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The Potential for Media Literacy to Combat Misinformation: Results of a Rapid Evidence Assessment

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Academics, policy makers, and social media platforms have engaged with media literacy responses to misinformation. To examine the effectiveness of specific strategies, we conducted a rapid evidence assessment of research conducted between 2011 and 2021, focusing on the intersection of media literacy and misinformation. The analysis revealed the effectiveness of certain types of media literacy intervention, notably strategies that prompt conscious and rational engagement with content and develop critical thinking skills. The effects of interventions varied over time, and the complexity of media and information environments suggests that this variability will persist. The literature contained multiple definitions of misinformation and media literacy, making it hard to draw wider conclusions or comparative insights across studies. We conclude that future research should employ more robust methodologies, including a wider variety of platforms and more inclusive sampling of vulnerable and marginalized populations, as well as extending research into global majority countries.

Keywords: media literacy, media literacy interventions, digital literacy, misinformation, disinformation, social media, platforms, system thinking, media education, rapid evidence assessment

Whether it is possible to respond to challenges posed by online misinformation is a question that continues to occupy policy makers, technology corporations, civil society organizations, and activists. Its urgency has increased following the election of Donald Trump to the U.S. presidency in 2016 (Swire, Berinsky, Lewandowsky, & Ecker, 2017), in light of the crucial role information integrity (or lack thereof) played in the COVID-19 pandemic; the Russian invasion in Ukraine and associated information warfare; war in the Middle East; and multiple national elections in 2024, including the reelection of Donald Trump. Moreover, the rapid evolution of media technology, including social media platforms and the integration of

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generative artificial intelligence (AI) content into everyday life, has enabled bad actors to circulate mis- and disinformation and presents new challenges for detection.

National policy makers have started implementing regulations designed to reduce misinformation and disinformation, hold platforms accountable, and support users in managing their information consumption habits. For example, the UK's Online Safety Act (2023) requires platforms to evidence the steps they take to prevent the circulation of harmful information, while the Australian Online Safety Amendment (November 2024) will ban 16-year-olds from many social media platforms from 2026.

Technology companies have had varied responses, consulting the government on proposed measures but also lobbying against changes unfavorable for their business models. Most recently, the purchase of Twitter/X by Elon Musk and the platform's response to the reelection of Donald Trump have seen a relaxation of measures focused on information integrity. X is now commonly regarded as a highly partisan platform where the truthfulness of posts is unregulated. Meta announced in January 2025 that it would close its independent fact-checking service (Kaplan, 2025; Newton, 2025). These trends suggest that political and business interests strongly influence both the circulation of disinformation (intentional false information) and misinformation (unintentionally false information) and the strategies used to address them (Bradshaw, Bailey, & Howard, 2021; Wardle & Derakhshan, 2017).

At the multinational level, societal integrity is more central to policy. The United Nations Education, Scientific and Cultural Organization (UNESCO) helps journalists respond to the challenge of misinformation (Ireton & Posetti, 2018), while the European Union's Democracy Action Plan identifies misinformation as one of its three pillars. It also developed a "Digital Competence Framework" (European Commission, 2020) and initiated the European Digital Media Observatory (EDMO) to combat disinformation, while the Digital Services Act seeks to mitigate disinformation as a societal risk (European Commission, 2022). Such initiatives have fostered a multicountry network of media literacy practitioners across the region, and substantial funding is made available for a range of projects, although this varies by country.

Measures addressed to users are often based on media literacy interventions in contexts where misinformation widely circulates, especially on social media platforms (Aïmeur, Amri, & Brassard, 2023; Ipsos, 2023; World Economic Forum, 2024). At a national level, media literacy has long been recognized as having the potential to equip citizens with the skills they need to engage with information, including identifying dis- and misinformation. France founded the Centre for Media and Information Literacy (CLÉMI, Centre pour l'Éducation aux Médias et à l'Information) in the early 1980s and incorporated media literacy into compulsory primary and secondary teaching (Adriaens-Allemand, 2021). In the UK, the communications regulator Ofcom was charged with promoting media literacy in the Communications Act 2003, although its efforts fluctuated with the political climate (Lunt & Livingstone, 2012). In 2021, the Canadian government announced that it would support 50 media literacy projects to tackle misinformation (Government of Canada, 2021), while the Australian Electoral Commission started a social media advertising campaign in 2019 encouraging citizens to "stop and consider" whether the news content they saw was true (Australian Electoral Commission, 2019).

Nonetheless, the reach of media literacy interventions is limited. Most research has focused on countries in the Global North, where investment in media literacy is often significant, but the findings are largely consistent and suggest a wider trend. A 2021 11-country survey found that only 9% of Europeans aged 16–70 had received training in using online tools to combat misinformation, although 58% were interested in such training (Archer, 2021). In the United States, a 2020 report found that media literacy education in K–12 schools is uneven and insufficient, partly because such education is rarely mandated in legislation, although legislators show growing interest (Media Literacy Now, 2020, 2021). In the United Kingdom, a recent media literacy stakeholder consultation suggested that the limited reach of media literacy interventions, within and beyond formal education and among vulnerable groups, is a recognized problem across the sector (Edwards, Obia, Goodman, & Spasenoska, 2023). Evaluating media literacy's long-term and societal effects is an ongoing challenge, although it is fundamental to support skills and training.

Significant investment in media literacy continues, but the rapidly changing context raises important questions about what is being delivered and how effective it might be, given emerging challenges for media users. The advent of generative AI tools—and the high quality of content they produce—makes disinformation more difficult to detect and critically assess. The increasing dominance of video- and image-based content, including ephemeral content that disappears after a short time, requires multimedia expertise to review and analyze, complicating the tracking of disinformation and misinformation over time.

Increasingly polarized national politics and a geopolitical environment characterized by major and high-profile conflict also mean that mis- and disinformation is instrumentalized and normalized by those who are trying to assert their dominance, making it more difficult to discern factual truth, fair argument, and intentionally misleading information. Finally, the media habits of users themselves are shifting so that media use is often spread across multiple platforms, often simultaneously, and platforms are overtaking legacy news organizations as the most used news sources (Newman, Fletcher, Robertson, Eddy, & Nielsen, 2024). All these issues raise challenges for practitioners and policy makers about the delivery of media literacy and evaluating its effects on user behavior and its societal impact. In this article, we engage with these challenges by exploring what previous research on media literacy and misinformation reveals about how they might be addressed and how a media literacy research agenda should evolve to accommodate these changes.

Research on media literacy and misinformation tends to be siloed in single disciplines (e.g., psychology, communication, information science, education; see Gwiaździński et al., 2023), making it difficult to track (Guess & Lyons, 2020; Tiemann, Melzer, & Steffgen, 2021) or to learn from comparison of interventions and their outcomes (Chapman & Oermann, 2020; Huguet, Kavanagh, Baker, & Blumenthal, 2019). This article conducts a rapid evidence assessment (REA) to identify and integrate insights from research across disciplines about media literacy and misinformation. The research questions guiding the REA were intentionally broad to capture as much information as possible:

RQ1: What research exists that integrates ideas from misinformation and media literacy?

RQ2: What does this research say about the effectiveness of media literacy against misinformation on social media platforms?

Methodology

The REA was commissioned by Ofcom, the UK communications regulator with enhanced responsibility for online safety as of 2023 (for the original report, see Edwards et al., 2021). The research was conducted in 2022 and reflected the policy priorities and technology landscape at the time—a focus on mitigating the harms caused by online dis- and misinformation, particularly in relation to individual and collective health (prompted by the COVID-19 pandemic) and democratic integrity. Therefore, the research included in the REA does not reflect more recent developments, such as the role of generative AI or the latest policy interventions and actions by platforms. Yet, we suggest that these highly significant changes in the current environment make it more urgent to understand what research can already tell us about the connections between media literacy and misinformation across disciplines, with the potential to inform future research strategies.

The literature search was conducted following the preferred reporting items for systematic reviews and meta-analyses protocol (PRISMA-P) guidelines (Moher et al., 2015; Figure 1).

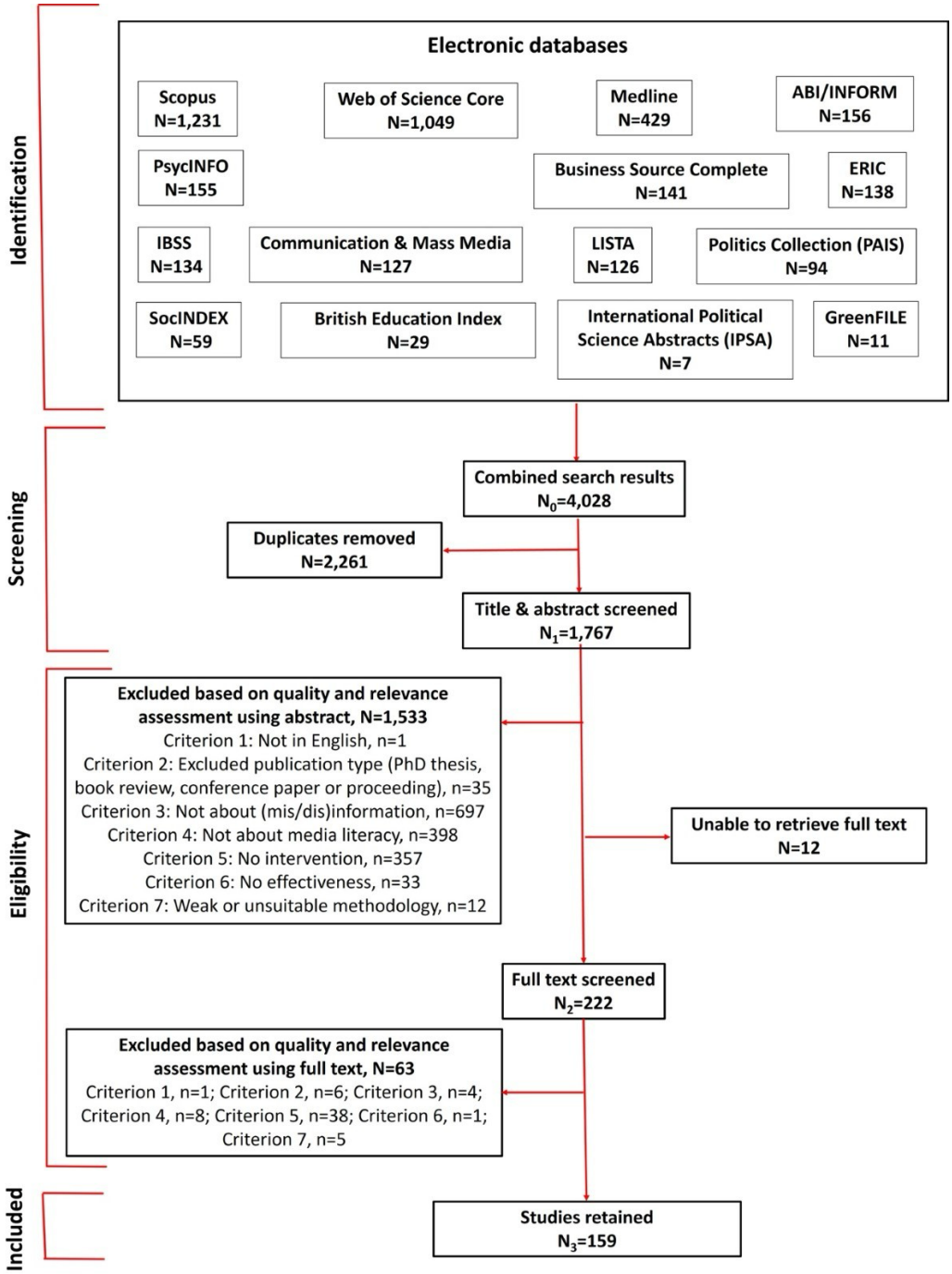

Figure 1. Stages of the literature search and process of determining inclusion.

Sixteen databases were searched using three groups of concepts relating to misinformation, media literacy, and social media platforms (see Appendices 1 and 2[1]). To be selected for analysis, studies had to feature at least one term from each search concept area in their title, abstract, or keywords. Three additional search criteria were used: studies published from 2011 up to the end of data collection in March 2021 (either online first or in a completed journal issue), in English, and peer-reviewed. The search was not restricted to particular countries. However, the corpus it produced was dominated by scholarship about countries in the Global North (we discuss this absence of global majority countries as a limitation in our conclusion).

Duplicate items were removed, leaving 1,767 unique results. The studies were imported to the specialist application for systematic reviews, Rayyan. All studies (N1) underwent an initial screening based on title and abstract (see Figure 1). A seven-step exclusion process was used to evaluate relevance, applying criteria ordered from the simplest to the most complex (see Figure 1 and Appendix 3). The first four criteria concerned the search parameters: the studies should be in English (criterion 1), peer-reviewed (criterion 2), and about mis/disinformation and media literacy (criteria 3 and 4). To identify evidence about the effectiveness of media literacy interventions for combating misinformation, three additional criteria were included: the studies should include an intervention (criterion 5), evaluate its effectiveness (criterion 6), and include a structured methodology (criterion 7). We adopted a cautious approach to exclusion, taking a broad approach to definitions of literacy and interventions (see Appendix 3) to ensure no relevant articles were excluded.

The screening process was tested on 20 studies, which were blind-coded by five members of the project team. Each researcher noted how they applied the codes, including any exceptions or difficulties, before meeting to compare results. The exclusion criteria were then refined for consistency. The first screening of title and abstract resulted in the exclusion of 1,533 studies, reflecting the tendency in many publications to touch on core concepts (criteria 3 and 4) without a focused analysis of an intervention or its effectiveness (criteria 5 and 6). The full text was unavailable for 12 additional studies, so these were excluded. The remaining 222 studies were screened using the full text, applying the same criteria. A further 63 were excluded at this stage, primarily based on criteria 5–7. The remaining 159 addressed aspects of both misinformation and/or media literacy on social media platforms—although not always deeply engaging with the two concepts. Each also included an intervention and an assessment of its effectiveness. These items were grouped according to their focus:

- Misinformation interventions: Sixty-one studies primarily concerned with the effectiveness of technical interventions to counter misinformation on social media platforms (e.g., flagging, fact-checking tools), where the application reflected some principles of media literacy (e.g., critical thinking) but did not formally draw on media literacy research or practice.

- Media literacy practices: Sixty-two studies primarily concerned with media literacy practices directly or indirectly related to countering misinformation on social media platforms (e.g., educational interventions).

[1] All appendices can be accessed via this link: https://eprints.lse.ac.uk/124341/

- Integrative approaches: Thirty-six studies focused on research relating to and potentially offering a conceptual integration of both misinformation and media literacy on social media platforms, explicitly or implicitly (e.g., by examining skills relevant to media literacy interventions applied to tackling misinformation).

All studies were read in full and double-blind-coded using a bespoke framework. Coders noted definitions of media literacy and misinformation on social media platforms, evidence about their relationship (where available), information about interventions (description, findings, measures of effectiveness), and study details (location, methods, sample, age; see Appendix 4). The studies represented a mix of qualitative and quantitative approaches, and the scale and methodological quality varied; this was noted in the coding and through additional researcher observations about different articles. The findings and discussion below note the relevant limitations of the entire corpus. Because of the variability across studies, numerical values could not be assigned to each code; instead, detailed notes were taken for each category to identify differences and similarities.

Findings

Studies with an integrative approach, although relatively few, are most helpful for learning from previous work. Their main purpose was to identify aspects of media literacy that improve awareness of and resilience to misinformation, emphasizing skills and capabilities found in media literacy curricula. Below, we summarize the insights from this corpus.

Digital and Information Literacy Training Supports Critical Engagement With Information, but Results Can Vary

A few studies show that instruction in digital and information literacy correlates with the ability to identify misinformation or engage critically with information. Training on critical evaluation of online texts improved search and evaluation strategies among Italian school students aged 14–15, compared with a similar group who received no training (Mason, Junyent, & Tornatora, 2014). Similarly, pre- and postscores from an experiment conducted with 68 U.S. students aged 16–17 showed that teaching strategies for evaluating digital content resulted in significant improvements in lateral reading, evidence evaluation, and claim research (McGrew, 2020). A Ukrainian experiment involving 412 participants found that those trained in literacy and identifying misinformation techniques were more skeptical of news regardless of its veracity after the training and up to a year after participation, compared with the control group (Murrock, Amulya, Druckman, & Liubyva, 2018). In a vocational context, 113 U.S. psychology students trained in myth debunking demonstrated more accurate knowledge than a control group that received a more general study skills course (R. LaCaille, L. LaCaille, Damsgard, & Maslowski, 2019).

There are also some unexpected results. One Spanish study used a pre- and postsurvey to establish the effectiveness of workshop training for 55 18–29-year-olds to identify bots on Twitter. After the training, participants used a wider range of criteria to identify bots but were slightly less successful. Errors increased with the complexity of the identifying criteria, suggesting that this complexity may have increased uncertainty about participants' ability to identify bots (Calvo, Cano-Orón, & Abengozar, 2020). Additionally,

while media literacy training may affect participants' ability to assess content, it might not affect their information diet. This was the finding of a small study of a three-day health information literacy workshop with 14 Austrian schoolchildren. Pre- and postmeasures showed that participants rated their health information literacy skills more accurately after the workshop, with those who had previously rated their skills highly becoming more realistic. Participants also better understood how to find online information at the end of the workshop. Nonetheless, they still did not always choose to use high-quality sources, with only 10% of the websites they opened rated as good or fair by two independent experts (Maitz et al., 2020). Leeder (2019) found that critical evaluation skills supported identifying fake news among 63 19–24-year-olds. However, on average, fake news stories were still regarded as more believable and trustworthy than real news by participants, and willingness to share was unrelated to the story's trustworthiness or accurate identification as true or false. These studies offer food for thought about the complex relationship between media literacy, resilience to misinformation, and attitudes and behaviors toward misinformation. However, they were conducted with small samples, so further investigation is needed.

Incorporating Reflexivity in Interventions Can Support Resilience to Misinformation

Some studies suggest that interventions promoting reflexive engagement with learning and decision making prompted better resilience to misinformation, particularly credibility verification skills. Activating critical reflection was one approach: Tsipursky, Votta, and Roose (2018) found that 21 U.S. citizens, politicians, and journalists were less likely to share poor-quality information with Facebook contacts after signing a Pro-Truth Pledge. Similarly, Tseng (2018) found a small sample of 14 16–18-year-olds, prompted to critically reflect after they read a blog, were also more likely to find flaws in the argument. In a larger combined survey and online experiment with 2042 German participants, Kirchner and Reuter (2020) found that various warnings on Facebook content reduced the perceived accuracy of fake news headlines, with the most effective warnings including an explanation of their purpose.

Gamification Techniques Can Support Identification of Misinformation

A few studies analyzed the effect of gamification techniques on resilience to misinformation. Two focused on the game Bad News (DROG, 2025), where players are "inoculated" from fake news by learning to identify misinformation techniques. Roozenbeek and Linden (2020) conducted an online experiment with an international panel of 2,159 18–21-year-olds. They found that players were better able to identify misinformation using the techniques and were not more skeptical of real news because of playing the game. The effects were most beneficial for players more vulnerable to misinformation. Using a smaller sample of 196 18–24-year-olds, an online experiment by Basol, Roozenbeek, and van der Linden (2020) also found that players were more able to identify fake news and, if their assessments were accurate, more confident about their ability to judge misinformation compared with the control group who had not played. Other results are mixed: an online experiment with 210 Korean 20–29-year-olds to evaluate the effects of an educational game, Trust Me! (designed to enhance media literacy skills) as compared with an online quiz, found that playing Trust Me! improved critical analysis of information but did not affect skepticism toward online information (Yang et al., 2021). Katsaounidou, Vrysis, Kotsakis, Dimoulas, and Veglis (2019) tested the value of gamification by creating a game, MAthE, designed to improve players' misinformation detection

strategies. Self-evaluations of 111 players suggested they were enthusiastic about the approach and felt the game improved their verification abilities, but the study did not test this independently.

Preexisting Media Literacy Can Reduce Vulnerability to Misinformation

Research also identified factors related to the user or media environment that affect the relationship between media literacy and engagement with misinformation. An online survey of 788 U.S. adults found that preexisting news literacy, operationalized as knowledge of media industries, systems, and effects, negatively correlated with intention to post news and political content on social media and positively correlated with skepticism toward social media information (Vraga & Tully, 2021). An online survey of 770 U.S. adults showed that knowledge of media industry processes and practices improved recognition of misinformation and native advertising and supported abilities to counterargue false claims (Amazeen & Bucy, 2019). Craft, Ashey, and Maksl's (2017) survey of 397 U.S. adults found that more knowledge about news industries reduced the likelihood of believing conspiracy theories. In contrast, Jones-Jang, Mortensen, and Liu (2021) conducted an online survey of 1299 U.S. adults to compare the effects of media, digital, news, and information literacies on identifying fake news. They found only information literacy significantly affected the ability to identify fake news stories. In a smaller study of 40 Lithuanian university students aged 19–20, Šuminas and Jastramskis (2020) found that journalism students could identify fake and trustworthy news more accurately than publishing and advertising students. Finally, two studies tested the effect of reinforcing social norms about news literacy on reception of social media content but found only marginal effects on participants' credibility ratings of news-based tweets (Tully, Vraga, & Bode, 2020) and on expert credibility evaluations (Vraga, Bode, & Tully, 2022). The authors suggest that when attention is scarce, activating generalized beliefs and values may be less effective than prompting more robust, context-specific critical thinking.

While broader approaches to media literacy in studies addressing misinformation were rare, this group of studies highlights the value of critical thinking, critical approaches to source credibility, encouraging reflexivity, and using gamification in strategies for tackling misinformation. Few studies articulated a specific definition of media literacy, and most tended to experiment with skills more aligned with information literacy or digital media literacy, falling short of testing the full potential of media literacy curricula. Overall, while the more optimistic findings suggest that media literacy, in various forms, could help tackle misinformation, the small body of work suggests there is more to explore.

Findings Indicate Complex Empirical Landscapes, but Academic Specialisms Prevent Knowledge-Sharing

The other two groups of publications—focused on misinformation interventions and media literacy practices—did not feature an integrative approach. However, they provide valuable information that suggests directions for future research. Both groups featured diverse definitions of core concepts, reflecting not only the complexity of misinformation and media literacy (Potter, 2022; Tandoc, Lim, & Ling, 2018) but also the siloed nature of research. For example, in misinformation studies, the term was operationalized as problematic content (e.g., rumors or native advertising; e.g., Pal, Chua, & Hoe-Lian Goh, 2019; Paynter et al., 2019), "false information" (Yang et al., 2021), or lying (Tsipursky et al., 2018), or with reference to intentionality (Amazeen & Bucy, 2019; Tandoc et al., 2018) or context, such as vaccine or climate

misinformation (Friesem, 2019; Scharrer, Stadtler, & Bromme, 2019; Tseng, 2018). Similarly, research focused on media literacy used multiple definitions and approaches. These ranged from critical thinking (e.g., Bryan, 2018; Wells, 2018) to media competences (e.g., Frolova Ryabova & Rogach, 2018; Sinatra & Lombardi, 2020; Sivek, 2018), digital literacy (e.g., Kozyreva, Lewandowsky, & Hertwig, 2020; Valtonen, Tedre, Mäkitalo, & Vartiainen, 2019), empowerment, and civic engagement (e.g., Azlan, 2019; Jain & Bickham, 2014; Middaugh, 2018).

The range of definitions reflects how misinformation and media literacy have become more multifaceted as the complexity of the media and information environment has increased, including fragmentation of the media ecosystem (Baildon & Damico, 2011; Walker, 2019), manipulative choice architectures (Kozyreva et al., 2020; Valtonen et al., 2019), and declining institutional trust in the contemporary political environment (Bonney, 2018). These features—and newer generative AI technologies—allow misinformation to circulate more widely and rapidly in different forms but also make it more difficult to trace and identify (Schmitt, Rieger, Ernst, & Roth, 2018). The pattern in these studies suggests that research has responded with a proliferation of definitions and operationalizations, producing informative studies but with limited connection between approaches.

The research in the misinformation-focused studies is illustrative of this disconnection. It was heavily dominated by psychological approaches, without any engagement with media literacy principles such as critical thinking, reflexivity, or knowledge of media industries. For example, the studies included various approaches to testing interventions: evaluating System 1 (rapid and intuitive) and System 2 (conscious and logical) thinking (Kahneman, 2011); identifying backfire effects, when attempts to correct misinformation lead to incorrect beliefs becoming more widespread or held more strongly; testing confirmation bias, when users have a propensity to believe content that is in line with prior beliefs (Kim, Moravec, & Dennis, 2019; Moravec, Minas, & Dennis, 2018) or to accept new information without changing underlying opinions (Porter, Wood, & Bahador, 2019); evaluating the role of emotion in responses to misinformation (Sivek, 2018) and corrections (van der Meer & Jin, 2019); and testing forms of inoculation, where preexisting knowledge can limit the effects of exposure to specific media content (McGuire, 1961, 1986). The misinformation solutions being tested tended to be technical or content-based, including the presence and type of fact-checks (such as Clayton et al., 2020; Mena, 2020; Nekmat, 2020); the type of content (visual or textual; see Hameleers, van der Meer, & Dobber, 2022; Mehta & Guzmán, 2018; Oeldorf-Hirsch, Schmierbach, Appelman, & Boyle, 2020); sources of news (Pennycook & Rand, 2019); and style of correction (Vraga, Kim, & Cook, 2019; Vraga, Kim, Cook, & Bode, 2020; Vraga et al., 2022).

The findings from this group suggest that existing knowledge or beliefs, information source, and information format all influence the effectiveness of fact-checking and refutations. Interventions appear more successful when they enable users to process information more consciously and slowly. However, they had little to contribute about integrating media literacy into strategies for resisting misinformation.

Discussion

The need to find ways of tackling misinformation is more urgent than ever, given the challenges to media and information integrity that operate on a global scale. The REA findings offer

important information that we can build on to develop new research agendas for meeting these challenges. Certainly, the research we identified was limited in quantity and mostly defined by a focus on dis- and misinformation as content rather than structure or context. Many studies focused on one or two media literacy-related variables rather than adopting multidimensional approaches. Furthermore, the literature was dominated by high-income countries in the Global North, predates the widespread availability of generative AI and, in some cases, the predominance of multimedia content. Nonetheless, the REA provides insights into how different media literacy competencies might be connected to resilience against dis- and misinformation. We conclude by considering how the findings can inform the search for better ways for media literacy to tackle dis- and misinformation in the changing contemporary environment.

Two approaches to addressing the complexity of media literacy and misinformation in the current environment emerge from the REA. First, psychological approaches that isolate and measure behavioral variables. These emphasize the institutional, social, and political-economic dimensions of the problem (e.g., political orientation, educational level, previous knowledge of the media) and focus on outcomes for individuals who might be deceived by misinformation. Second, studies that address more general media literacy abilities. These suggest that having information literacy, a broad understanding of how the media works, and supporting users' reflexivity about information they encounter may build resilience to misinformation. Each approach addresses different dimensions of media literacy—whether specific behaviors or a general orientation to information. However, a broad approach to media literacy would incorporate both outcomes, and so we suggest that these approaches would be more valuable if combined, for example, in multimethod studies linking users' overall orientation and abilities with their specific behaviors.

The findings clarify that outcomes of media literacy interventions will vary significantly over time. For example, while Murrock et al. (2018) found effects from information literacy training that lasted a year, Paynter et al. (2019) found the effects of myth-debunking training on Australian professionals supporting children with autism were not sustained six weeks later. Other studies found that the consequences of instruction can be complex and may lead to greater skepticism toward information in general. Many findings concerned specific user groups (e.g., school students following a course or individuals with specialist training, such as health misinformation), which may limit generalizability. However, the growing complexity of media environments, the normalization of dis- and misinformation, and the expanding range of news sources suggest that this variability will certainly persist and potentially increase. If that is the case, then trying to understand the value of media literacy by predicting specific effects might be a lost cause. Instead, a reorientation toward understanding the main vectors through which variability emerges might be more productive. Studies could address the impact of specific aspects of the environment, such as the frequency and nature of encounters with generative AI and/or multimedia content, use of different platforms with different algorithmic infrastructures, awareness of new regulatory expectations and platform responses, as well as variables that are already being investigated, such as availability of media literacy education, political orientation, and educational level.

The gaps and limitations in research identified through the REA are also informative, particularly relating to data, methodology, and sampling.

Data and Methodology

Many of the studies in the REA adopted methodologies that reflected an important constraint in studying the effects of media literacy and misinformation: the lack of access to high-quality data about people's behavior online, particularly over prolonged periods. Most online data are proprietary, and platforms do not make data readily accessible for research. Furthermore, the underpinning technologies of platforms are often opaque or inaccessible, although some researchers are finding innovative solutions (e.g., Banaji & Bhat, 2022).

Better access to data and information about platform architectures would help researchers understand how platforms guide users' choices and experiences, change behavior, or facilitate mis- and disinformation. This, in turn, could help pinpoint how media literacy might be targeted (e.g., Kaiser, Vaccari, & Chadwick, 2022). It would also help to address some of the limitations of current research about the effects of interventions, including the difficulty of evaluating their impact on behavior over time, using uncontrolled or self-reported data without controlling for other variables, or replacing evaluations of actual behavior with analyses of behavioral intention, self-perceptions, or laboratory-based experiments.

The findings suggest that opportunities exist for a much broader methodological palette to be used, including observation and online ethnographies, as well as participant-centered techniques such as diaries and interviews. This would enhance our understanding of user engagement and decision making in contexts closer to real-life environments. It would offer a window into the impact of specific technologies, such as generative AI content, multimedia content, or different algorithmic systems, on participants' ability to reflect on and critically evaluate dis- and misinformation. Continued use of quantitative tools and more longitudinal research would also allow researchers to explore more standardized evaluations of media literacy strategies that could be applied beyond a single context.

Sampling

The variability of media literacy effects means that clarity about sampling is particularly important to ensure that results are understood in context and overgeneralization is avoided. The REA findings illustrate the need for further exploration in this area, particularly about the clarity of sample parameters and result limitations. For example, contextual information about the participants and interventions tested was often limited, while important factors such as motivation to engage in training, education, or a different kind of intervention (e.g., a game), interest or preexisting knowledge about the topic of misinformation, and familiarity with the technique being tested (e.g., fact-checking) were often not specified. Most studies were also located in the United States and tended to rely on school- or university-age participants but did not always explain the limitations of their results. These issues made it difficult to infer the robustness of any correlation between an intervention and behavioral change.

Future research could pay particular attention to specific aspects of sampling. Most fundamentally, clarity about who and what is being investigated and the variables that affect the interpretation of the results is essential. Second, increasing research beyond more accessible sites and populations is crucial, particularly given that dis- and misinformation are global challenges rather than only national issues. As noted above,

our REA sample was dominated by high-income countries/countries in the Global North, even though our approach should have identified relevant articles from other countries, suggesting a lack of research in these locations during the study period.

Recent research suggests reasons to be cautiously optimistic about the geographical range of research on media literacy responses to misinformation. For example, a recent interview-based study with Kenyan journalists, fact-checkers, and policy makers revealed significant enthusiasm for fact-checking and media literacy to fight disinformation (Matanji, Tully, Mudavadi, Diop, & Madrid-Morales, 2024), while Aljalabneh (2024) identified a range of visual media literacy strategies used by educators in Jordan to combat visual fake news. Other studies have examined the intersection of media literacy and misinformation. For example, an experimental study with 187 students in Ghana by Dame Adjin-Tettey (2022) found that media and information literacy (MIL) training improved participants' ability to determine the authenticity of a story and reduced the likelihood of sharing inaccurate stories. In Nigeria, Wei, Gong, Xu, Eeza Zainal Abidin, and Apuke's (2023) survey-based study of 1,068 social media users found that social media literacy weakened the relationship between the four predictive factors and fake news sharing. Results of an experimental study of Malaysian social media users found that participants who spent at least two minutes on a media literacy education website were significantly less likely to share both fake and genuine news, although it did not improve the accuracy of identifying fake news (Ford, Yankoski, Facciani, & Weninger, 2023). Results of a quasiexperimental study with 204 Egyptian university students and staff suggested that media literacy lectures increased fake news detection rates and reduced the likelihood of fake news sharing (El Mokadem, 2023). In a rare field experiment held during the 2020 mayoral elections in São Paolo, Brazil, Batista Pereira, Bueno, Nunes, and Pavão (2024) found that preemptive training on identifying fake news reduced both rumor acceptance and belief in fake news among participants. These publications suggest that one of the gaps identified in our sample—the heavy focus on Global North countries in research—is already starting to close.

Aside from the need for greater inclusivity of marginalized countries, cross-national research has shown how different cultural, social, political, and economic conditions change user attitudes and behavior, but also provide crucial learning across different country contexts (Helsper, 2016; Mascheroni, 2023; Stoilova & Livingstone, 2024). Research that has focused on both younger, school-age populations and older citizens also shows how media literacy education can be beneficial, particularly when tailored to user needs (Abades-Barclay & Banaji, 2024; Haddon et al., 2020; Ofcom, 2024); more investigations of these audiences would support the implementation of programs among vulnerable and currently neglected audiences for media literacy.

Increasingly polarized national and international political debates and conflicts also raise new questions for sampling. Polarization tends to produce more extreme speech and content, which leaves some groups more affected by the negative effects of dis- and misinformation (e.g., racialized, gendered, differently abled groups; Banaji & Bhat, 2022). Such groups have been largely neglected by current research, but their views on the kinds of media literacy needed to resist discrimination and stigmatization, and their experiences of using media literacy skills to enact that resistance, could be immensely beneficial to the field.

Conclusion: Working With Complexity, Rather Than Against It

The period covered by the REA encompasses a time when the problem of dis- and misinformation online was emerging at scale. While the studies included in the REA are valuable in their specific contexts, their cumulative insights do not yet enable us to address the evolving landscape of dis- and misinformation. Even if certain measures to change behavior appear effective, applying them at scale would be an enormous task, with little clarity about their potential success. The complexity of both media literacy and dis/misinformation also suggests that multiple measures would need to be implemented simultaneously, if a game of misinformation "whack-a-mole" is to be avoided.

Here, our final suggestion is that working with the complexity of the environment, rather than against it, might be a more productive route for research. Specifically, we suggest that increasing the amount of research operationalizing media literacy in its broad sense could be helpful. Buckingham (2015) advocates a definition of media literacy as "a broader form of education about media, that is not restricted to mechanical skills or narrow forms of functional competence" (p. 223), including representation, language, production, and audience. Conducting research on media literacy interventions that adopt this approach, which is as much about understanding context as it is about media techniques and practices, would provide more information about whether and how users might be empowered by understanding the media industries and their sociocultural, economic, and political contexts and by having the ability to apply media literacy skills and techniques in various ways, including media creation itself. The focus here is on user agency, not just in terms of their cognitive reactions to media (as conceptualized in psychological approaches to research), but also in terms of the creative agency of their responses over time, on a range of platforms, using different technologies, and across various environments.

Adopting this more expansive approach to media literacy that focuses more specifically on users' choices and experiences, rather than on media content or technology, would more accurately situate their responses to dis- and misinformation in the wider institutional, social, political, economic, and cultural dynamics they experience, wherein users themselves make complex and sometimes contradictory decisions about when and how to engage with different types of media and information. Reframing user engagement as more than a cognitive process would also open the door to assessing the value of media literacy for supporting the broader goal of democratic engagement and participation, including societal resilience to misinformation.

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