

Generative AI and Media Literacy Education

Policy brief #1

September 2024

At a glance



Why should we worry about the impact of generative AI on media literacy education?

- › There is a lack of knowledge among educators about how generative AI works in practice, where it appears and in what forms, and about how to identify generative AI content in media outputs.
- › The speed of generative AI development outpaces media literacy curriculum development and the capacity to train educators.
- › There is inconsistency in continued education in more durable general skills (e.g. critical thinking, knowledge of media industries) while also paying attention to the impact of generative AI.
- › Media skills for creating, using and critically reflecting on generative AI content need to be distributed across the population, including among vulnerable groups.
- › High-profile negative stories associated with generative AI run the risk of accelerating declining public trust in media, making media literacy more difficult to deliver.
- › The legislative context for generative AI is rapidly evolving and will alter the landscape of generative AI, creating further challenges for media literacy educators to stay abreast of change.



How can we address the challenges that generative AI raises for media literacy?

- › Develop and publicise tools that are accessible for the general public to improve their AI literacy and identify generative AI content
- › Raise public awareness of the importance of generative AI in the context of media literacy, both as an opportunity for creative and empowering uses of media, as well as a risk to be addressed
- › Structure media literacy curricula to have built-in flexibility and balance.
- › Review AI literacy curricula in education, and connect the content with media literacy curricula, where possible.
- › Invest in media literacy training that includes content developed collaboratively by education experts and tech companies addressing technological changes in the media environment.
- › Address potential inequalities in media and AI literacy by working with other civil society organisations or professionals to deliver interventions
- › Within media literacy organisations or partners, appoint a champion responsible for AI-related developments so that they can cascade learning appropriately through the organisation.

Background

In September 2023, Google commissioned Ecorys and LSE's Department of Media and Communications to carry out a *Media Literacy Policy Study*. This document is one of a number of positioning papers informed by the research findings. The recommendations build on data collection and analysis carried out between September 2023 and April 2024.

Further information about the study, including the methodology and full set of reporting outputs, is available on the dedicated web page:

www.ecorys.com/MediaLiteracyEducation

Author

Lee Edwards, Professor of Strategic Communications and Public Engagement, Deputy Head of Department (Education), LSE Department of Media and Communications.

Disclaimer: The views expressed are those of the authors and do not necessarily reflect the official position of Google or its partner organisations.

What are the main challenges when it comes to generative AI in the context of media literacy education?

A recent UNESCO mapping of educational curricula in AI defined AI literacy as ‘knowledge, understanding, skills, and value orientation’ in relation to AI technologies.¹ Given the integration of AI content throughout information ecosystems, AI literacy can be understood as part of media and digital literacy, but AI technologies, particularly generative AI – deep-learning machine models that can produce content based on data – present a range of challenges for media literacy delivery that currently limit the potential for higher levels of AI literacy among the general public.

There is a lack of knowledge among educators about how generative AI works in practice, where it appears and in what forms, and about how to identify generative AI content in media outputs and processes

Applications of artificial intelligence are rapidly expanding. Public and policy attention tends to focus on high-profile and negative issues such as deepfake imagery, voice faking, and election interference,² but less is known and understood about the day-to-day integration of AI into media as part of online architectures, and how these shape our everyday interactions with platforms and apps.³ Moreover, the technology that underpins these systems is opaque, sometimes even to those who have developed the technology. Our research indicates that these realities limit the ability of media literacy educators to understand and communicate how and why certain types of content appear and circulate, as well as how the characteristics of AI-generated content can be linked back to the underlying technical infrastructure.

This kind of knowledge is part of broader understandings of media literacy⁴ that could help users better understand and tackle mis- and disinformation but could also support them in more proactive and creative uses of media. At present, it is difficult to realise these benefits through media literacy education.

In addition, the ongoing challenge for the sector to keep up with changing media technologies is magnified by the advent of generative AI and its already widespread use online. Media literacy professionals lack both the tools and the confidence to identify and evaluate AI content⁵ and this lack of confidence might be exacerbated by the fact that the people they teach are using digital media technologies extensively already, particularly among the younger demographic – even if they still have questions about its ethics and risks.^{6,7} The lack of skills and confidence means that even if AI-related topics were included in media literacy curricula, delivery of these components may not be very effective. As our country case study analyses also indicate, the problem points to the need for ongoing training of media literacy practitioners in technological advances, as well as the need for access to user data for media literacy training and evaluation – for example, data that shows user engagement across platforms, algorithmic responses to user activity, or changes in user behaviour as a result of a particular intervention such as factchecking prompts. These measures would enable the ‘black box’ of online and misinformation architectures grounded in generative AI to be unpacked, at least to some extent, through media literacy education.

1 UNESCO, 2022. K12 AI curricula: A mapping of government-endorsed AI curricula. Paris: UNESCO. Available [here](#).

2 See, for example, Heath, R. 2023, 11 September. *Poll: Americans believe AI will hurt elections*. Arlington, Virginia: Axios. Available at: <https://www.axios.com/2023/09/11/poll-ai-elections-axios-morning-consult> and Contreras, C. 2023, 9 November. *Most Americans are concerned about AI's impact on the 2024 presidential election*, Northeastern survey finds. Boston, MA: Northeastern Global News. Available at: <https://news.northeastern.edu/2023/11/09/2024-election-artificial-intelligence-impact/>

3 Turov, J. 2011. *The Daily You: How the new advertising industry is defining your identity and your worth*. New Haven, CT: Yale University Press; Webster, J.G. 2014. *The marketplace of attention*. Cambridge, MA: MIT Press.

4 We define media literacy as an umbrella expression that: “includes all the technical, cognitive, social, civic, ethical and creative capacities that allow a citizen to access and use information and media effectively, and to safely and responsibly create and share media content through different platforms”. This definition aims to capture media literacy’s dynamic and multifaceted nature and aligns with the broad operational definition outlined in the EU 2020 Council conclusions. For more, please see: Council Conclusions on media literacy in an ever-changing world 2020/C 193/06: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020XG0609%2804%29>

5 See Super Searchers case study, for example.

6 Ofcom, 2023. *News consumption in the UK: 2023*. London: Ofcom. See also Heath, 2023 (*ibid*).

7 For an example of the range of skills needed to teach AI literacy effectively, see the EU Digital Education Hub ‘[AI Report](#)’ on Artificial Intelligence in Education.

The speed of generative AI development outpaces media literacy curriculum development and the capacity to train educators

Media literacy educators note the difficulty they have in keeping up with technology generally, but the rapid advance of generative AI applications is a particular problem. Not only do the developers of generative AI update their systems on a regular basis to make them more sophisticated and increase their capabilities, but the range of applications of generative AI expands correspondingly. This means that maintaining the relevance of generative AI content into media literacy curricula will be challenging.

In most country case studies in our research, no specific generative AI content had been developed for media literacy interventions, and practitioners sometimes commented that it was an impossible task to keep up with digital media that are always changing. Instead, they argued that the advent of generative AI makes the need for general, but universally applicable and enduring media literacy skills such as critical thinking skills, more urgent.⁸ Nonetheless, these skills have to be applied to real-world examples, so generative AI-related content will still be needed.

There is a need to ensure continued education in more durable general skills (e.g. critical thinking, knowledge of media industries) while also paying attention to the impact of generative AI

Because technology moves on so quickly, it is tempting for media literacy agendas to focus on the latest developments; this is exacerbated by the fact that funding for media literacy interventions can follow these trends (for example, the current emphasis across many countries on media literacy skills to tackle misinformation). However, such approaches run the risk that more general skills are neglected, that media and their role in society become understood in relatively narrow terms, or that media literacy curricula have to be frequently renewed to stay current. In the case of generative AI, the risk is also that the negative effects of the technology are overemphasised because of the high levels of public concern about these effects, and the general utility and creativity of AI tools (e.g. as a search tool, or as an opportunity to create media content, or to tackle misinformation) are under-emphasised or overlooked.⁹

8 See France case study, for example.

9 See Italy case study, for example.

Media skills for creating, using and critically reflecting on generative AI content need to be distributed across the population, including among vulnerable groups

Inequalities among potential audiences for media literacy interventions are widely acknowledged among the stakeholders and cases that comprised our empirical data. Adults and those in vulnerable groups tend to have less access to media literacy interventions and the industry finds them harder to reach. However, they may also be those most vulnerable to the negative effects of generative AI, and disadvantaged in the context of the ongoing digital divide.¹⁰ Even in schools, where the majority of media literacy education takes place in most countries, there can be existing inequalities between students and among educators, and those most vulnerable may be those least able to access the skills they need both to use AI and to identify fake AI content.¹¹

High-profile negative stories associated with generative AI run the risk of increasing polarisation, making media literacy more difficult to deliver because of the associated declining public trust in media

Among the general population, the advent of generative AI has the potential to further polarise audience trust in the media. The high profile of risks associated with generative AI in particular (such as election interference, or deepfake technology) has created a high level of distrust and this may further decrease trust in the media among those who have less knowledge about AI and struggle to understand its limitations as well as its potential.¹² Such declines in trust may not always be grounded in evidence, but are nonetheless an important factor in making media literacy more difficult to deliver because the basic premise of engaging with media as a source of information is fundamentally challenged.¹³

10 See Anrijs, S., Mariën, I., De Marez, L. and Ponnet, K. 2023. Excluded from essential internet services: Examining associations between digital exclusion, socio-economic resources and internet resources, *Technology in Society*, 73, 102211, doi 10.1016/j.techsoc.2023.102211 and Helsper, E. and Reisdorf, B. (2017) The emergence of a “digital underclass” in Great Britain and Sweden: changing reasons for digital exclusion. *New Media & Society*, 19 (8). pp. 1253-1270.

11 See Poland case study, for example, and Chu-Ke, C., & Dong, Y. (2024). Misinformation and Literacies in the Era of Generative Artificial Intelligence: A Brief Overview and a Call for Future Research. *Emerging Media*, 2(1), 70-85. <https://doi.org/10.1177/27523543241240285>.

12 Stakeholder interviews, 22.10.23, 14.11.23.

13 Edwards, L., Obia, V., Goodman, E. and Spasenoska, S. 2023. Cross-sectoral challenges to media literacy: Final report. London: Department for Science, Innovation and Technology.

The legislative context for generative AI is rapidly evolving and will alter the landscape of generative AI as it does so, creating further challenges for media literacy educators to stay abreast of change

The challenge to keep up with generative AI technologies is not only related to the technology and its development, but also to the relatively fast-moving efforts to regulate generative and other forms of artificial intelligence in different jurisdictions. In some countries, the focus has been primarily on mitigating the harms associated with generative AI technologies, such as malicious deepfake videos and images.¹⁴ Elsewhere, legislation has been implemented or proposed to ensure AI is prioritised and integrated into key areas of society, including education and the information environment.¹⁵

In the EU, the [International Code of Conduct for Developing Advanced AI systems](#) was published in October 2023 and the [EU AI Act](#) is due to come into force during 2024. While these are not directly related to media literacy, they do include provisions for AI producers to be transparent about the technology, evaluation of risk levels for different kinds of AI, and require investment in measures that mitigate associated risks such as the spread of disinformation, including clearly labelling AI-generated content.

Industry awareness of the ethical challenges of producing and using generative AI technologies is also increasing and there is, to some degree, a drive to demonstrate responsible practices that address risks. For example, the [Partnership for AI](#) has released a series of case studies that demonstrate how transparency and consent are at the centre of its members' practices. In parallel, obligations on media and platform organisations to deliver or support media literacy are also enshrined in law in different ways – for example, in the EU via the Audiovisual Media Services Directive 2018, and in the UK via the Online Safety Act. Keeping pace with these kinds of changes will therefore be important for media literacy practitioners, both generally and in terms of expanding the possibilities for training and education, but is a challenge because of the number of relevant initiatives and the range of industry responses being developed.

14 See Romania case study, for example, and UK Ministry of Justice, 2024. Government cracks down on 'deepfakes' creation. London: Ministry of Justice.

15 Centre for AI and Digital Policy, 2024. AI Frameworks. Washington, DC: CAIDP.

What can be done to address the challenges that generative AI presents to delivering media literacy effectively?

Develop and publicise tools that are accessible for the general public to improve their AI literacy and identify generative AI content¹⁶

The impetus for centring consent and transparency in AI deployment among legislators and industry leaders presents an opportunity for working with media literacy practitioners to develop tools that can be made available to all members of the public, regardless of their level of media or AI literacy, to access when engaging online. In our research, experts suggested an infrastructure to protect against misinformation and prioritise good practice is necessary,¹⁷ and collaborative development of tools would be one part of such a system.

Such tools could be developed in conjunction with media literacy practitioners, who would have the understanding and skills to integrate them into media literacy curricula and content, using them to illustrate how AI content is translated across different forms of media, for example. These tools could also provide sources for ongoing development of media literacy curricula as well as illustrative examples of what users might look for when trying to identify generative AI content in the media they use. They should also be tailored to current events and topical issues, such as elections, child safety online, or protecting democratic debate, to ensure their relevance can be explained to a wide range of audiences and they are valued and adopted.

Raise public awareness of the importance of generative AI in the context of media literacy, both as an opportunity for creative and empowering uses of media, as well as a risk to be addressed

A number of different options exist for public engagement. As our case studies indicate, awareness days, or weeks such as Media Literacy weeks, provide ready-made opportunities to showcase innovative uses of AI as well as tools and techniques for identifying generative AI content.

At the same time, connecting media literacy and critical generative AI skills to wider civil society concerns such as the quality of education or democratic engagement, or the integrity of elections, can also raise the profile and importance of these issues among the public. A legislative context where the importance of AI skills is recognised alongside broader media and digital literacy skills, for example, could help legitimise efforts to increase public engagement.¹⁸

Structure media literacy curricula to have built-in flexibility and balance

Ensuring core media literacy skills remain at the centre of the curriculum is essential to avoid interventions going out of date, while still paying attention to current developments and contextualising their importance in the wider media environment.¹⁹ Both policy developments and research with the public shows that core skills such as critical thinking are recognised as crucial,²⁰ so they should be prioritised, but new technologies should be included to illustrate changes in the media context where the use of these skills is required in different ways – for example, as techniques for disinformation become more sophisticated.²¹ This will enable media literacy curricula to remain sustainable and future-proof, by being flexible enough to respond to changes in media technologies without requiring a wholesale change in content. At the same time, MIL curricula should avoid focusing too narrowly on the digital environment or on generative AI risks, and ensure that the benefits of digital media and generative AI as creative and empowering means of making media are also recognised, including the ways in which they can be used to verify information sources and accuracy (stakeholder interview, 22.10.23, 14.11.23). Including generative AI technologies in media literacy curricula in these ways, as opportunities for reflective and critical thinking and engagement that invite both creativity and caution from users, is essential.

¹⁶ See France case study.

¹⁷ EU expert interview, 19/03/24.

¹⁸ See Romanian case study, for example.

¹⁹ Stakeholder interviews, 5.5.23 and 6.10.23

²⁰ See, for example, Family Online Safety Institute, 2.23. Generative AI: Emerging habits, hopes and fears. London: Kantar.

²¹ Stakeholder interviews, 5.5.23, 6.10.23.

Review AI literacy curricula in education and connect the content with media literacy curricula, where possible

Education and schooling is one of the areas where most attention is being paid to both media literacy and AI literacy programmes (EU expert interview, 07.03.24). In some contexts, AI curricula are incorporating many aspects of core media literacy skills, such as understanding the technology, creative use and applications, and critical thinking about the ethics and social impact.²² Where AI literacy programmes are attracting investment and training for teachers and students, opportunities exist to connect these curricula with media literacy interventions. This could provide opportunities for mutual benefit by extending the reach of general media literacy skills into AI curricula and integrating high quality AI-related content into media literacy programmes, within formal educational contexts and outside them.

Invest in media literacy training that includes collaborative content addressing technological changes in the media environment

Ongoing training is essential for all those providing media literacy, but technological change is one of the hardest areas to address and interviews with practitioners show that when left without support from technology companies, it is even more difficult for media literacy practitioners to achieve. Technology companies can support training by making test data sets and example cases of generative AI content available for use in the media literacy classroom, as well as promptly publicising new tools for tracking and tracing these technologies as they are developed. They can also support teachers with mini-curricula to address the topic, as developed in the [Experience AI](#) programme, a collaboration between Google DeepMind and Raspberry Pi. In addition, using a 'train-the-trainer' approach with professional groups such as librarians (as in Google's Super Searchers programme) to reach populations outside formal education is potentially powerful.²³ Peer-to-peer training, as delivered by the Guardian Foundation in their 'Behind the Headlines' Media Literacy Ambassadors programme, can also be a valuable way of scaling up media literacy among teachers and school-age students, and offers additional opportunities for technology companies to provide data and example cases of generative AI content for training purposes.

22 UNESCO, 2022, *ibid*.

23 Stakeholder interview, 22.10.23.

Address potential inequalities in media and AI literacy by working with other civil society organisations or professionals

It is essential to cascade training through organisations that already reach people who are disadvantaged in terms of access to digital skills and media literacy.²⁴ Tailoring content in line with their outreach could also support efforts to minimise polarisation in media trust by demonstrating examples of media and AI literacy that are relevant to participants' needs and everyday lives, and can be taken up on their own terms, rather than imposed on them.²⁵ At the same time, this ensures the relevance of media literacy skills is illustrated across a range of general activities that involve users in information seeking. Critical reflection on the information obtained during these activities is still needed, even though they might not be formally defined as 'media'-related actions (e.g. looking for health and well-being information, or advice and tips on budgeting). Examples of this kind of practice include the work done by TechSoup Europe, which has been supported by Google (see the separate case study of this work and the example below).

Within media literacy organisations or partners, appoint a champion responsible for AI-related developments so that they can cascade learning appropriately through the organisation

AI 'champions' can ensure that the rapid changes in this arena are recognised and that opportunities and challenges arising for media literacy are addressed. This would ensure that there is a single locus of expertise for the area, which reduces duplication of effort while still ensuring the intersection of media literacy and AI-related changes is effectively monitored and kept up-to-date.²⁶

24 Edwards, L. *et al*, 2023. *Ibid*.

25 See TechSoup case study.

26 See Be Internet Awesome case study, for example.

Box of resources

Example projects

The following examples illustrate projects where the best practices above have been implemented in various ways. The aim is to illustrate the creative ways in which such ideas can be put into practice; evaluation of their success is not always available or current, so no evaluation information is included here.



Case study 1: Experience AI: Google DeepMind and Raspberry Pi

The Raspberry Pi Foundation is a UK-based charity focused on empowering young people by supporting their engagement with and use of digital technologies. Raspberry Pi is already known for its work providing both students and teachers resources to develop their skills in learning and teaching about digital technologies. Google DeepMind, as a global leader in generative AI technologies, was well-positioned to help Raspberry Pi to extend their support into addressing generative AI and machine learning technologies. The resulting programme, Experience.ai, is tailored to the level and interests of students aged 11-14, and offers a layered set of tools for teachers and students to use.

- › The programme is structured in stages, starting from basic explanations of generative AI technology and what it can and can't do, to more advanced tools that students can use to experiment with generative AI programmes.
- › The lessons include a range of content types, including lesson plans, presentations, worksheets and simulations, making them adaptable to different types of lessons and different learning and teaching methods.
- › The programme balances opportunities to be creative with generative AI/machine learning tools, while also critically engaging with the risks they pose.
- › The programme offers two additional subject-specific lessons, for the PSHE and Biology curriculum, so that students can see the applicability of the technologies in other areas.
- › There is a separate training module for teachers to support their knowledge development in the subject area.
- › The tools are open access, available free online and can be easily downloaded.



Case study 2: Digital Activism Accelerator: Google.org, Hive Mind and TechSoup Europe

[TechSoup Europe](#) is part of TechSoup global, a non-profit organisation dedicated to using technology for social change. The Digital Activism Accelerator programme was developed in conjunction with Google.org and Hive Mind, to build civil society resilience to disinformation in CEE countries, through stronger digital skills development and capacity building. The programme is Europe-wide, is particularly focused on reaching vulnerable groups. While it is not specifically focused on generative AI skills, it is a good example of the value of cascading training through local networks and organisations who know local needs and can tailor content appropriately.

- › TechSoup partners in different countries first map local needs and demand, and identify civil society organisations, frontline workers and activists as the primary targets for training, in particular those who have already been challenged by disinformation.
- › Once selected, the participants are mentored to develop a roadmap based on their current challenges, needs, and how these needs can be met with training.
- › Training begins with delivery of onboarding sessions and tailored capacity building for the selected organisations. This is followed by the development of local action plans and campaigns to tackle disinformation challenges.
- › The training is hosted on Hive Mind's platform, a learning hub for civil society organisations to build digital resilience, which is available in multiple languages. Its existing reputation and multi-lingual capacity make it particularly suitable for an international programme like the DAA.
- › Monitoring and mapping at regional and national levels can continue through the programme deployment, delivering a good basis for future evaluation and identification of continued disinformation challenges.



Case study 3: Webwise Ireland: AI Hub

[Webwise Ireland](#) provides information, advice and free education about internet safety for teachers, parents and young people. It runs the annual Safer Internet Day, runs awards, conducts research and produces a wide range of resources that are accessible via its website. Webwise has integrated AI into the topics available for visitors to explore when using its site and is a good example of the multiple ways awareness about the complex topic can be developed when information is targeted effectively, and distributed via a trusted source.

- › The Webwise website has a dedicated page, called the '[AI Hub](#)', where the resources about AI are accessible in a single location and in multiple formats that can appeal to its three key audiences: parents, youth and teachers.
- › The AI Hub is structured around key questions relating to AI (e.g. What is artificial intelligence? What is the impact? What are the benefits and limitations?) that introduce readers to the basics of AI.
- › More complex questions are dealt with through 'Explainers' – brief articles contributed by experts, written in an accessible way but clarifying misconceptions (e.g. AI is not sentient, AI does not replace human creativity).
- › Explainers create space for discussions of key debates such as the impact of Deepfakes on trust in information, the power of ChatGPT and how it can be used, and tailored content about AI and technology more broadly (e.g. a podcast interview targeted at teenagers).
- › Teaching resources on the page provide downloadable materials for lessons on AI technologies, including facial recognition, persuasive design, and ethics.
- › The page also links to other relevant resources: the EU guidelines for using AI in education; the workshop programme '[AI in my Life](#)', offered by Ireland's [ADAPT](#) centre for transition year students; and '[Everywhere, all the time](#)', a digital literacy intervention offered by [Tactical Tech](#). These resources help to contextualise the AI-specific content and offer additional materials and options for personal or educational use.

Further resources

UNESCO Policy Brief, [User empowerment through media and information literacy responses to the evolution of generative artificial intelligence](#) (February 2024)

EDMO draft checklist for [Media Literacy Standards and Best Practices](#) (March 2024). General guidelines for implementing media literacy projects, that should be integrated when addressing AI topics.

EDMO White Paper on [Generative AI and disinformation: Recent advances, challenges and opportunities](#) (Feb 2024). Overview of the most recent initiatives across EU countries, focused on challenges and collaborative approaches to solutions.

[European Broadcasting Union](#) website topic pages on artificial intelligence, focused on the challenges and opportunities of AI for media generally, and for media literacy. See, for example, this [blog](#).

[European Media and Information Fund](#), distributes a range of resources and funds projects relating to misinformation, disinformation and media literacy development.

Ecorys and LSE Department of Media and Communications (2024). On behalf of Google Europe.



Answering
tomorrow's
challenges
today

Albert House
Quay Place
92-93 Edward Street
Birmingham
B1 2RA

T: +44 121 827 9151

E: birmingham@ecorys.com

ecorys.com