

From Digital Competence to Media Literacy: Addressing Information Pollution in the Age of Social Media in Wales

Shang Zhao

1. Introduction

1.1 Background

In the era of widespread digital media, global citizens—including those in Wales—increasingly rely on social media as a primary channel for accessing, sharing, and engaging with information. However, since the large-scale emergence of social media on public and political platforms around 2012, the rapid dissemination of false and misleading information—ranging from "fake news" to deepfakes — has significantly undermined both the integrity of information and the stability of democratic institutions (Frau-Meigs, 2022). As Nygren et al. (2022) observe, the current media ecosystem has become increasingly polluted by various avatars of fake news. Wardle and Derakhshan (2017) further argue that the contemporary information landscape is marked by global information pollution, characterized not only by its complex underlying motivations but also by the alarming speed at which such content spreads within trusted social networks.

In response to the growing challenge of information pollution, international organizations such as UNESCO and the European Union, as well as national governments, have actively adopted education policies and developed corresponding curricular frameworks. These initiatives go beyond the teaching of basic digital skills, placing greater emphasis on the integrated

development of media literacy, digital competence, and information literacy in order to foster responsible and critically engaged digital citizens. In Wales, the introduction of the Digital Competence Framework (DCF) aligns with this global trend, aiming to equip learners with the critical thinking skills necessary to navigate and respond effectively to the complex challenges posed by the digital information environment. The ultimate goal is to support both individual and societal sustainable development in a media-saturated world. However, questions remain regarding the practical implementation of the DCF — specifically, whether it sufficiently addresses the full range of competencies required to combat information pollution in real-world educational settings.

From the perspective of the researcher's positionality, as a doctoral student in education currently studying in Wales, I have a strong academic and professional interest in media education within the Welsh context. Media literacy has also become a growing area of focus for the Welsh Government in recent years, which further enhances the relevance and value of this research topic. Additionally, my background in China enables me to adopt a cross-cultural perspective and draw upon my own experiences with media education to reflect critically on the similarities and differences between national approaches. This comparative insight allows for a deeper understanding of the challenges facing media literacy policy in Wales today and provides a foundation for offering informed and context-sensitive recommendations.

While extensive research has explored digital skills and online safety, a significant gap persists in comprehending the integrated development of digital competence and media literacy within the Welsh context, particularly regarding social media-driven information pollution. Additionally, the existing literature predominantly centers on either youth or adult learners, frequently overlooking the interplay between policy, education, and social factors that

influence citizens' critical engagement with digital content.

1.2 Key search terms and process of review

To explore this issue, I conducted a structured literature review using a range of academic databases, including EBSCOhost, JSTOR, ERIC, and Taylor & Francis Online, as well as grey literature sources such as Welsh Government documents, and policy strategy papers. The following keywords were central to the search strategy: “media literacy,” “digital competence,” “information pollution,” “social media,” “Wales,” “critical thinking,” and “media education.” Boolean operators (e.g., AND, OR) and snowballing techniques were employed to expand the scope and depth of relevant sources.

In the initial conceptualization phase, the plan was to use Finland and Wales as contrasting case studies to explore policy strategies and implementation outcomes in media literacy and digital competence education across different countries. Finland is often regarded as a "model for media literacy education" (Salomaa et al. , 2019), due to its high rankings in international educational assessments, its systematic information literacy curriculum, and its interdisciplinary teaching approach. The original intention of this comparison was to highlight the potential and gaps in educational practices in Wales. However, as the literature review progressed, it became evident that Finland has an extensive body of mature research and a clear policy framework, whereas research on media literacy in Wales is still in its developmental stages, with limited empirical studies and comprehensive evaluations available. To critically and constructively address this gap, the focus of this study has been shifted to concentrate on local educational policies, social contexts, and implementation challenges in Wales, using Finland only as a comparative background or reference model. This adjustment enhances the depth and focus of the research and aligns more closely with the aim of

exploring the relationship between information pollution and educational intervention mechanisms.

The review primarily encompasses peer-reviewed journal articles published between 2010 and 2025, as well as key policy documents that shape current educational practices in Wales. Although several studies explore the role of media literacy in combating misinformation, only a limited number specifically examine how the Welsh Digital Competence Framework (DCF) supports this objective in practice. Likewise, while the societal impacts of information pollution have been investigated within broader UK or international contexts, a synthesis specific to Wales remains underdeveloped. The challenges in identifying region-specific empirical studies underscore a significant gap in the literature that this review aims to address.

Three main themes were identified during the review process: (1) the evolution and definitions of media literacy and digital competence; (2) the structure and aims of the Welsh Digital Competence Framework; and (3) the societal consequences of information pollution, particularly on civic trust and political participation, and how education can act as a mitigative force.

1.3 Research aims and draft research questions

This literature review aims to explore how enhancing digital competence and media literacy among citizens in Wales can help them effectively identify, filter, and counteract information pollution on social media platforms. It also seeks to examine the broader societal impacts of information pollution in Wales and the potential of educational initiatives to mitigate these effects.

The study is guided by the following research questions:

- 1. How can enhancing digital competence and media literacy among citizens in Wales empower them to effectively identify, filter, and**

counteract the challenges posed by information pollution on social media?

- 2. What are the impacts of information pollution on societal behavior, political engagement, and public trust in Wales, and to what extent can improvements in digital competence and media literacy mitigate these effects?**

1.4 Summary

In summary, this introduction has outlined the background, motivation, and strategy behind this literature review. By focusing on the Welsh educational context and leveraging an international comparative perspective, this study aims to bridge existing gaps in the research and offer new insights into the critical intersection of education, media, and society in the age of information pollution.

2. Literature Review

2.1 Introduction

This chapter aims to examine current academic and policy perspectives on media literacy and digital competence in the context of widespread information pollution—a phenomenon significantly intensified by the rapid development of digital media technologies. With a particular focus on the Welsh context, this review explores how media literacy and digital competence can equip citizens to navigate complex digital environments and respond critically to the spread of misinformation and disinformation on social media platforms. In addition, the chapter considers the broader societal harms posed by information pollution, including its impact on social behaviour, political engagement, and public trust. It also investigates the potential of

media education—through the enhancement of media literacy and digital competence—as a mitigative tool to counter these negative effects.

To achieve these aims, the literature review is structured into four sections. It begins by introducing and defining the key concepts of media literacy, digital competence (with a focus on the Welsh Digital Competence Framework), and information pollution. The review then discusses three main themes:

First, how media literacy and digital competence help individuals recognise and deal with false or misleading information.

Second, the social impacts of information pollution, including effects on behaviour, political engagement, and public trust.

Third, how Welsh education policy, especially the DCF, has responded to these issues and what challenges remain.

These thematic categories build upon the initial patterns identified during the review process (as outlined in Section 1.2), but are further refined to directly address the research questions guiding this study. Through this structure, the chapter aims to synthesise existing knowledge, highlight current gaps in the literature, and provide a solid foundation for the subsequent exploration of educational policy and practice within Wales.

2.2 Key definitions/theories

2.2.1 Media literacy

Media literacy, as a core concept in contemporary education, has gained increasing attention, especially as the public has to cope with a digital environment where information is highly complex and often accompanied by ‘information pollution’. Definitions of media literacy vary somewhat between the academic and policy levels, mainly in terms of their focus on ‘critical

analysis' and 'creative engagement' orientations.

One of the most widely cited definitions comes from UNESCO (2011), which frames media literacy as “the ability to access, analyze, evaluate and create media in a variety of forms,” Its ultimate aim is to produce citizens who are capable of critical engagement and information recognition. This definition argues for citizens' responsible participation in the media ecosystem from the perspectives of both information reception and production.

Also in the academic world, the concept of media literacy has been expanded. Some scholars (e.g., Potter, 2010) focus primarily on the analytical and evaluative components of media literacy, arguing that the ability to critically deconstruct media messages—such as identifying bias, perspective, and misinformation—is key to informed citizenship. Others (e.g., Hobbs, 2011; Livingstone, 2004) argue for a more holistic approach, one that also encompasses the creative and participatory aspects of media production. This includes encouraging learners to become active content creators, capable of expressing their voices ethically in the digital public sphere. At the heart of this disagreement is the question of whether media literacy is merely an 'interpretive skill' or whether it should be expanded to a 'comprehensive competence' that encompasses creativity and digital civic engagement. In the age of social media, each user is both a recipient of information and a distributor of content, a 'dual identity' that makes both critical thinking and creativity a necessary precondition for dealing with information pollution.

The definition adopted in this study considers media literacy as a dynamic ability that encompasses both the ability to critically analyse and evaluate media content and the ability to produce and share media creatively and responsibly. This balanced perspective reflects the complexity of the demands placed on individuals by the contemporary media environment,

particularly in the fight against ‘information pollution’, which requires both the ability to recognise and the sense of rational engagement. It also fits with the aim of Wales and the wider education system to use media literacy not only as a tool to protect against disinformation, but also as an important means of developing an active, critical and responsible digital citizenry.

2.2.2 Digital competence framework (DCF)

The **Digital Competence Framework (DCF)**, introduced in 2016 by the Welsh Government, forms a key part of Wales’s broader educational reform under the new *Curriculum for Wales*. The DCF aims to develop learners into *digitally literate citizens* who can confidently, critically, and safely participate in an increasingly digital society. Rather than treating digital skills as an add-on, the DCF embeds digital competence across all subject areas, making it a cross-curricular responsibility for all educators.

Although the DCF is a locally developed policy tool, it aligns strongly with international frameworks—particularly United Nations Educational, Scientific and Cultural Organization (UNESCO)’s Media and Information Literacy (MIL) model. Both the DCF and MIL emphasize critical thinking, ethical participation, and the empowerment of individuals as active and informed digital citizens. Consequently, the DCF can be understood as a localized and context-specific instantiation of global MIL principles within the Welsh educational system. It not only mirrors global concerns regarding misinformation, digital rights, and media engagement but also transforms these into actionable, curriculum-integrated learning outcomes.

The DCF is organized around four core strands, each representing a fundamental domain of digital citizenship and media literacy:

Citizenship - This component focuses on learners' awareness of their rights and responsibilities in the digital world. It covers issues such as online

behaviour, digital identity and understanding the ethical and social implications of media and technology use.

Interacting and Collaborating - This area emphasises communication, collaboration and the ability to use digital tools effectively and appropriately in different contexts, including education, work and civic life.

Producing - This area of study equips learners to create digital content in a variety of formats (text, visual, audio), supporting both technical skills and fostering creativity. It encourages students to become producers of media, not just consumers, with a focus on accuracy, originality and purpose.

Data and Computational Thinking - Whilst not a core focus of this study, this area helps learners to understand how data is used, interpreted and processed, whilst developing the problem solving and logic-based skills associated with digital literacy.

Thus, DCF is not a single conceptual IT class, but a system of digital and media literacy for the current and future development of society, which not only serves as an educational foundation for the development of 'digital citizenship', but also prepares learners for 'information pollution', and for the development of critical thinking and critical thinking. It is not only the educational foundation for the development of 'digital citizens', but also provides a defence against 'information pollution', and offers the possibility of developing critical thinking and responsibility. Therefore, in this study, the DCF is not only seen as an educational framework, but also as a policy tool that reflects how Wales is attempting to practise media literacy through education in order to respond to the complex digital environment and the challenges it poses.

2.2.3 Information pollution

In recent years, the reliability and integrity of the digital information environment have come under increasing threat. A growing volume of false, misleading, or harmful content is spreading rapidly, particularly on social media platforms. In response to this phenomenon, Wardle and Derakhshan

(2017) introduced the widely adopted concept of information disorder, categorising problematic information into three distinct types:

- Misinformation: false information shared without harmful intent—for example, rumours or outdated content;
- Disinformation: deliberately fabricated and distributed false information intended to mislead or manipulate;
- Malinformation: genuine information that is used maliciously to cause harm, such as doxxing or the non-consensual leaking of private data.

These categories capture many of the concrete threats present in today's digital landscape, including viral hoaxes, targeted propaganda, and online harassment. As such, information disorder has become a common term in academic and policy discourse, especially in relation to democratic integrity, media regulation, and digital governance.

However, while the concept of information disorder is valuable, it is often employed from legal, institutional, or security-oriented perspectives. For the purpose of this study, the term information pollution is preferred. Unlike “disorder,” which implies a breakdown in structure or regulation, “pollution” draws attention to the environmental, accumulative, and long-term nature of the problem. As Floridi (2010) argues, information pollution functions much like environmental pollution—its effects may not be immediately visible, but its persistent presence contaminates the digital ecosystem, gradually eroding individuals' ability to think critically, evaluate content, and make informed decisions.

In the context of social media, information pollution manifests in several key forms:

- Fake News: fabricated stories presented as legitimate journalism;
- Deepfakes: AI-generated audio or video designed to deceive viewers;
- Emotional Manipulation: content intended to provoke outrage, fear, or hostility, often used for political gain or commercial profit.

The nature of information pollution on social platforms is especially concerning: it spreads rapidly, takes diverse forms, and frequently evades traditional gatekeeping and editorial mechanisms. Ordinary users often struggle to assess the accuracy or intent of what they encounter online. Moreover, the harms associated with polluted information are not always immediate but tend to accumulate over time. As Giannetto (2024) notes, “Disinformation and harmful narratives are a threat to democracy and national security.”

Therefore, information pollution is not solely a media or technological issue—it is fundamentally a civic and educational challenge. It disrupts conventional understandings of how knowledge is constructed, validated, and disseminated, particularly among young people growing up immersed in digital environments. In this context, the development of media literacy and digital competence is not just a personal defence mechanism against false information—it is a crucial strategy for building a healthier, more resilient, and democratically vibrant digital public sphere.

2.3 Enhancing Digital Competence and Media Literacy to Address Information Pollution

2.3.1 Introduction to the theme

With the growing problem of information pollution on digital platforms, the public's ability to recognise and respond to false and misleading content has become an important issue that needs to be addressed. Scholars and

policymakers generally agree that media literacy and digital competence are important educational strategies to help individuals identify, screen, and cope with social media information pollution (Livingstone & Bulger, 2014; Mihailidis & Viotty, 2017). Through theoretical analyses, empirical studies, and case studies of educational interventions, this section will explore how these two competencies can assist citizens in coping with information pollution in reality and systematically assess their actual effectiveness and potential limitations.

2.3.2 Critical Capacities: Analysis, Evaluation, and Resistance

Numerous studies emphasize a robust correlation between individuals' media literacy levels and their ability to critically assess online content. According to Potter (2010), media literacy entails a set of cognitive and affective abilities that enable users to interpret messages, identify manipulation, and question credibility. Hobbs (2011) further argues that the ability to analyse media representations and identify ideological bias is fundamental to democratic participation, particularly in an era of algorithm-driven information.

Empirical evidence supports these claims. For example, Guess et al. (2020) conducted large-scale experiments in the U.S. and found that individuals with higher media literacy levels were significantly less likely to believe or share misinformation on social media. Similarly, McDougall et al. (2018) found that media literacy education led to measurable improvements in students' abilities to discern bias, distinguish factual content, and engage in reflective online behaviour. In a comparative study by Horn and Veermans (2019), Finnish students consistently outperformed their U.S. peers in tasks measuring civic online reasoning, suggesting that Finland's education system is more effective in building resilience against disinformation. The study attributes these outcomes to Finland's National Core Curriculum, which embeds media literacy and critical thinking across more than ten subjects, rather than isolating them into standalone lessons. In contrast, the California

Common Core lacks explicit integration of critical thinking or media literacy, highlighting the role of systemic curricular design in shaping students' capacity to evaluate online information critically.

Beyond critical reception, several scholars stress the importance of productive and participatory media skills. Mihailidis & Thevenin (2013) argue that empowering young people to become ethical content creators can help shift their role from passive consumers to active contributors to a healthier media environment. This view aligns with the concept of civic media literacy, which integrates critical analysis with responsible content production (Kahne & Bowyer, 2017). In this sense, digital competence and media literacy are not merely defensive mechanisms but also enablers of civic agency.

However, these skills are not evenly distributed. Livingstone et al. (2017) warn of a growing "literacy gap" where individuals from more advantaged backgrounds tend to receive better media education and are more adept at navigating digital spaces. This creates inequalities in vulnerability to information pollution and challenges the notion that literacy alone is a universal solution.

2.3.3 Debates, Limitations, and Tensions in the Field

While most scholars agree that media literacy and digital competence are essential to addressing information pollution, there is still debate about the most effective educational strategies, the prioritisation of these approaches, and ways to measure their impact.

Some researchers question whether current media literacy education focuses too heavily on individual responsibility, rather than addressing structural issues such as platform design, algorithmic bias, and the political economy of

digital media (boyd, 2017; Fuchs, 2014). For instance, Bulger and Davison (2018) argue that media literacy efforts often lack integration with systemic reform and overemphasise “teaching users to fix the problem themselves.”

Others raise concerns about the effectiveness of media literacy interventions. A meta-analysis by Jeong, Cho, and Hwang (2012) found that while media literacy education can improve knowledge and critical thinking, its effects on behavioural outcomes—such as resisting or not sharing misinformation—are often small to moderate. This suggests a need for multi-level interventions that combine literacy efforts with platform regulation and community-based digital resilience.

Moreover, scholars diverge on whether digital competence and media literacy should be taught as separate domains. Some, like Buckingham (2013), advocate for media education to be rooted in cultural studies and not diluted by technical training, while others, including Rheingold (2012), promote hybrid models that integrate creativity, technical fluency, and ethical awareness.

2.3.4 Implications for my study

The literature shows that improving media literacy and digital competences is indeed a key path to help citizens cope with information pollution. However, it is not enough to write these competencies into a curriculum framework; attention must also be paid to their concrete implementation in the teaching and learning site, the adequacy of teacher training, and whether learners have truly mastered the dimensions of criticality and creativity.

Therefore, this study will not only assess whether the Digital Competency Framework (DCF) for Wales embodies the principles of media literacy at the policy level, but will also explore the real-life dilemmas and opportunities in its implementation. In particular, it will examine teachers' pedagogical confidence, resource support, and whether pupils are acquiring

cross-curricular, “contaminating” competencies in the classroom.

2.4 The Impacts of Information Pollution on Social Behaviour, Political Engagement, and Public Trust

2.4.1 Introduction to the Theme

The escalating issue of information pollution on social media platforms not only undermines individuals' ability to assess the authenticity of information but also jeopardizes broader patterns of social behavior, political engagement, and public confidence in institutions. While there has been a large body of research exploring how disinformation affects public perceptions and voting behaviour in the digital age, newer studies are beginning to reveal its deeper impact on civic sentiment, community relations and social cohesion (Tucker et al., 2018; Freelon & Wells, 2020). This section will focus on analysing the impact of information pollution on social behaviour, political participation and public trust, with a particular focus on the English and Welsh contexts, as well as exploring the role that education may play in addressing these challenges.

2.4.2 Social Behaviour: Polarisation, Cynicism, and Conspiracies

Research suggests that information pollution, especially in emotionally charged formats, can provoke significant changes in social behaviour. Tucker et al. (2018), in a comprehensive review of misinformation in political communication, argue that false information tends to provoke strong affective reactions, such as anger or fear, which in turn drive social fragmentation and identity-based polarisation. Misinformation is not only misleading—it is often emotionally manipulative, designed to activate tribalism and deepen social divides.

In addition, Marwick and Lewis (2017) show that online misinformation contributes to the rise of conspiratorial thinking and civic cynicism,

particularly among young and disillusioned users. Exposure to unverified claims on platforms like Facebook, YouTube, and TikTok reinforces distrust in mainstream institutions, creating fertile ground for disengagement and radicalisation. This is especially concerning in regions where digital literacy and critical thinking education are lacking.

2.4.3 Political Engagement and Public Trust: Disruption and Distrust

The effects of information pollution extend beyond individual behaviour into the functioning of democratic systems. Numerous studies highlight how exposure to misinformation can distort public opinion and alter electoral outcomes. For instance, Allcott and Gentzkow (2017) found that false news stories were widely circulated on social media during the 2016 U.S. election, and a substantial portion of the public believed them. Although their study was U.S.-focused, subsequent research in the UK reveals similar trends—particularly regarding Brexit-related disinformation and declining trust in news media and politicians (Fletcher et al., 2020).

In the UK context, Ipsos MORI reports that public trust in government information has significantly declined, with social media often seen as both a source and amplifier of this distrust. In Wales specifically, political discussions online are frequently shaped by algorithmic filtering and partisan echo chambers, although empirical research on this regional aspect remains limited. The lack of Wales-specific data highlights a pressing need for further study into how information pollution manifests and impacts engagement at a devolved, local level.

2.4.4 Implications for my study

This section of the literature indicates that information pollution has profound implications for social behaviour and political life, with issues such as emotional polarisation, conspiratorial thinking, institutional distrust, and civic

apathy becoming increasingly severe. These findings underscore the potential and urgency for the education system to address information pollution in this study.

Consequently, this research will focus on analysing whether the Welsh education system, particularly the DCF, incorporates elements to mitigate the societal impacts of information pollution and how effectively these elements are being implemented. Additionally, the study will examine whether current classroom teaching is confined to merely 'recognising misinformation' or if it also fosters students' ability to rebuild trust in institutions, develop rational participation, and cultivate responsible citizenship.

2.5 Education Policy Responses and Practical Challenges in Wales

2.5.1 Introduction to the theme

In the face of growing problems of information pollution and disinformation, Wales is actively promoting the inclusion of media literacy and digital competence at the heart of the curriculum in its national education system. Key manifestations of this endeavour include three major policy frameworks: the DCF, the Curriculum for Wales, and the Ofcom Media Literacy Strategy (2021-2024), which covers the whole of the UK. Whilst these frameworks represent forward-looking policy commitments, their actual impact depends on their effective implementation and the creation of synergies between them. This section assesses the links and disconnects between these policies and explores the practical challenges affecting their implementation.

2.5.2 Policy context and current frameworks

The DCF was officially introduced by the Welsh Government in 2016 as one of the three cross-curricular responsibilities in the national curriculum. Its

importance was further reinforced in the 2019 draft of the Curriculum for Wales, which formally positioned digital competence as a core pillar of the new curriculum implemented in 2022. It aligns closely with UNESCO's Media and Information Literacy (MIL) principles, emphasising digital citizenship, critical thinking, and safe online engagement.

Crucially, Wales's educational response to information pollution cannot be understood in isolation from broader UK-wide initiatives. The Ofcom Media Literacy Strategy (2021–2024) is particularly relevant here. As the UK's statutory media regulator, Ofcom leads on promoting media literacy across all four nations, including Wales. Its strategy focuses on improving people's critical understanding of media content, encouraging safe and informed participation in digital spaces, and addressing the needs of vulnerable or underrepresented communities (Ofcom, 2021).

Although Ofcom and the DCF originate from different institutional domains—Ofcom from national regulation, and the DCF from devolved Welsh education policy—their strategic goals often overlap. Both promote critical thinking, ethical digital citizenship, and inclusive access to digital learning. However, as McDougall et al. (2023) argue, these frameworks tend to operate in parallel rather than in coordination, leading to policy fragmentation. This lack of integration raises concerns about missed opportunities for systemic impact, particularly in embedding consistent media literacy principles across formal and informal learning contexts.

Recognising Ofcom's role within this policy ecosystem is therefore essential. It allows for a more comprehensive analysis of how media literacy is being conceptualised and implemented in Wales—not only within schools but also through community partnerships, non-formal education, and public awareness campaigns. This broader view supports the central concern of this

study: whether current strategies are working together in practice to equip citizens with the competencies needed to respond to information pollution in a cohesive and inclusive way.

2.5.3 Implications for my study

The literature suggests that Wales has demonstrated strong policy ambitions for media literacy education, but that implementation has been uneven. This study will not only look at whether the DCF and the new curriculum 'cover' media literacy in policy terms, but more importantly assess whether they are actually translated into visible and effective pedagogical practice.

Additionally, the study will explore the coherence of curriculum design and the level of integration between systems (the education system and the public communication system) to identify potential structural barriers and opportunities for enhancement.

Collectively, this section underscores the core argument of this study: that merely having well-designed frameworks is insufficient to effectively combat information pollution, and genuine progress depends on systemic collaboration and inclusive educational ecosystems.

2.6 Summary

This chapter of the literature review highlights the urgency of addressing information pollution and its far-reaching implications for individual cognition, social behaviour and democratic participation. The research suggests that media literacy and digital competence are widely recognised as key tools for enhancing citizens' resilience to disinformation, but there are still many gaps and challenges in practice, particularly in terms of the definition of competence, pedagogical approaches and support mechanisms.

In Wales, although policies such as the DCF and the Curriculum for Wales have laid the foundations for media literacy education, issues such as poor teacher preparation, policy fragmentation and the digital divide are still faced at the implementation level. The disconnect between national-level strategies and local educational practice, and the lack of effective synergy with external initiatives such as the Ofcom Media Literacy Strategy, suggests that there is an urgent need for more systematic, inclusive and locally adaptable educational strategies.

These findings offer guidance for the analyses presented in the next chapter. Chapter 3 will summarize the key points, highlight the potential contributions of this study, and further refine the research questions by addressing the existing gaps in the literature.

3. Conclusion

3.1 Summary of common themes

This review explores the relationship between digital competence, media literacy, and information pollution in the age of social media. Three key themes emerge: (1) Media literacy and digital competence are essential for critically engaging with online content and resisting misinformation; (2) Information pollution leads to significant social and political issues, such as emotional polarization, civic disengagement, and declining public trust; (3) While Welsh education policies like the DCF and Curriculum for Wales emphasize digital skills, their effectiveness is limited by fragmented implementation, insufficient teacher capacity, and unequal access to resources.

3.2 Identified gap

Despite the establishment of a policy framework, research gaps remain. This study addresses the following: First, there is limited empirical research on media literacy implementation in Welsh schools, especially regarding combating information pollution and fostering civic engagement. Second, frameworks like the DCF lack adequate assessment mechanisms, teacher training, and alignment with national strategies such as Ofcom. Third, little attention has been given to how students perceive and experience media literacy education, particularly in areas with insufficient digital resources. This study will examine the current state of teaching and perceptions of media literacy in the Welsh education system, evaluate its support for young people in managing information pollution, and provide actionable recommendations for improvement.

3.3 Refined research questions

Taking into account the findings of the literature review, the research will be centred on the following two questions:

- 1. How is digital competence and media literacy understood and implemented in Welsh secondary education, particularly in the context of facing social media information pollution?**
- 2. To what extent do these pedagogical practices help students recognise, resist and respond to disinformation? How do teachers see their role in this process?**

References

- Allcott, H. and Gentzkow, M. (2017) Social Media and Fake News in the 2016 Election. *Journal of Economic Perspectives*, 31(2), pp.211–236.
doi:<https://doi.org/10.1257/jep.31.2.211>.
- Bakir, V. and McStay, A. (2018) Fake News and The Economy of Emotions. *Digital Journalism*, [online] 6(2), pp.154–175.
doi:<https://doi.org/10.1080/21670811.2017.1345645>.
- Buckingham, D. (2013) *Media education : Literacy, learning and contemporary culture*. Cambridge: Polity.
- Frau-Meigs, D. (2022) How Disinformation Reshaped the Relationship between Journalism and Media and Information Literacy (MIL): Old and New Perspectives Revisited. *Digital Journalism*, 10(5), pp.912–922.
doi:<https://doi.org/10.1080/21670811.2022.2081863>.
- Freelon, D. and Wells, C. (2020) Disinformation as Political Communication. *Political Communication*, 37(2), pp.145–156.
doi:<https://doi.org/10.1080/10584609.2020.1723755>.
- Grizzle, A. ed. (2011) *Media and information literacy curriculum for teachers*. United Nations Educational, Scientific and Cultural Organization.
- Hobbs, R. (2012) *Digital and media literacy : connecting culture and classroom*. Moorabbin, Victoria: Hawker Brownlow Education.
- Horn, S. and Veermans, K. (2019) Critical thinking efficacy and transfer skills defend against ‘fake news’ at an international school in Finland. *Journal of Research in International Education*, 18(1), pp.23–41.
doi:<https://doi.org/10.1177/1475240919830003>.

LIVINGSTONE, S. (2004) Media Literacy and the Challenge of New Information and Communication Technologies. *The Communication Review*, 7(1), pp.3–14.
doi:<https://doi.org/10.1080/10714420490280152>.

Marwick, A. and Lewis, R., (2017) Media manipulation and disinformation online. *New York: Data & Society Research Institute*, 359, pp.1146–1151.

McDougall, J. and Fowler-Watt, K. (2023) Media literacy in the infodemic. In: K. Fowler-Watt and J. McDougall, eds. [online] Springer International Publishing, pp.371–380. doi:<https://doi.org/10.1007/978-3-031-11976-7%E2%82%825>.

Mihailidis, P. (2018) Civic media literacies: re-Imagining engagement for civic intentionality. *Learning, Media and Technology*, 43(2), pp.152–164.
doi:<https://doi.org/10.1080/17439884.2018.1428623>.

Nielsen, R. and Graves, L. (2017) "*News you don't believe*": Audience perspectives on fake news. Reuters Institute for the Study of Journalism.

Nielsen, R., Fletcher, R., Cornia, A. and Graves, L. (2018) Measuring the reach of 'fake news' and online disinformation in Europe.

Nygren, T., Frau-Meigs, D., Corbu, N. and Santoveña-Casal, S. (2022) Teachers' views on disinformation and media literacy supported by a tool designed for professional fact-checkers: perspectives from France, Romania, Spain and Sweden. *SN Social Sciences*, 2(4). doi:<https://doi.org/10.1007/s43545-022-00340-9>.

Pennycook, G. and Rand, D.G. (2019) Fighting misinformation on social media using crowdsourced judgments of news source quality. *Proceedings of the National Academy of Sciences*, 116(7), pp.2521–2526.
doi:<https://doi.org/10.1073/pnas.1806781116>.

Potter, W.J. (2010) The State of Media Literacy. *Journal of Broadcasting & Electronic Media*, 54(4), pp.675–696.

doi:<https://doi.org/10.1080/08838151.2011.521462>.

Salomaa , S. and Palsa, L. (2019) *MEDIA LITERACY IN FINLAND National media education policy*. [online] Available at:

<https://medialukutaitosuomessa.fi/mediaeducationpolicy.pdf>. [Accessed 28 Mar. 2025].

Tucker, J., Guess, A., Barbera, P., Vaccari, C., Siegel, A., Sanovich, S., Stukal, D. and Nyhan, B. (2018) Social Media, Political Polarization, and Political Disinformation: A Review of the Scientific Literature. *SSRN Electronic Journal*. [online]

doi:<https://doi.org/10.2139/ssrn.3144139>.

Wardle, C. and Derakhshan, H., (2017) *Information disorder: Toward an interdisciplinary framework for research and policymaking*. Strasbourg: Council of Europe., pp.1–107.

Wardle, C. and Derakhshan, H. (2017) *INFORMATION DISORDER : toward an Interdisciplinary Framework for Research and Policy Making*. [online] Available at: <https://tverezo.info/wp-content/uploads/2017/11/PREMS-162317-GBR-2018-Report-desinformation-A4-BAT.pdf>.

Welsh Government (2022) *Digital Competence Framework - Hwb*. [online]

hwb.gov.wales. Available at:

<https://hwb.gov.wales/curriculum-for-wales/cross-curricular-skills-frameworks/digital-competence-framework/>.