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No-panic pragmatism

Nordic journalism educators' preparedness to teach artificial intelligence (AI) in 2024

MAARIT JAAKKOLA
University of Gothenburg

JENNY WIIK
University of Gothenburg

Abstract

This article investigates the educational preparedness of Nordic academic journalism schools to teach artificial intelligence (AI) in 2024. More specifically, we examine journalism educators' initial ideas on AI at a time when AI had gained prominence in public, following the release of the first user-friendly applications of generative and conversational AI. Based on the concept of pedagogical domestication of new technologies and journalism schools' responsibility to critically adapt to industry development, we conducted a survey among journalism educators at major Nordic journalism education institutions (N=118, response rate 58%). We found that academic educators had mixed feelings about AI technologies. They expressed the need for AI to be incorporated primarily in the teaching of journalism ethics, as well as in fact-checking and information validation processes, but highlighted that the journalistic core values and understandings of the world needs to remain the same. With a mode of 'no-panic pragmatism', educators perceived AI as something that should be integrated into existing structures rather than anticipating a structural change in education. The study provides an initial documentation of the current state of journalism education and concludes with suggestions for further research and development of pedagogical practices.

KEYWORDS
artificial intelligence (AI), journalism education, AI literacy, AI pedagogy, generative AI, pedagogical domestication, the Nordic countries

Introduction

Artificial intelligence (AI) has become a pervasive learning challenge, discussed in the educational contexts (e.g., Luckin et al., 2022; Jaakkola, 2024; 2025), both in the basic level of education (see e.g. Casal-Otero et al., 2023) and in higher education (e.g., Aoun, 2017). As a disruptive and general-purpose technology, AI is expected to bring about transformation in all sectors of society, which needs to be prepared for facing this rapid, transformative and volatile technological development (OECD, 2018). Global and national debates have revolved, above all, around the structural conditions of producing and using AI, such as the development and investments in AI, ethical frameworks, as well as the automatization processes of production processes, including newsrooms (Wiik & Jaakkola, 2024). Despite the insecurities that are involved, competence frameworks related to AI have started to emerge across cultural contexts (Cardon et al., 2021; Kim et al., 2021; Southworth et al., 2023; Miao & Cukurova, 2024; Miao et al., 2024; OECD, 2025), based on the initial conceptualizations of AI literacy and other AI-related competencies (Long & Magerko, 2020; Ng et al., 2021; Yi, 2021), as well as empirical findings (Wenger et al., 2024; Gomez Diago, 2022).

Consequently, AI has also been addressed as a competence area in journalism and journalism education (Deuze & Beckett, 2022; Jaakkola, 2023; Wiik & Jaakkola, 2024). During the past decades, journalism education – which typically refers to the tertiary education of future practitioners within distinct study programmes of journalism at universities and university colleges (see Terzis, 2010; Deuze, 2000; 2006) – has in line with the technological environment faced several techno-educational phases of transformation, including the digitalization and the emergence of the internet, social media journalism and platformization, the rise (and death) of specific technologies such as mobile technologies, producing pedagogies of mojo journalism and mobile learning (see e.g. Walck et al., 2015), social journalism and related pedagogies (Kothari & Hickerson, 2016), drone journalism connected to experiential learning (Uskali & Gynnild, 2018), and data journalism with distinct skills and competences (Bhaskaran et al., 2024). Some calls for harnessing technological innovations, like the one for Flash journalism (McAdams, 2005), have become obsolete as the associated technologies have been discontinued. Meanwhile, certain ideas remain topics of ongoing debate, such as whether all journalists should acquire basic programming skills (Sørmo Strømme, 2023; Royal, 2017). While some concepts may fade away and attempts to systematically integrate these technologies into curricula may be abandoned, others may evolve and thrive, often under the banner of specialized

journalism fields. These include innovation journalism (Hewett, 2016; Machado & Texeira, 2016) or computational and algorithmic journalism (Lewis, 2017; Thurman et al., 2021), which can also serve as tools for teaching other forms of journalism, such as participatory or data journalism.

In 2024, the question is whether something called "AI journalism" will emerge in the future, and whether journalism schools should respond to the "AI spring" marked by the breakthrough of generative AI in 2023. Historically, journalism education has been expected to mirror the journalism industry, as students need to be prepared to integrate into the professional community. However, while adapting to changes and upholding professional standards (Deuze, 2001; Wiik, 2010), journalism education has also sought to avoid becoming too aligned with industry practices. As Deuze (2006) notes, journalism education has been seen as both a follower and a socializer, as well as an innovator and critic of the industry. Determining which of these roles should take precedence has not always been straightforward. Over the past decade, particularly in the U.S. with discussions around the "hospital model" of journalism education,[1] there has been an expectation for journalism schools to stay ahead of the industry, maintaining a critical and proactive stance (Adam, 2001; Mensing & Ryfe, 2013). In the Nordic countries, this critical distance is often associated with emphasizing the academic foundations of journalism programs (Jaakkola, 2019).

This article builds on the idea of journalism education as a responder to change, with journalism educators as key agents in this process. It examines the perspectives and experiences of Nordic journalism educators at the forefront of integrating new technologies into pedagogy. In our analysis, we focus on the findings from a survey conducted among educators at major Nordic journalism schools, marking a first attempt to document their relationship with emerging technologies. The Nordic countries are known as a region with a strong cultural integration, similar media systems and journalistic cultures, as well as a solid common foundation in journalism education, even if there are also small cross-country differences (see Hovden et al., 2016). Previous studies have examined Nordic journalism educators in terms of their values and views on journalism education (Hovden et al., 2018; Jaakkola & Uotila, 2022), as well as curriculum and instructional design (Jaakkola & Uotila, 2020; Jaakkola, 2019; 2018). However, the pedagogical relationship to various technologies has largely been studied within national contexts (cf. e.g., Splendore et al., 2016). Thus, exploring Nordic journalism educators' initial perspectives on AI technologies provides a valuable addition to this body of knowledge.

Nordic journalism educators represent a distinct occupational group with a unique identity. First, they are part of a professional education system with strong ties to the journalism industry and its broader field. They are often described as "hackademics" – professionals with experience in journalism who have transitioned to academia. Second, journalism education is also an academic discipline, subject to the standards and requirements of higher education programs. University-based journalism educators frequently navigate between professional and academic traditions, balancing the divide between "practice" and "theory" (Jaakkola, 2019). Their orientation is critical in shaping the learning ecosystem formed by both formal educational institutions and informal practices.

Our theoretical framework relies on the concept of domestication. Domestication of media and technology has been explored in the context of everyday media use (Hartmann, 2023), but the pedagogical domestication of new technologies – referring here to the responsive integration of new technologies into journalism education – presents a unique challenge. It takes time for new ideas to be incorporated into curricula, instructional designs, classroom practices, and teaching cultures. The year 2023 marked a turning point in the discourse on AI, widely recognized by tech and innovation companies as "the year of AI" (Johnson, 2024; McKinsey & Company, 2023), and as "the year we started to panic about it" (AP, 2023). In a survey by Hussain and Wenger (2024) of U.S. journalism educators on the most influential technologies for the future of journalism education, AI ranked at the top, followed by virtual and augmented reality—both of which are closely interconnected with AI, practically, professionally and pedagogically. By 2024, journalism educators found themselves in a context where general awareness of AI had surged, sparking widespread public and professional discussions. However, resources and best practices for effectively integrating AI into journalism education were still scarce (see Jaakkola, 2023; Andreassen, 2020).

By exploring journalism educators' perspectives and experiences with AI, this study seeks to contribute to the ongoing dialogue on how journalism education can critically respond to emerging technologies. In the following sections, we briefly examine the current place of AI within journalism education, before presenting survey findings. We conclude by discussing what these early results may suggest for the future direction of journalism education in the Nordic countries.

Background: AI in journalism education

By 2023, most established frameworks for understanding AI had emerged from formal education, particularly in the fields of computer and data sciences. Discussions about the role of AI in journalism, and especially within journalism education, were still in their early stages (for journalism, see Marconi, 2020; Thurman et al., 2021; Pihlajarinne & Alén-Savikko, 2022; Kumar Biswal & Kulkarni, 2024; Whittaker, 2019; Lemershtrich Latar, 2018). Meanwhile, AI was being actively integrated into media and information literacy curricula of formal education systems, adopting a cross-disciplinary approaches (Kim et al., 2021; Pinski & Benlian, 2024). In the Nordics, AI became an official subject in Swedish upper secondary schools and vocational education programs starting in Fall 2024 (Swedish Agency for Education, 2024).

In early 2024, there was no unified consensus on how AI should be incorporated into journalism education or on its role in shaping pedagogical strategies. Discussions about automated journalism and AI-driven practices in the newsroom were only just beginning. Although AI is expected to play an increasing role in journalism education, the scope of its integration into curricula, teaching methods, and independent study practices remains uncertain. At this stage, we are witnessing the initial steps of what is anticipated to be a significant and ongoing development. As one educator noted in our data, "Everyone is talking about AI in university teaching and journalism, but no one really knows what to do."

Despite growing interest, there are currently only about ten academic programs across the Nordic region explicitly focusing on AI, mostly in computer or data sciences (NMN, 2024). In journalism education, during the 2023–2024 academic year, only one course specifically mentioned AI in its title. The course "Artificial Intelligence" (5 ECTS), offered by the University of Jyväskylä in Finland, was part of the organizational communication curriculum and accessible to students from various disciplines. According to the syllabus, the course aimed to provide "theoretical and empirical knowledge about the adoption and consequences of artificial intelligence in organizations". Additionally, a Nordic MOOC (massive open online course), "The Elements of AI", was launched by the University of Helsinki in 2021, signalling a broader interest in making AI knowledge accessible.

As journalism programs typically undergo curriculum updates every four years, it is likely that AI-related content will be formally included in upcoming revisions. However, elements of AI are already being introduced informally and are part of the hidden curriculum, which often serves as a precursor to more structured

inclusion. In this context, the focus on preparedness – encompassing organizational, social, and individual aspects – becomes increasingly important as journalism educators navigate the complexities of integrating AI into their teaching practices.

AI literacy and preparedness

In educational settings, AI is generally approached as a set of skills, competencies, or literacies (Long & Magerko, 2020). Early discussions on AI literacy often focused narrowly on specific tools (e.g., equating AI with ChatGPT) or emphasized the importance of integrating AI into curricula (see e.g., Cai & Nishal, 2023; Irfan, 2023). However, Ioscote and colleagues (2024) noted in their literature review that AI's role in journalism education has received limited attention in academic research over the past decade. AI literacy in journalism education can be categorized into three distinct types (also summarized in Table 1):

1. **Professional AI literacy**: This involves skills and knowledge directly related to the use of AI in journalistic practice. It includes competencies such as data analysis, content generation, and the use of AI tools in reporting. Professional AI literacy also requires educators to effectively scaffold learning through appropriate pedagogies and didactics. According to Deuze and Beckett (2022), the core components are: knowledge of AI, the ability to discern when AI can be applied creatively (and when it should not be), and the skills to coach or guide others in implementing AI effectively.
2. **Academic AI literacy:** This focuses on the application of AI within academic work, such as research, thesis writing, and critical analysis. Here, AI is used as a tool for co-intelligence, supporting academic tasks while preserving the researcher's agency (Jaakkola, 2024). Academic AI literacy also emphasizes critical thinking and a cautious, reflective stance toward AI. Drawing on Deuze and Beckett's (2022) framework, it includes: understanding AI, recognizing when it can be used effectively, and having the ability to mentor others in leveraging AI for scholarly activities like research, writing, editing, and publishing.
3. **Integrative literacies:** This hybrid category combines elements of both professional and academic AI literacies. It encompasses the intersection where journalistic methods are blended with academic theories and practices. Integrative literacies emphasize the ability to apply AI tools in a way that supports both practical journalism skills and deeper academic inquiry, creating a cohesive learning experience that bridges practice and theory.

Role	Professional AI literacy	Integrative literacies	Academic AI literacy
Learner	AI skills for journalistic practice	Blended academic-journalistic use	AI skills for research and writing
Educator	Teaching AI tools in journalism	Hybrid pedagogical approaches	Teaching AI in academic contexts

Table 1: AI Literacy areas in journalism education.

In both professional and academic contexts, a key aspect of AI literacy is understanding the core nature of AI, recognizing when to use or bypass it, and thoughtfully integrating it into existing structures. Verma (2024, p. 150) highlights that implementing AI in journalism requires a balanced approach, leveraging its capabilities while maintaining journalistic integrity and ethical standards. Similarly, journalism educators must navigate this balance, shaping the concept of journalism they teach while upholding ethical principles in both pedagogy and academic practice.

The conditions of pedagogical domestication can be described as a state of preparedness or readiness (Holmström, 2022). At the organizational level, this preparedness is typically described as maturity with which the organization's ability to conduct tasks related to the technology and the challenges posed by it are fulfilled (Sadiq et al., 2021). The condition that influences the preparedness of educators is the state of curriculum planning, which includes the selection of topics and identification of relevant fields for the study programmes (for the Nordic curricula, see Jaakkola, 2019).

Traditionally, journalism education has framed its learning goals in terms of competencies, which include knowledge, skills, and attitudes related to specific technologies (see e.g., Donsbach, 2014; Kim et al., 2021). However, the advent of AI has renewed interest in the concept of literacy, understood as a cultural practice linked to a particular technological environment (Street, 1987; Gee, 1987). From the educational perspective, there are three main areas of inquiry: (1) learners' knowledge and perception of AI in their environment, (2) their emotional and cognitive engagement with AI, and (3) their ability to use AI tools independently, enhancing their understanding through trial and error. These areas are fundamental to developing both professional and academic AI literacies, as well as effective pedagogies for journalism education.

Research questions

In this blueprint study, we aim to explore the preparedness of journalism educators in Nordic countries to integrate AI into teaching practices, and their views on the relevance of AI for the future of journalism education. By examining educators' perceptions of professional, academic, and integrative AI literacies, the study seeks to provide an initial mapping of the current state of AI readiness in Nordic journalism education. More specifically, we address the following research questions:

1. How do journalism educators in Nordic countries perceive their preparedness to integrate AI into teaching practices?
2. What are their conceptions of AI's relevance to the future of journalism education?

We address the research questions by surveying the knowledge, perceived skills, relevance, attitudes, and values related to AI among educators at major journalism schools in the Nordic region. Our focus is primarily on professional AI literacy, which is central to the vocational training of journalists. However, we also recognize that academic literacies are an essential component of journalism programs, and there is significant overlap between the two. As the first study of its kind, this survey provides an initial attempt to document the current state of teaching in a rapidly evolving technological area with substantial transformative potential for the future.

Data and methodology

The empirical material is based on a web survey directed to employees involved in delivering journalism education at major academic journalism programs in Denmark (including Greenland), Finland, Iceland, Norway, and Sweden (N=26). These journalism schools are partners in the Nordic Cooperation Committee for Journalism Education (*Nordiska samarbetskommittén för journalistutbildning*), which has operated since the 1970s and currently includes 22 higher education institutions as members (NCCJE, 2024). Approximately half of these journalism schools (n=12) are also members of the European Journalism Training Association (EJTA, 2024), an organization comprising 83 institutions across 34 countries. Membership in these networks indicates that these institutions adhere to professional and academic journalism training standards in their respective countries' official languages and contribute significantly to the education of journalists, thereby having a nationwide impact.

The questionnaire was distributed to employees at academic institutions who were expected to be involved in journalism education, including lecturers, lecturing researchers, and professors listed on the universities' websites as part of journalism programs. A total of 203 individuals with valid email addresses were contacted. The invitation to participate in the survey was sent on January 25–26, 2024. In the invitation letter, it was emphasized that while respondents were expected to be currently involved in journalism education, they were not required to have expertise in AI or consider themselves experts in the field; rather, the focus was on understanding journalism educators' general perspectives on AI. Respondents were given three weeks to complete the survey. After sending reminders on February 15, we received 118 responses by the deadline, resulting in a response rate of 58 percent. We consider this response rate sufficient to draw representative conclusions (see Dolsen & Machlis, 1991).

The questionnaire, which initially described the objective and intention of the study and asked the respondents to actively provide their informed consent for participation, consisted of three sections: the first section gathered information about the educator's profile and experience (Q1.1–1.10), the second focused on perceived uses of AI (Q2.1–2.5), and the third addressed attitudes and assessments regarding the future of education and technology (Q3.1–3.3). The questionnaire was provided in English, but respondents were allowed to answer open-ended questions in their native language. In designing the questionnaire, we strategically chose not to provide predefined definitions of AI or limit the discussion to specific types of AI or related literacies. This approach was intended to explore respondents' overall relationship with this broad technological category without excluding aspects that might be relevant in different countries, regions, or institutions. Instead, we encouraged respondents to elaborate on their thoughts in open-text fields included with each question.

The respondents were from Sweden (38%), Denmark (23%), Finland (21%), Norway (18%), and Iceland (1%). The majority (68%) were affiliated with universities or comparable academic institutions, while the remaining 32% came from universities of applied sciences (Finland) or university colleges (Denmark, Norway), which, although more practice-oriented, still pursue academic goals and emphasize student employability.

Slightly more than half of the respondents (53%) were male, with 1% choosing not to disclose their gender. This distribution indicates a slight overrepresentation of males, but it closely reflects the gender balance of those invited to participate in the study, where approximately 50% (n=101) were assumed to be male.

Among the respondents who disclosed their native-language job title (N=97), 72 (74%) held primarily teaching-focused positions (e.g., lecturers, senior lecturers, university instructors), while 24 (25%) were in research or administrative roles (e.g., professors, associate professors, docents, or chairs of study programs). The educators represented a wide range of specializations, including photojournalism, news reporting, collaborative journalism, and television journalism. Despite their varied expertise, they shared a common goal of training aspiring journalists for the labour market, in line with the Nordic tradition of higher education (see Hovden et al., 2018). The respondents were generally experienced, with 44% having worked as journalism educators for 11–20 years, 20% for 6–10 years, 16% for 21–30 years, and 16% for 2–5 years.

Despite the small sample size (N=26), the study remains valid for several reasons. First, the respondents were drawn from major academic institutions in the Nordic region, many of which are members of respected networks like the Nordic Cooperation Committee for Journalism Education (NCCJE) and the European Journalism Training Association (EJTA). This ensures representation from key educators with significant influence in journalism education. The high response rate of 58% further strengthens the study's validity, as it reflects meaningful engagement from the target population (Dolsen & Machlis, 1991). Additionally, the diversity of respondents across countries and institution types captures a broad range of perspectives. Given the exploratory nature of this research, the focus on experienced educators provides valuable insights into the early stages of AI integration, offering a foundational understanding that can inform future, larger-scale studies.

Results

AI presence

A key aspect of AI awareness among respondents was their perception of AI's presence in the educational environment. In response to the question, "Have you been actively addressing AI as part of teaching journalism so far?" over half of the respondents (61 percent) said "yes," while a third (29 percent) said "no," and 10 percent were unsure. This indicates that a majority had consciously engaged with the topic in 2023 and could recall specific instances. Some respondents, however, expressed uncertainty about how to define and delineate AI, noting that it often appeared more as a component of broader discussions rather than as an independent topic. Respondents frequently mentioned using translation and transcription tools and reflecting upon prompts with large language models like

ChatGPT. Some reported designing exercises with tools such as ChatGPT, Microsoft Copilot, MidJourney, and ChatPDF, or offering theoretical lectures and workshops on AI in journalism. These activities aligned with professional AI literacy. Additionally, several respondents linked AI use to academic AI literacy, citing cases of plagiarism in academic theses where AI was implicated.

Overall, it was evident that most Nordic journalism educators had encountered AI in their daily teaching practices, indicating an integrative literacy requirement that encompasses both professional and academic skills. There was an ongoing, active exploration of AI, highlighted by the recurring question of whether to permit student use of AI tools.

Respondents were asked to evaluate the presence of AI in various aspects of their professional activities. As shown in Table 2, AI was most frequently noted in university pedagogy courses, scoring an average of 3.1 on a scale from 0 ("not at all") to 5 ("a great deal"). AI was also perceived to play a role in the strategic initiatives of the university (average score of 2.4) and in the personal tasks of the educators (2.3). This suggests that AI integration is occurring both at the organizational (macro) level and at the individual (micro) level. Additionally, respondents indicated that AI was more prevalent in practical courses (2.0) compared to theoretical courses (1.8).

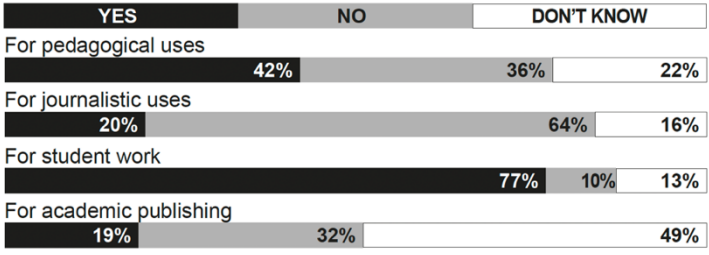
Area	Average
On theoretical courses	1.80
On practical courses	2.01
On university pedagogical courses	3.08
In the strategic work of your university	2.40
In the everyday teaching activities at your institution	1.46
In collaboration with society (third assignment)	1.09
In your personal work as a teacher	2.31

Question: To which extent, on a scale between 0 (=not at all) and 5 (a great deal), is AI currently present in the following areas at your department and university?

Table 2: Perceived presence of AI in different work areas of journalism educators.

The open-ended responses revealed that students were also actively exploring AI, with many respondents noting that the most ambitious students frequently used AI to complete tasks. However, the presence of AI was not reflected in course syllabi or other curriculum documents; instead, it relied on individual initiatives by students or teachers. As shown later in Figure 2, 25 percent of respondents strongly agreed that they had encountered dilemmas as educators due to AI, including issues such as suspicions of unfair use.

When asked whether their universities had established written guidelines for AI use (see Figure 1), a majority of respondents (77 percent) reported that formal guidelines existed for student work, such as writing academic essays and theses. Additionally, 42 percent indicated that their university had introduced pedagogical guidelines for teachers, likely related to managing student use of AI. In contrast, 64 percent stated that there were no guidelines for the use of AI in practical journalism courses, with only 20 percent reporting the opposite. Regarding academic publishing, 49 percent of respondents were unaware of any formal guidelines, suggesting that many were not directly involved in research leadership roles.



Question: Has your university presented written guidelines or rules regarding the uses of AI in the following areas?

Figure 1: The existence of written guidelines.

AI emerged as a relevant area for both professional and academic competencies in journalism education, but it has been more prominently emphasized as an academic issue at the institutional level. This focus is likely due to the widespread use of AI-driven plagiarism detection software, making plagiarism a practical concern for departments. Additionally, questions related to academic ethics, which apply across study programs and universities, have long been supported by national science organizations and initiatives. Public debates about AI in higher education have also primarily centred on these ethical and integrity-related issues.

AI on the curricula

Respondents expressed mixed feelings about their personal relationship with AI. When asked to rate their emotions towards AI on a scale from 0 ("not at all") to 100 ("fully"), the results were varied. The highest average scores were for both "troubled" (51) and "inspired" (47), as shown in Table 3. Feelings of empowerment received a lower average score, while emotions like hesitance, uneasiness, and doubt were more prevalent. One respondent captured these tensions: "AI

stands in stark contrast to the foundations of journalism. Journalists should be witnesses who convey testimony to their readers, viewers, or listeners" (translated from Swedish by the authors).[2] Despite this, AI was also described as a "gamechanger" and "an inevitable tool embedded in our everyday lives." Many journalism educators felt they had little influence over its development and often could not even discern when AI was being used. A recurring theme in the open responses was the concept of "delayed learning", articulated by one respondent as follows:

> I think journalism students should first learn the trade in a traditional way, that is, by doing things on their own. I would only introduce AI-enhanced journalism at the master's level, once they already know the basics and have some work experience. At the moment, however, I wouldn't feel very confident teaching these topics myself, as I don't feel I have enough knowledge about the practices or needs in the field.

Respondents felt that the craft of journalism should be learned with minimal technological assistance, emphasizing that students must first master the core patterns of journalistic thinking and the foundational elements of journalistic culture. Only then should they begin to rely more on technological tools. In this context, AI was viewed as an issue largely outside the direct control of journalism educators, perceived instead as the responsibility of the industry. While the primary focus in journalism education remains on developing journalistic thinking, the expectation is that specific tools and technologies will be learned on the job.

	Average	Minimum	Maximum	Count
Troubled	50,64	5	100	73
Inspired	47,39	0	100	77
Puzzled	46,88	0	100	65
Sceptical	46,66	4	100	79
Amused	41,11	0	100	54
Frightened	40,04	0	100	71
Empowered	39,28	0	85	67
Disinterested	25,71	0	100	51

Question: How do you feel about AI on a scale between 0 ('not at all') and 100 ('fully')?

Table 3: Feelings among journalism educators regarding AI.

Respondents tended to differentiate between two distinct aspects of AI: first, AI as a set of production and productivity tools for use in the production process, and second, AI as a societal issue that needs to

be critically examined and reported on by journalists. Individual respondents placed varying emphasis on these two aspects. Some argued that the focus on AI as a production tool was less relevant, suggesting that journalism education should instead prioritize teaching future practitioners to critically analyse AI's impact on society. This view was based on the belief that decisions about production tools are mainly organizational and will be part of workplace learning. One respondent expressed scepticism about journalism schools' ability to lead in this area, given the pace of development driven by substantial industry investments.

In contrast, other respondents saw a more active role for journalism educators and students in experimenting with, testing, developing, and even co-designing AI tools for newsrooms. They argued that journalism schools should play a proactive role in critically assessing industry practices and exploring alternative approaches.

Another set of questions focused on how AI should be integrated into the curriculum and how educators view AI as a subject of learning. The most preferred area of knowledge for AI, according to the responses, was journalism ethics, with most respondents identifying it as the top priority. Following the ethical dimensions, respondents saw AI playing a supportive role in production tasks, such as illustrating stories, fact-checking and information validation, data visualization, as well as proofreading and editing. These production-related uses were generally seen as less critical compared to the emphasis on ethics.

Thus, AI was primarily seen as an ethical issue that needs to be emphasized, discussed, and critically examined by future journalists. At the same time, it was also viewed as a helpful tool in journalistic production. As one respondent noted, "AI can assist with creating video subtitles, planning social media content, making articles accessible by adding audio, simplifying text, or converting audio notes to text." The respondent also highlighted that AI could help "plan the content, tone, or point of view of an article to better attract the target audience," suggesting that these applications came to mind due to promising industry examples.

Indeed, AI has often been used to enhance journalistic production by augmenting reporting capacity, reducing production costs, and optimizing revenue (Keefe et al., 2021). However, unlike the media industry, journalism education does not need to focus on streamlining workflows or maximizing cost-efficiency. Instead, universities can provide more space for slower, reflective production processes, allowing for experimentation and deeper critical engagement.

AI as a competence challenge

Respondents were aware of the new challenges they face in conveying knowledge about AI and supporting the development of both journalistic and academic AI literacies among future journalists. As shown in Figure 2, around half (51 percent) of the respondents "strongly" or "somewhat" agreed that their knowledge was up to date for meeting the requirements of teaching, while the other half disagreed. This suggests a split among journalism educators regarding their confidence in effectively teaching AI concepts to students.

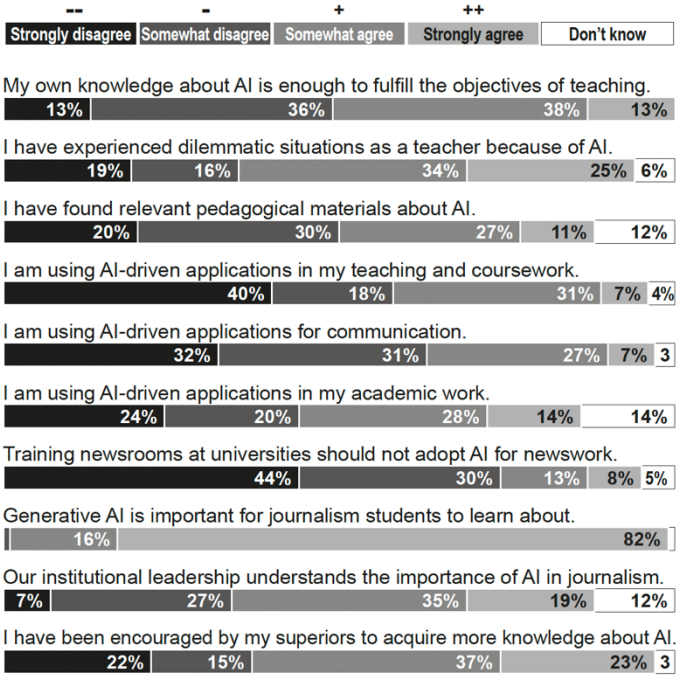


Figure 2: Journalism educators' responses to statements on AI.

Overall, 58 percent "strongly" or "somewhat" disagreed that they used AI-driven applications in their coursework (e.g., proofreading student work), 63 percent reported not using AI for communication tasks (e.g., creating presentations, lectures, or emails), and 44 percent did not use AI in their academic work, as shown in Figure 2. Only 7 percent "strongly" agreed with the statements "I am using AI-driven applications in my teaching and coursework" and "I am using AI-driven applications in my communication". This indicates

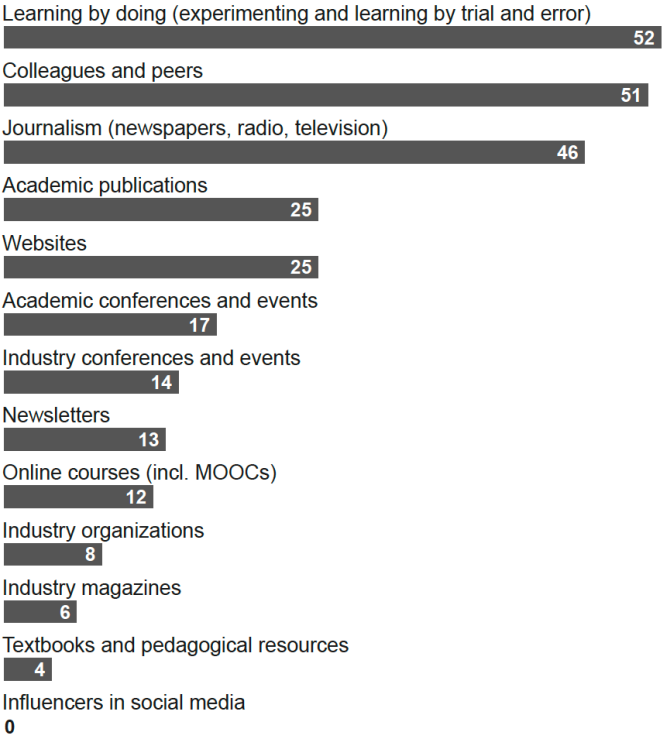
that AI tools were not widely adopted in the educators' personal teaching activities. Instead, AI appeared to be more relevant to the academic aspects of their roles than to their direct teaching responsibilities. Nevertheless, as indicated in Figure 2, a significant majority (82 percent) "strongly agreed" that generative AI would be an important area for journalism students to learn about.

Many respondents noted that staying up to date with the rapid developments in AI and its implications for journalism is time-consuming. Some even expressed a sense of frustration, as one respondent remarked: "It [AI] bores me to death and makes me long for retirement!" Acquiring new knowledge about AI often had to take place during personal time, with collegial and multi-stakeholder networks playing a more significant role than the academic institution itself, as one respondent described:

> Denmark has a network for AI in Journalism, there's also a Nordic Network, and we've created a network specifically for journalism teachers in Denmark. All of these are essential, but they are also extremely time-consuming. It feels like we, as teachers, now have to reskill ourselves in our free time just to keep up with the basics. It seems that our institutions are not prepared for this revolution—they treat it like just another text tool, like Word, without considering the implications for exams, copyright issues, creativity, and many other aspects that come with it.

Respondents reported significant differences in attitudes towards AI among colleagues within their departments and journalism schools. As shown in Figure 2, a majority (54 percent) "strongly" or "somewhat" agreed that the institutional leadership understands the importance of AI in journalism. However, one-third (34 percent) "strongly" or "somewhat" disagreed with this statement. This suggests considerable variation in the level of support provided by different departments and faculties.

As shown in Figure 3, self-study emerged as the primary source of information on AI and its development. About 54 percent (n=52) reported relying on hands-on learning, experimenting with different tools and systems, and discovering new features through trial and error. Learning from colleagues and peers was also common, with 53 percent (n=51) citing peer-to-peer information exchange as a key channel. This combination of experiential learning and word-of-mouth was seen as the most relevant approach. Both methods involve the domestication of technology, where individuals test specific tools or systems and apply discipline-specific knowledge to them.



Question: What are the three main sources for you to acquire information about AI and AI development?

Figure 3: The most important sources for journalism educators to learn about AI.

The third most important channel for acquiring information was journalism, cited by 48 percent of respondents. This underscores the influential role of public discourse in shaping perceptions of AI. However, journalistic coverage has faced criticism for being dominated by industry perspectives, specific brands, and particularly male influencers (Jaakkola, 2023; Deuze & Beckett, 2022). Although respondents did not favour commercial channels as primary information sources, if the critique of journalism holds true, industry- and influencer-driven agendas may still influence the content of journalistic reporting.

No-panic pragmatism

Overall, the qualitative responses were characterized by a pragmatic tone, often downplaying the significance of AI. This downplaying was evident in comments that minimized AI's role as a new

component in the curriculum, as one respondent noted: "I think it [AI] will be an extremely tiny part of journalism education, 7.5 ECTS at most." Dismissing the importance of a technology that has not yet had a major impact on education may also reflect a strategy to counteract the hype often associated with future-oriented topics. Many respondents viewed AI as "just another technology," similar to attitudes seen during previous technological transformations. This "no-panic pragmatism" was likened to the response to the Web 2.0 revolution, as one respondent expressed:

> I feel that, just as social media became an integral part of journalism, media, and society in the 2010s, AI will similarly be integrated into journalism and journalism education in the coming years. So, there's no need to panic—we just need to incorporate AI into the workflow. Basic journalistic skills will still be essential.

The message of "just integrate it when it's time" reflects the educators' experience with previous major digital transformations, particularly the rise of social media and social journalism (e.g., Kothari & Hickerson, 2016). The core task of journalism education remains to teach the fundamental elements of journalistic ideology and practice. While technologies and methods of presentation evolve, the core principles largely stay the same.

Most journalism educators appear to support the inclusion of AI in the journalism curriculum, as indicated by the high number of responses favouring the integration of AI into the pedagogical and journalistic workflows of training newsrooms, and teaching students to adopt generative AI principles (see Figure 2). However, respondents also voiced concerns, with one noting that AI could potentially undermine students' cognitive skills and efforts:

> [S]tudents [are] using AI to cheat on tasks and exams, or at least to complete half the work without thinking for themselves. Written texts no longer reflect what students truly know about a subject; instead, they show how skilled they are at editing AI-generated drafts. This is a serious issue that goes far beyond grading. It challenges the very core of what it means to possess knowledge in an academic field and raises questions about the value and status of a text within an academic context.

The responses suggest a need for discussion about AI's impact on authorship, like ongoing debates in academic literacy (Jaakkola, 2024). However, rather than advocating for restrictions, educators emphasized the importance of providing guidance and fostering reflection.

Discussion

The nuanced approach to AI literacy identified in this study underscores the importance of distinguishing between different types of skills and knowledge. Professional AI literacy focuses on practical competencies for newsroom applications, while academic AI literacy emphasizes critical thinking and ethical considerations. The findings indicate that educators are attempting to balance these literacies, integrating both practical tool-based skills and broader critical perspectives into the curriculum. However, the reliance on informal learning and self-study highlights significant gaps in institutional support, suggesting that educators are often left to navigate these changes independently. This ad-hoc approach points to the need for more structured resources and clearer frameworks to support effective AI integration.

Institutional readiness emerged as a major challenge, with many educators expressing frustration over limited support from their universities. The findings suggest a disconnect between the rapid development of AI technologies and the conservative pace of higher education institutions. By treating AI as "just another tool," universities risk underestimating its broader implications for areas such as authorship, creativity, and academic integrity. This conservative response may hinder the potential for critical engagement and innovation within journalism education, limiting the ability of educators to fully prepare students for an AI-driven media landscape.

The significance of this study lies in its documentation of the early stages of AI integration into journalism education. It shows that while educators are willing to engage with AI, they do so cautiously, reflecting broader cultural and pedagogical norms of adaptation. This cautious approach may serve as a protective measure, allowing educators to critically assess the implications of AI without succumbing to the hype. However, it also highlights the need for a more proactive institutional strategy to enhance AI preparedness, including formal training, interdisciplinary collaboration, and the development of comprehensive AI literacy frameworks.

Conclusion

The study's findings have several important implications for the future of journalism education. First, there is a clear need for institutions to take a more active role in supporting educators through formal training and the provision of clear guidelines. Structured resources and interdisciplinary collaboration—particularly with fields like computer science and data analytics—could help build a more

cohesive understanding of AI's potential and limitations, enabling educators to navigate its integration more confidently.

Second, the evolving nature of AI literacy must be addressed within the curriculum. This includes expanding the skill set beyond practical newsroom applications to include critical analysis and ethical considerations. Journalism programs should emphasize the importance of understanding not only how to use AI tools but also how to critically engage with their broader societal implications. By fostering a reflective approach to AI, journalism education can equip students with the skills needed to navigate an increasingly complex media landscape.

Finally, the findings suggest a need for future research that extends beyond the Nordic context, offering comparative insights into how different educational systems globally are responding to the rise of AI. Such studies could provide valuable lessons on best practices and highlight diverse approaches to integrating AI in journalism education. Additionally, longitudinal research could track the evolution of AI preparedness and the effectiveness of different strategies over time, shedding light on which methods prove most successful in fostering both practical proficiency and critical awareness among journalism students.

In conclusion, the integration of AI into Nordic journalism education reflects a careful negotiation between embracing technological innovation and preserving the core values of the field. While the cautious, incremental approach tempers the hype, it may also delay necessary adaptations, potentially hindering the development of future journalists who are both proficient in AI tools and capable of critical inquiry. By adopting a balanced approach that combines practical skills training with ethical reflection, journalism education can play a proactive role in shaping an AI-literate and critically aware generation of journalists. This balanced strategy will ensure that journalism continues to fulfil its democratic role, even in an era increasingly influenced by automated technologies.

The study's insights underscore the importance of preparing for an AI-driven media landscape while maintaining the foundational principles of journalism. As AI becomes more embedded in journalistic practices, the challenge for journalism education will be to integrate these technologies thoughtfully and critically, equipping students not only with the technical skills needed but also with the critical mindset to question and shape the future of journalism in an AI-influenced world.

NOTES

[1] The "hospital model" of journalism education refers to an approach where journalism schools aim to closely mimic a professional newsroom environment, similar to how medical schools use teaching hospitals for hands-on training.

[2] Translations of quotes from Northern languages are indicated; otherwise, quotes appear in the original English.

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MAARIT JAAKKOLA
Associate Professor
Department of Journalism, Media and Communication
University of Gothenburg
maarit.jaakkola@gu.se

JENNY WIIK
Associate Professor
Department of Journalism, Media and Communication
University of Gothenburg
jenny.wiik@gu.se