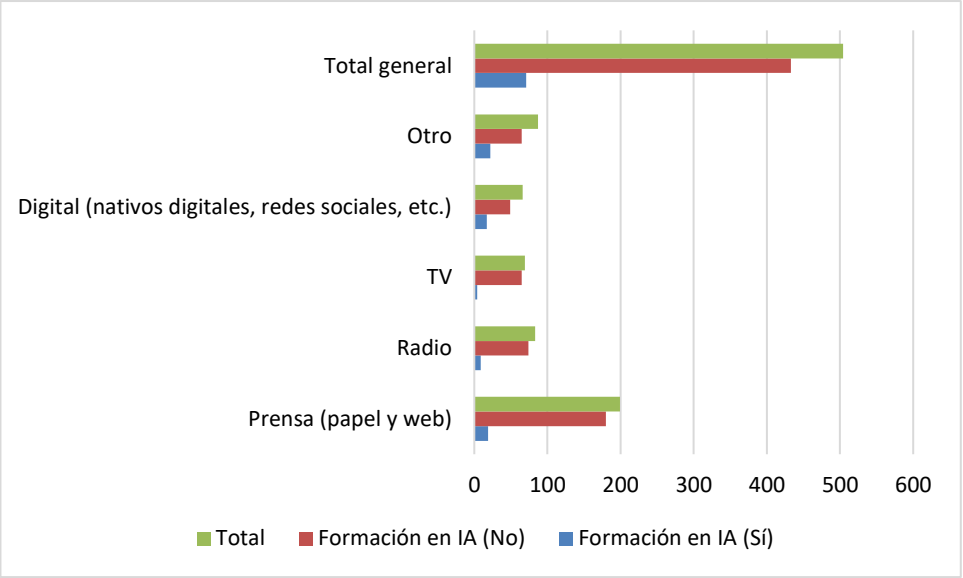
4.3. Factors Limiting the Use of AI in Journalism (Training, Resources, and Ethics as Elements That…)

Regarding training (see Figure 4), only 14.1% (71 out of 504) of journalists have received any type of AI training. Digital-native media outlets have the highest percentage of AI-trained journalists (25.7%, or 17 out of 66), followed by the "Other" category (25.3%). In contrast, traditional media outlets show very low levels of training: print (9.5%, 19 out of 199); radio (10.8%, 9 out of 83); and TV (5.8%, 4 out of 69).

Regarding the type of training received (Figure 5), self-directed learning stands out. Most journalists (84.5%, or 60 out of 71) who have received AI training have done so independently, particularly those in print media (89.5%, or 17 out of 19), suggesting a lack of access to or availability of structured training within media companies. In addition to self-directed learning, 47.9% (34 out of 71) of journalists pursue training through online courses to improve their skills, which are more common in digital media (76.4%, 13 out of 17). This suggests a greater predisposition toward self-directed and digital training in Basque media.

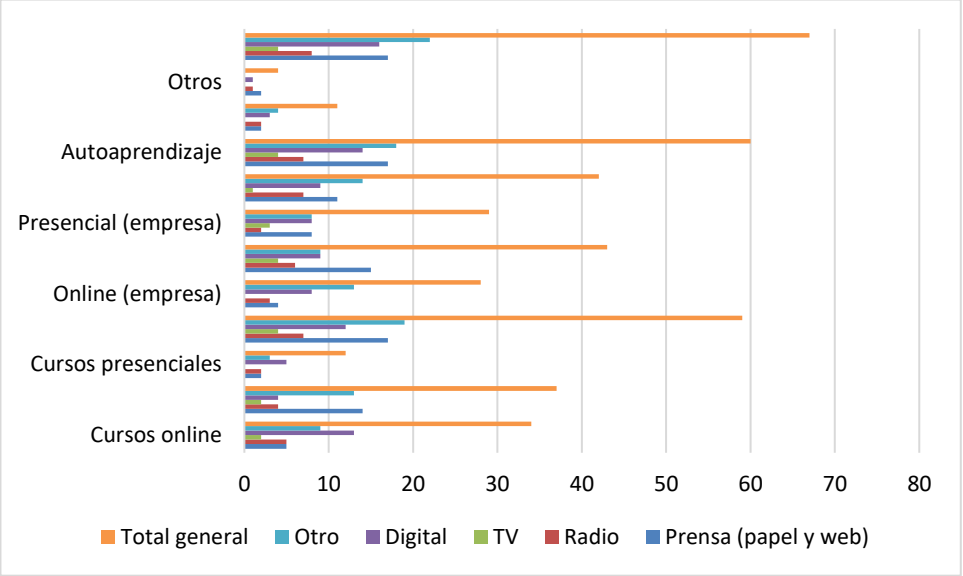
Furthermore, the data reflect that companies generally offer limited training. Online courses are somewhat more frequent in digital media, while face-to-face courses organized by companies are more common in television (three out of four mentions), followed by the press (8 out of 19) and digital media (8 out of 17).

Figure 4. *AI training according to the media type*



Source: Elaborated by the authors

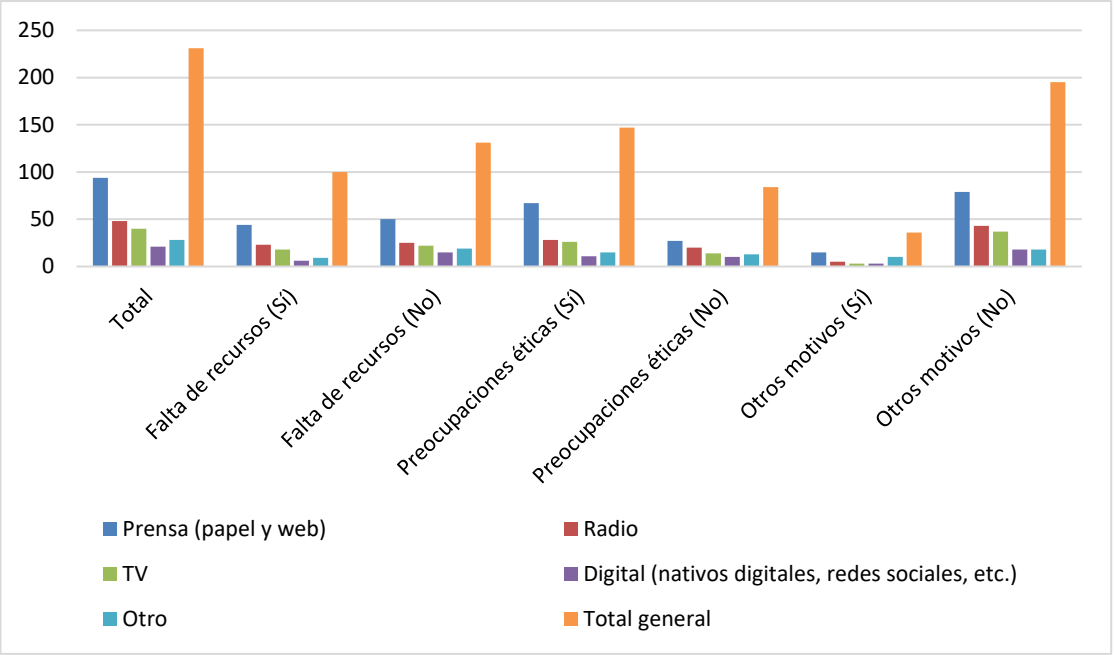
Figure 5. *Type of AI training received according to the media type*



Source: Elaborated by the authors

When asked about their reasons for not using artificial intelligence, journalists in the Basque Country mention a lack of training, resources, and ethical concerns (Figure 6). Those most affected by resource scarcity (n = 231) are journalism professionals working in traditional media: print (46.8%, 44 out of 94 responses), radio (47.9%, 23 out of 48), and TV (45%, 18 out of 40). In contrast, digital media outlets appear to have fewer financial constraints (28.6%, 6 out of 21), suggesting that they are more technologically prepared. However, while the results indicate that a lack of resources is problematic, ethical concerns emerge as the primary obstacle. These concerns are more prevalent than economic factors across all media types (print: 71.3%; radio: 58.3%; TV: 65%; digital: 52.4%), indicating a strong cultural and ethical resistance to AI use in journalism.

Figure 6. *Reasons for not using AI according to media type*



Source: Elaborated by the authors

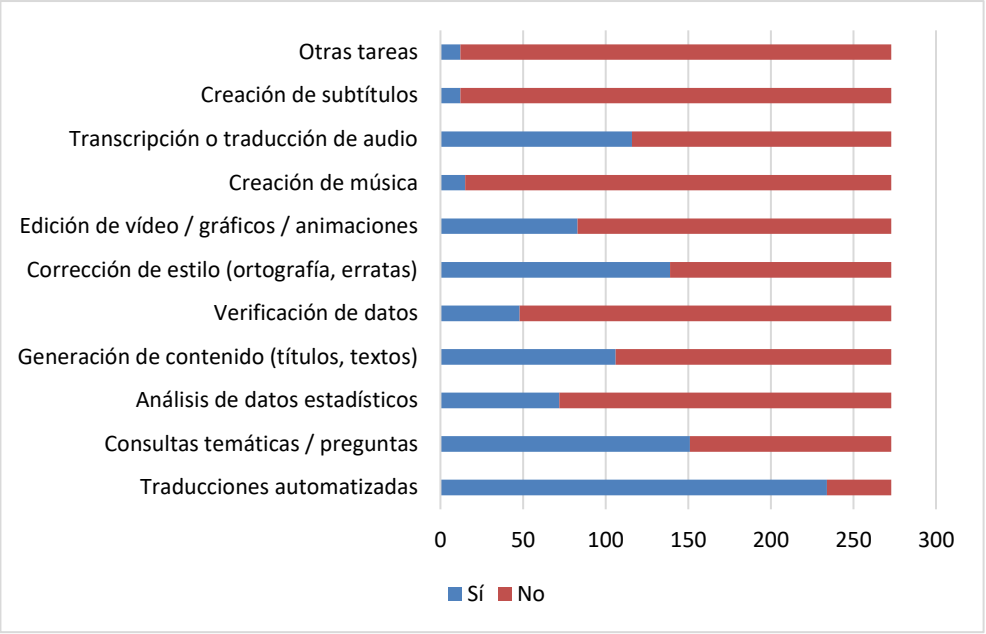
4.4. Key Skills for AI-Powered Journalism: Do Perceptions and Reality Match?

As journalism adapts to AI, it becomes important to identify which competencies are perceived as essential to the profession and whether these align with the competencies actually applied. The data reveals a clear discrepancy between the perceived importance of AI and the amount of AI training journalists have received. Although most recognize the need for technical knowledge and analytical skills, the majority have not received AI training. In fact, only 71 journalists (14%, n = 504) have received AI training, while 433 (86%) have not. Of the skills considered essential for working with artificial intelligence, 469 journalists believe analytical skills are "very" or "quite" necessary; 458 consider critical thinking skills equally important; 458 value professional ethics as "very" or "quite" necessary; and 421 indicate technical knowledge is "very" or "quite" necessary.

AI use (Figure 7) is concentrated in a few specific tasks, primarily support tasks such as automated translation (234 mentions, 85.7%, n = 273), thematic queries (151 of 273, 55.3%), copyediting (139 of 273, 50.9%), audio transcription/translation (116 of 273, 42.5%), and content generation (106 of 273, 38.8%). Conversely, AI is used less frequently for more advanced tasks, such as statistical data analysis (72 out of 273; 26.4%), fact-checking (48 out of 273; 17.6%), video or graphics editing (83 out of 273; 30.4%), subtitling (12 out of 273; 4.4%), and music generation (15 out of 273; 5.5%). These results suggest that journalists may lack the technical knowledge or confidence to apply it to more complex processes.

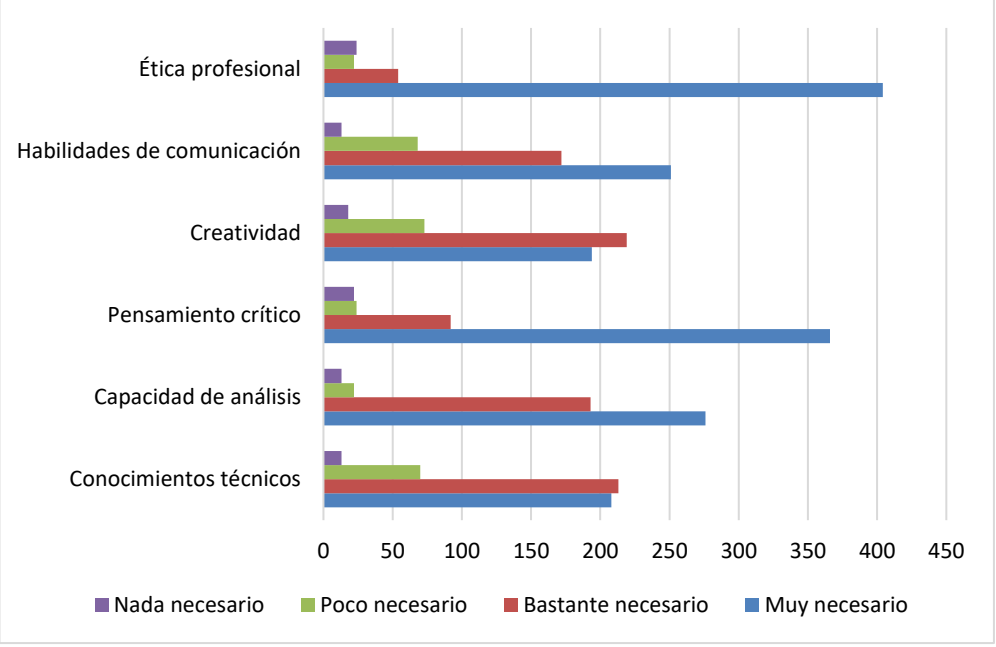
Additionally, while technical knowledge is highly valued (83.3% consider it necessary), analytical and ethical skills, such as analytical ability, critical thinking, and ethics, are considered even more important (more than 90% of journalists deem them essential) (Figure 8). This suggests that the use of AI in journalism is viewed not only as a technical challenge but also as one requiring critical judgment and a solid ethical foundation. Furthermore, the data reveals a discrepancy between the required skills and the actual use of artificial intelligence. For instance, 404 journalists deem professional ethics essential, yet only 48 use AI for fact-checking, a critical journalistic task. The same is true for analytical skills: 276 journalists consider them crucial, yet only 72 apply them to statistical data analysis. Similarly, 366 journalists consider critical thinking essential, yet many only use AI for mechanical tasks, such as translation and copyediting.

Figure 7. *Tasks for which AI is used*



Source: Elaborated by the authors

Figure 8. *Skills perceived as necessary related to AI*

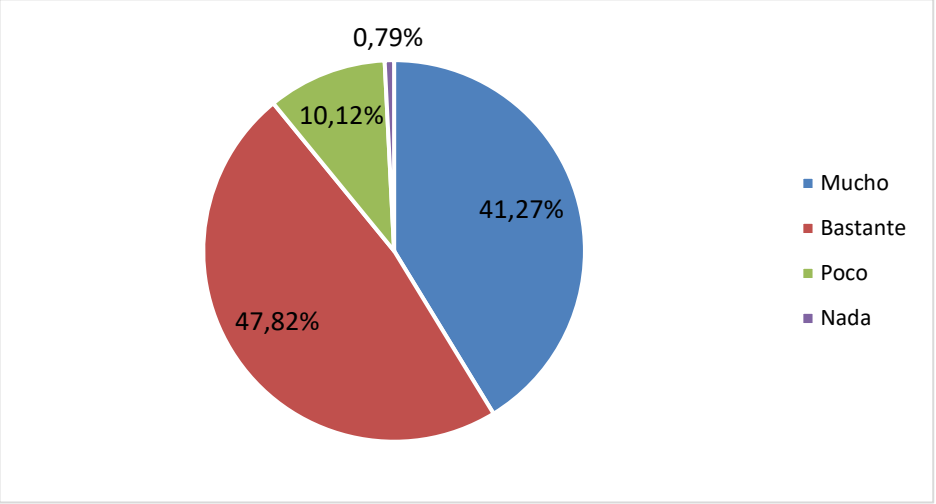


Source: Elaborated by the authors

4.5. Perception of the future impact of AI on journalism

The study indicates a clear consensus regarding the transformation of journalism due to AI (Figure 9). In this respect, almost all participants (89%, n = 504) believe that AI will have a significant impact on content production in the next five years (208 responded “a lot” and 241 “quite a bit”, n = 449). Only 1% believes that AI will have no impact, indicating a clear consensus on its future influence.

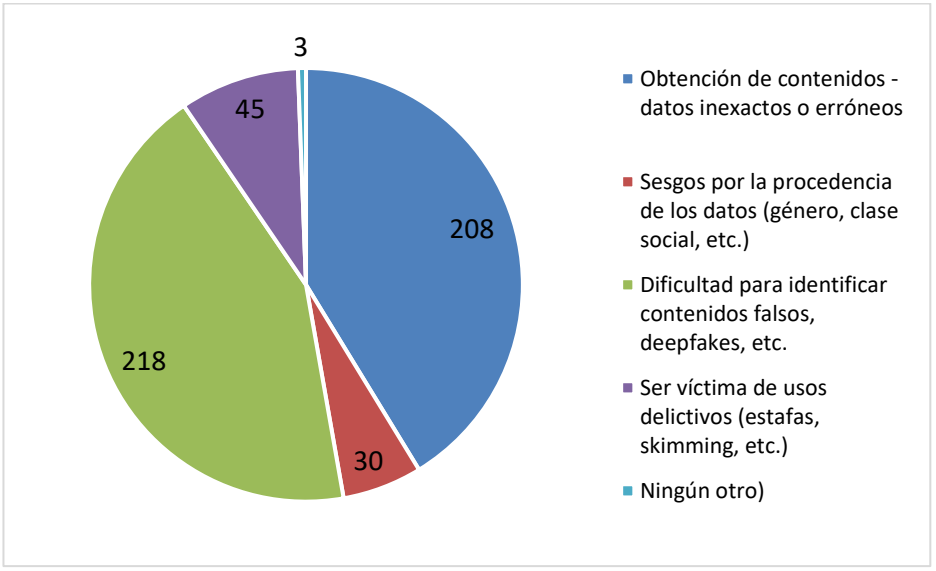
Figure 9. *To what extent do you think AI will change content production over the next 5 years?*



Source: Elaborated by the authors

In addition to future predictions, it is also worth analyzing the risks that journalists already perceive in the use of AI (Figure 10). The survey reveals that among the issues causing the greatest concern within the profession, the most frequently cited risk (n = 504) is the difficulty in identifying fake content or deepfakes (218 as the top risk and 164 as the second), suggesting significant concern about misinformation and digital manipulation. Likewise, obtaining inaccurate or erroneous data is also a recurring fear (208 mentioned as the first risk and 128 as the second). In third place are data biases, which concern some journalists, albeit to a lesser extent (30 mentioned as the first risk and 79 as the second). Finally, the criminal use of AI (scams, skimming, etc.) also worries a small group (45 cited it as the first risk and 72 as the second), indicating that the security issue is significant but not central to the perception held by Basque journalism professionals.

Figure 10. *Perceived risks of using AI in journalism*



Source: Elaborated by the authors

In light of the identified risks, it is crucial to analyze what measures can ensure the responsible use of AI in journalism by guaranteeing transparency, accuracy, and ethical implementation. In this regard, developing

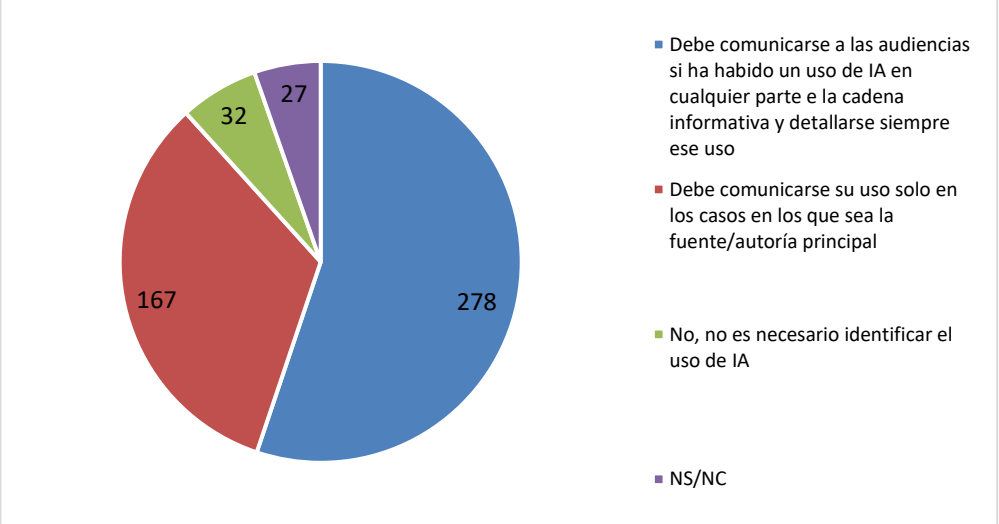
ethical codes on AI was the most popular choice (258 mentions). Similarly, the research indicates that transparency and training are also key. Declaring the use of AI was the second most prioritized measure with 135 votes and 83 votes for the third measure. Next is the demand to train journalists in AI use (93 votes for the first measure, 130 for the second, and 123 for the third).

Furthermore, although internal regulation and research are secondary, they are still relevant. For instance, regulating the use of AI in newsrooms received 42 votes as the first measure, 102 as the second, and 114 as the third. Additionally, researching the impact of AI on journalism is a measure that is gaining relevance (26 votes for the first measure, 37 for the second, and 72 for the third).

4.6. AI-powered journalism: Is it an ethical challenge?

The advancement of AI in journalism raises questions about its use and professional ethics. The data reveals a high level of consensus among Basque journalists on the importance of regulating AI and ensuring transparency in its use (Figure 11). Regarding this issue, 468 journalists (93%, n = 504) believe that AI should be regulated to some extent (327 "a lot" and 141 "quite a bit"), while only three journalists (0.6%) believe that it should not be regulated at all. This indicates virtually total consensus on the need for regulations governing AI use. Furthermore, most of the surveyed journalists believe that the use of AI should be communicated to audiences, though there are differences in opinion regarding the level of detail that should be provided. Regarding this issue, 88% of the journalists (445) believe that the use of AI should be communicated in some way. Of these, 55% (278 journalists) believe it should always be detailed, while 33% (167 journalists) believe it should only be detailed when AI is the primary source or author. Only 32 journalists (6%) believe that identifying the use of AI in journalism is unnecessary.

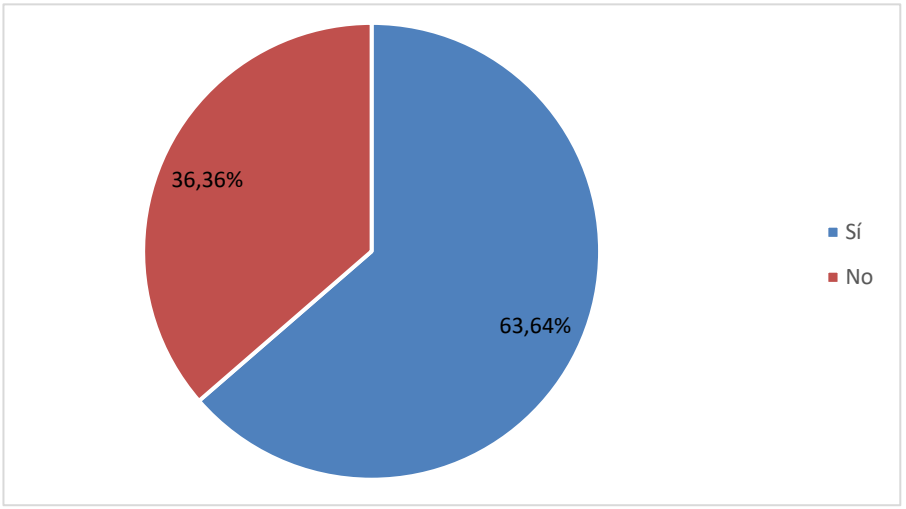
Figure 11. *In your opinion, how should the use of generative AI for journalistic content creation be identified?*



Source: Elaborated by the authors

Furthermore, the study identifies a strong correlation between the non-use of AI and ethical concerns. The data reveal that the less AI is used, the more often ethics is cited as a reason for avoiding it (Figure 12). Regarding this issue, 231 journalists (46%, n = 504) report not using AI in their work, and 147 of them (64%) state that they do not use it due to ethical concerns. The remaining 84 journalists (36%) indicate that they do not use it, without providing further details. However, despite ethical concerns, it is worth highlighting as a positive aspect the existence of a significant group of journalists (approximately 54%, n = 504) who are already using AI to some extent, indicating a gradual integration of these tools into the profession.

Figure 12. *Ethical concerns about the use of AI in journalism*

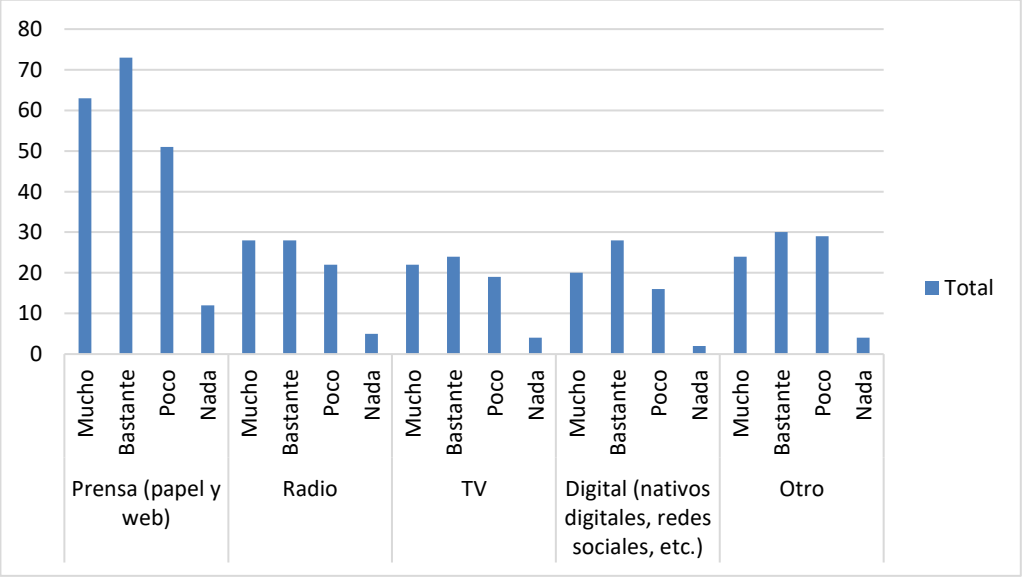


Source: Elaborated by the authors

4.7. AI and the precarization of journalism: Reality or myth?

The emergence of AI in journalism has sparked intense debate about its impact on employment, as questions arise regarding whether it is a tool that enhances journalistic work or a real threat that will lead to job losses and worsen working conditions. The data collected in the survey reveal that traditional print media (68%, 136 out of 199 journalists), television (67%, 46 out of 69), and radio (67%, 56 out of 83) show high levels of concern, but that digital media have the highest percentage (73%). Therefore, concern about potential job losses is widespread across all sectors under analysis (Figure 13).

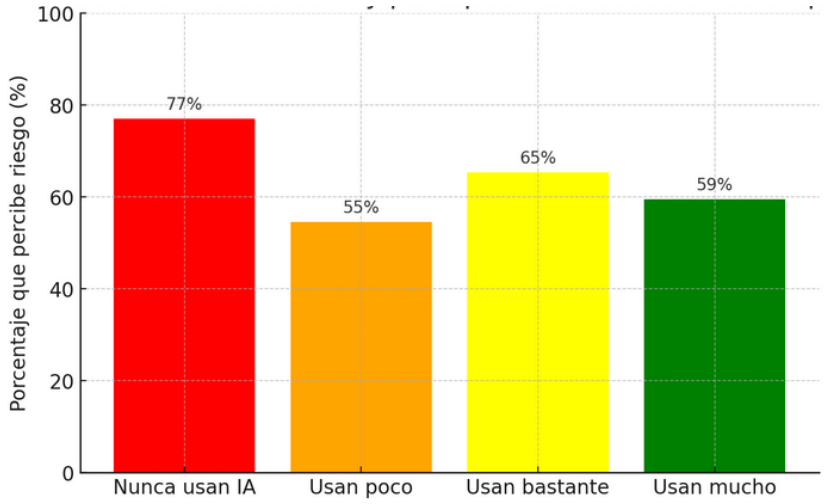
Figure 13. *Will AI result in fewer workers being needed or will it make working conditions in the media more precarious?*



The relationship between perceptions of job loss and the frequency of AI use was also examined (Figure 14). In this regard, journalists who do not use artificial intelligence (n = 231) are the most concerned that it will result in job losses. Seventy-seven percent (n = 178) believe it will reduce jobs “significantly” or “quite a bit.” Likewise, although those who are already using it seem less alarmed, the majority also fear the impact on job losses,

albeit to a lesser extent (59% among those who use it "a lot," 22 out of 37 journalists) and 65% among those who use it "quite a bit," 68 out of 104).

Figure 14. *Relationship between AI use and perception of job reduction*



Source: Elaborated by the authors

5. DISCUSSION AND CONCLUSIONS

Artificial intelligence tools are being adopted unevenly in Basque journalism. Digital media outlets are leading the way in AI integration, with 39.4% using it at least weekly. Other categories outside of traditional media, such as agencies and freelancers, are also adopting AI at a high rate (41.38%). A higher proportion of journalists use tools such as ChatGPT (40.1%) and Canva (33.3%), reflecting faster adoption in independent and online environments. In contrast, traditional media outlets (print, radio, and TV) exhibit more moderate integration. Print media show greater adoption than radio and television, possibly due to the nature of production in these audiovisual media and the lack of specific, adapted tools. Similar conclusions were reached in a study by Mayoral Sánchez et al. (2023), who also highlighted the pioneering and widespread use of AI by digital media and pointed out the disparity with radio and audiovisual media.

While Martínez-Navarro (2025) emphasizes the advantages of integrating AI tools into photography and photojournalism, this study reveals that AI-assisted photo generation is minimal in Basque journalism, accounting for only 6% of the total. Most of its use in the press is confined to the automatic production of texts and basic graphic tasks. This finding contrasts with the results of studies by Túñez-López et al. (2018) and Sánchez-García et al. (2023), which conclude that the actual use of automation for writing news content is also anecdotal in Spanish media.

In this regard, many journalists use popular tools such as ChatGPT, Canva, and Midjourney, as well as other programs that facilitate specific tasks, such as machine translation and language correction. These programs play a key role in the multilingual Basque environment. Similarly, AI-assisted transcription is becoming increasingly necessary, with options like Trint and Happy Scribe. Journalists are also exploring alternatives such as Copilot for content generation. However, the presence of AI-based video editing and graphic design tools in journalistic production remains moderate. The adoption of AI in Basque journalism continues to grow. Notably, almost half of journalists (43.5%) still do not use AI, leaving ample room for its more widespread integration into the profession.

The responses of the media professionals who completed the questionnaire also reveal a clear gender gap in usage. Women use AI more for content creation (47.3%) and copyediting (53.4%), tasks that are more closely linked to writing. Conversely, men use AI more for fact-checking (19.6%) and multimedia editing (32.9%). This may be related to differences in roles within Basque newsrooms, or it may be that women are more willing to adopt AI because their work (writing and editing) lends itself more easily to automation. There is also a subtle difference in the perception of gender bias when using AI. Women seem to be more aware of it (8.8%), while men do not usually perceive AI as a gender issue (3.3%). Although the observed percentage differences between men and women in the use and perception of AI are limited, they are considered relevant within this study's exploratory approach. However, these differences have not been statistically tested; therefore, future research with a more inferential approach is recommended to analyze them. Despite the clear gender biases of AI (Chen et al., 2024; Pérez-Ugena Coromina, 2024), journalists' lack of awareness of this issue is linked to training problems in Basque media. This highlights the need to address the use of AI in journalism from an ethical and socially responsible perspective (Peña-Fernández et al., 2023; Ufarte Ruiz et al., 2023).

Analyses such as those by Parratt-Fernández et al. (2021), Larrondo-Ureta and Peña-Fernández (2024), and Martínez-Navarro (2025) have already highlighted the importance of strengthening AI curricula and creating new, more collaborative frameworks for AI in media newsrooms. This research also reveals a clear discrepancy between the perceived importance of AI skills and the current reality. Specifically, most people believe that AI skills are necessary, yet almost no one has received specific training (86%). Among the few who have received training, the study shows that self-learning predominates (95.7%). The vast majority are learning independently, suggesting a lack of access to or availability of structured training within Basque Country media companies. Online courses undertaken by journalists working in digital media are relevant in this regard (76.4%). This sector has the greatest predisposition toward self-directed and digital training. Studies such as Mondría Terol's (2023) indicate that, in addition to some professionals' resistance, companies generally offer limited training, which is more common in digital media. This could suggest that some digitally oriented media outlets have begun to invest in AI training. Television is the medium with the greatest presence of in-person courses organized by companies (75%).

Therefore, the introduction of AI in Basque journalism is limited by a lack of training and ethical barriers, which range from 71.3% to 53.6% across all media. This is more of a limiting factor than a scarcity of resources, as digital-native media with more training show less resistance. Basque journalism professionals report having limited technical knowledge and confidence when it comes to applying AI to complex processes. Consequently, they primarily use AI for support tasks, such as translation, copyediting, and thematic research, rather than for advanced tasks, such as data analysis (26.4%), fact-checking (17.6%), and multimedia content production (30.4%). However, the use of AI in Basque journalism is seen not only as a technical challenge, but also as one requiring critical judgment and a solid ethical foundation. In fact, analytical and ethical skills, such as analytical ability, critical thinking, and ethical awareness, are considered more important (over 90%) than technical knowledge (83.3%).

The study also explores Basque journalists' perceptions of the future impact of AI on their profession. Based on the obtained data, a clear consensus (89%) emerges regarding the transformation that journalism will undergo in the next five years, particularly in content production. However, this transformation poses risks, the main ones being those related to misinformation and data accuracy (218 mentions as the primary risk and 164 as the secondary risk; more than bias and criminal use). Similar conclusions are reached in the work of Peña-Fernández, Meso-Ayerdi et al. (2023). They point out that, despite recognizing AI's transformative role in the economy and business, journalists express concerns about its effect on employment and working conditions in the media.

It is important to note that journalists who perceive a greater impact of AI also tend to perceive more risks. This suggests that they are aware of the challenges that this technology poses to their profession. Given this reality, ethics and transparency are the most valued strategies for the responsible use of AI in journalism in the Basque

Country, with 258 and 135 mentions, respectively. AI is seen as an ethical and regulatory challenge; almost all journalists believe it should be regulated due to concerns about disinformation and manipulation. Indeed, ethical concerns hinder the adoption of AI in journalism; a significant proportion of journalists (64%) report not using it due to these dilemmas. Nevertheless, it is encouraging that over half of those surveyed are already using AI to varying degrees, demonstrating its transformative potential in journalism. Therefore, the future of journalism will depend on finding a balance between adopting AI and safeguarding professional ethics. According to this study, this balance requires a combination of regulation, transparency, and training. These are key elements that will allow journalists to leverage the advantages of AI while maintaining the fundamental values of the profession. Studies such as those by Ufarte Ruíz et al. (2021) address this regulation and add the need to create codes of ethics, style guides, press councils, and audience ombudsmen. These should include an agreement defining responsibilities related to quality, compliance, transparency, and accountability, approved by all parties (Noain-Sánchez, 2022).

However, this technological transformation raises a crucial question: Does AI pose a threat to the employment and working conditions of journalists, or does it present an opportunity to enhance the quality of journalism and the work of professionals? The survey analysis reveals that concern about job losses is widespread across all media sectors, ranging from 62% to 73%. Professionals who never use AI are the most fearful of its impact (77%) because they see this technology as a threat to their job stability. Similarly, those who already use AI extensively also feel threatened, albeit to a lesser extent (59%). Studies such as Noain-Sánchez (2022) reach similar conclusions, indicating that the perception of job insecurity is influenced more by uncertainty and lack of use than by AI's actual impact. However, the fact that frequent AI users perceive some risk suggests that AI is not just a myth but a real process that will transform journalistic employment. In fact, journalists who are technologically proficient and familiar with the platforms used in the media, as well as with artificial intelligence, will be in demand (Fieiras-Ceide et al., 2022).

This study has limitations because it relies on self-reported data from surveyed professionals. Therefore, the results reflect subjective perceptions rather than objective measurements of the use of artificial intelligence in professional practice. The self-reported nature of the data means it may be influenced by response biases, such as the desire to seem modern or professional when using technological tools. These potential biases should be considered when interpreting differences found between groups, such as gender differences. These differences could reflect actual practices, as well as differences in self-perception or reported familiarity with AI use (study limitations).

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