

Media Literacy in the Age of Misinformation: Challenges and Responsibilities of Journalism Education

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ABSTRACT

The rapid transformation of the media environment from traditional mass media to digitally networked communication has fundamentally altered the ways in which information is produced, distributed, consumed, and interpreted. The expansion of social media, mobile communication, algorithmically curated platforms, user-generated content, and generative artificial intelligence has created unprecedented opportunities for access to information while simultaneously increasing exposure to misinformation, disinformation, manipulated content, and other forms of information disorder. In this environment, media and information literacy has emerged as an essential competency for citizens and, more particularly, for journalism students who are expected to become professional gatekeepers, interpreters, verifiers, and disseminators of information.

This article examines the significance of media and information literacy in the age of misinformation and critically analyses the challenges and responsibilities of journalism education in developing competent, ethical, and verification-oriented journalists. The study adopts a qualitative, exploratory, and conceptual approach based on a critical review of scholarly literature, institutional frameworks, research reports, and contemporary developments in journalism and digital media. Particular attention is given to the historical evolution of media literacy, the changing information ecosystem, misinformation and disinformation, verification practices, fact-checking, algorithmic influence, digital technologies, and the emerging implications of generative artificial intelligence for journalism education.

The study draws upon Media Literacy Theory, Gatekeeping Theory, and Social Responsibility Theory to develop an integrated theoretical framework. The analysis indicates that journalism education can no longer be restricted to conventional reporting, writing, editing, and production skills. It must incorporate critical thinking, source evaluation, digital and visual verification, fact-checking, data and algorithmic literacy, ethical reasoning, and responsible use of artificial intelligence. The study argues that media literacy should be repositioned as a core professional competency within journalism education rather than being treated as an optional or peripheral skill. Strengthening media literacy among future journalists can contribute to professional credibility, public trust, democratic participation, and the integrity of the wider information ecosystem.

Keywords: Media Literacy, Media and Information Literacy, Misinformation, Disinformation, Journalism Education, Digital Journalism, Fact-Checking, Verification, Media Ethics, Artificial Intelligence

1. Background of the Study

The contemporary information environment is characterised by an unprecedented expansion in the volume, speed, diversity, and accessibility of information available to individuals and communities. Traditional newspapers, magazines, radio, and television have been joined by websites, social networking platforms, video-sharing services, messaging applications, podcasts, digital news platforms, and artificial intelligence-based systems. This transformation has fundamentally changed the relationship between journalists, media organisations, audiences, technology companies, and information.

Information is no longer produced and distributed exclusively by professional media institutions. Citizens, political actors, influencers, content creators, corporations, civil-society organisations, automated systems, and artificial intelligence technologies can now participate directly in the production and circulation of information. The boundaries between producer and consumer have therefore become increasingly blurred.

This transformation has created significant democratic and educational opportunities. Citizens can access diverse perspectives, participate in public discussions, communicate across geographical boundaries, and engage directly with institutions and public figures. Journalism has also benefited from digital technologies through faster newsgathering, multimedia storytelling, data journalism, mobile reporting, audience engagement, and real-time communication.

At the same time, however, the same technological environment has created conditions in which inaccurate, misleading, manipulated, and deliberately fabricated information can circulate rapidly and reach large audiences before professional journalists have sufficient opportunity to verify it. The contemporary challenge is therefore not merely the existence of false information. False and misleading information existed long before the internet. What has changed fundamentally is the speed, scale, reach, accessibility, persistence, and technological sophistication with which information can now be produced and circulated.

UNESCO conceptualises Media and Information Literacy (MIL) as a set of competencies that enables individuals to access, analyse, critically evaluate, use, create, and communicate information and media content effectively and responsibly. This broader understanding is particularly relevant to journalism education because journalists operate at the intersection of information production, verification, interpretation, and public communication.

The contemporary information environment has consequently created a new professional expectation for journalists. A journalist is no longer simply a reporter who gathers information and produces a news story. The journalist must increasingly function as a verifier, investigator, contextualiser, fact-checker, digital researcher, ethical decision-maker, and mediator between complex information environments and the public.

The Reuters Institute Digital News Report 2025 demonstrates the increasing importance of social media, video platforms, online personalities, and alternative digital channels in contemporary news consumption. The changing pattern of news consumption also raises concerns about misinformation, declining trust, and people's ability to distinguish reliable information from misleading content.

These developments have direct implications for journalism education. Journalism schools and departments must prepare students to operate in an environment where a newsworthy event may first appear as a social-media post, where a photograph may be taken from an unrelated event, where a video

may be digitally manipulated, where a quotation may be fabricated, and where artificial intelligence can generate increasingly realistic text, images, audio, and video.

Consequently, journalism education must move beyond the traditional emphasis on reporting, writing, editing, and media production. It must develop students who can question information, identify credible sources, verify evidence, recognise manipulation, understand algorithmic influence, use emerging technologies responsibly, and communicate verified information ethically.

Media literacy, therefore, should not be understood merely as a protective skill for media audiences. In contemporary journalism education, it represents a fundamental professional competency.

2. Historical Evolution of Media Literacy

The intellectual foundations of media literacy can be traced to the broader development of media education and critical approaches to communication. During the early development of modern mass media, audiences primarily interacted with newspapers, magazines, radio, and later television. Media education initially concentrated on understanding media content, developing critical appreciation, recognising persuasion, and understanding the influence of media messages on individuals and society.

As mass communication expanded during the twentieth century, scholars increasingly examined media representation, propaganda, advertising, persuasion, ownership, ideology, and audience interpretation. Media education gradually moved beyond the simple question of how media technologies functioned toward more critical questions concerning who produces media messages, why those messages are produced, how they are constructed, whose interests they represent, and what consequences they may have for society.

The development of television and commercial mass media further strengthened the importance of critical media education. Audiences were increasingly exposed to professionally constructed messages designed not only to inform but also to persuade, entertain, advertise, and influence public opinion.

The emergence of the internet produced another major transformation. Information was no longer confined to professionally produced media organisations. Websites, blogs, online forums, and digital communities created new opportunities for individuals to become information producers. The traditional distinction between media producer and media consumer consequently began to weaken.

The emergence of social media accelerated this transformation. Platforms such as Facebook, YouTube, Instagram, X, and messaging applications transformed audiences from predominantly passive receivers into active participants in information circulation. Users could create, modify, comment upon, recommend, and redistribute information. The result was a highly participatory information environment.

The subsequent development of algorithmic platforms introduced another significant transformation. Users increasingly encounter information through personalised recommendation systems rather than solely through editorial selection. Algorithms may determine which content receives visibility based on engagement, previous behaviour, predicted interests, and platform objectives.

The emergence of generative artificial intelligence represents the latest major stage in this transformation. AI systems can now generate text, images, audio, video, summaries, translations, and other forms of content. This development creates new opportunities for journalism while simultaneously increasing the difficulty of distinguishing authentic information from synthetic or manipulated content.

The historical development can therefore be broadly represented as:

Mass Media → Digital Media → Interactive Media → Social Media → Algorithmic Media → AI-Enabled Media

Each stage has expanded the scope of media literacy.

In the traditional mass-media environment, media literacy primarily required audiences to interpret and evaluate professionally produced messages. In the digital environment, media literacy additionally requires individuals to understand sources, platforms, algorithms, digital manipulation, verification, data, and artificial intelligence.

For journalism students, this historical transformation is particularly significant because journalism itself has evolved alongside these changes. The journalist must now understand not only the content of a message but also the technological, economic, social, and political systems through which that message is produced, amplified, distributed, and interpreted.

Thus, the history of media literacy reflects the broader history of changing communication environments. As media systems become more complex, the competencies required to critically engage with information also become more sophisticated.

3. Understanding Media Literacy: What, Why and How?

3.1 What is Media Literacy?

Media literacy broadly refers to the ability to access, analyse, evaluate, interpret, create, and communicate media messages critically and responsibly.

In the contemporary communication environment, the concept increasingly overlaps with information literacy and digital literacy, resulting in the broader framework of Media and Information Literacy (MIL).

Media literacy therefore involves much more than knowing how to operate a smartphone, computer, social-media application, or digital platform. A person may possess considerable technical skills and still lack media literacy if that person cannot determine whether the information encountered online is credible, accurate, adequately contextualised, or deliberately misleading.

For journalism students, media literacy has a particularly important professional dimension. It requires students to ask fundamental questions such as: Who created this information? Why was it created? What evidence supports the claim? What is the original source? Can the information be independently verified? What context may be missing? Who benefits from its circulation? Has the content been manipulated or altered?

These questions form an important foundation for responsible journalism.

3.2 Why is Media Literacy Important?

Media literacy is important because information influences individual decisions, public opinion, social relationships, institutional trust, and democratic participation.

When inaccurate information is accepted as factual information, it can influence political opinions, public debate, social relationships, consumer decisions, public-health behaviour, and perceptions of institutions and communities.

The importance becomes even greater in journalism because journalists possess the professional ability to amplify information to large audiences.

A citizen sharing an unverified claim may influence a limited network. A journalist publishing the same claim through a professional news organisation may give that claim institutional credibility and significantly expand its reach.

Therefore, journalism students require a higher level of media literacy than simply being able to consume media critically. They must develop the capacity to verify before amplification.

This principle is central to responsible journalism.

3.3 How Does Media Literacy Work?

Media literacy functions through a combination of critical thinking, source evaluation, evidence assessment, contextual analysis, verification, technological awareness, and ethical judgement.

A media-literate journalism student does not automatically accept a viral post simply because thousands of people have shared it. Instead, the student examines the original source, checks the date and location, searches for independent confirmation, evaluates available visual evidence, considers whether the material has been manipulated, and assesses whether publication is justified in the public interest.

Media literacy can therefore be understood as a continuous process of critical engagement with information rather than as a one-time skill.

For journalism education, this process should become habitual. Students should learn to pause before accepting or publishing information, particularly when the content is emotionally provocative, politically sensitive, unusually sensational, or rapidly viral.

4. Misinformation, Disinformation and Information Disorder

The rapid development of digital communication has increased the visibility, speed, and reach of false and misleading information. However, all inaccurate information does not have the same origin or intention.

Misinformation generally refers to false or inaccurate information that is shared without the deliberate intention to cause harm.

Disinformation refers to false or misleading information that is deliberately created or disseminated with the intention of deceiving or causing harm.

Malinformation generally refers to genuine information that is deliberately used or presented in a harmful or misleading context.

These distinctions are important for journalism education because describing every false claim simply as “fake news” can obscure the different motivations, mechanisms, and consequences involved.

The contemporary information environment has also produced new forms of information disorder, including manipulated photographs, misleading headlines, fabricated quotations, impersonation, false attribution, recycled old content presented as current, misleading visual context, manipulated audio and video, deepfakes, AI-generated images and videos, and fabricated or AI-generated textual claims.

The professional challenge for journalists is consequently shifting from simply finding information to determining whether information is authentic, accurate, relevant, contextualised, and independently verifiable.

This transformation makes media literacy an essential component of contemporary journalism education.

5. Journalism Education in a Changing Information Environment

Journalism education has traditionally focused on reporting, news writing, editing, media law, ethics, communication theories, media production, and professional practices. These areas continue to constitute the essential foundation of journalism education. However, the transformation of the contemporary information environment has created new professional demands that cannot be adequately addressed through conventional journalism training alone.

The digital transformation of journalism has changed not only the tools used by journalists but also the nature of journalistic work itself. Contemporary journalists may obtain information from social-media platforms, citizen-generated content, online databases, messaging applications, digital archives, satellite imagery, open-source intelligence, and artificial intelligence systems. Consequently, the journalist must possess the ability to assess the reliability of information obtained from diverse and often uncertain sources.

UNESCO's journalism education framework has recognised the growing importance of misinformation, disinformation, fact-checking, verification, digital technologies, social-media platforms, and media and information literacy in journalism training. This indicates a broader international movement towards integrating verification and critical information skills into journalism curricula.

The transformation also changes the traditional understanding of the journalist as a gatekeeper. Earlier, journalists and editors primarily controlled the movement of information from sources to audiences. In the digital environment, however, information may reach audiences directly through social-media platforms and messaging networks before journalists encounter it.

This creates a new professional responsibility. Journalists must increasingly act as verification gatekeepers rather than merely information gatekeepers.

A contemporary journalism curriculum must therefore prepare students to perform several interconnected functions: gathering information, evaluating sources, verifying claims, analysing evidence, understanding digital platforms, identifying manipulated content, interpreting algorithmic influence, using artificial intelligence responsibly, and communicating information ethically.

Journalism education must consequently evolve from a predominantly content-production-oriented model towards a critical, verification-oriented, technologically informed, and ethically grounded model.

6. Research Gap

The growing body of scholarship on misinformation and media literacy demonstrates the importance of critical engagement with contemporary information environments. Existing studies have examined misinformation from several perspectives, including social media, political communication, public opinion, psychology, platform governance, digital journalism, and democratic participation.

Similarly, media literacy research has examined the ability of citizens, students, teachers, and audiences to access, evaluate, interpret, and create media content. Considerable attention has also been given to information disorder, fact-checking, verification, digital literacy, and the effects of social-media platforms.

However, an important research gap remains at the intersection of media literacy, misinformation, professional journalism education, algorithmic communication, and generative artificial intelligence.

Much of the existing discussion treats media literacy primarily as a general civic or audience competency. Journalism students, however, occupy a distinctive position because they are future professional producers and disseminators of information. Their failure to recognise misinformation can potentially amplify false claims through institutions that audiences traditionally associate with credibility.

Furthermore, the emergence of generative artificial intelligence and algorithmically curated platforms has created challenges that extend beyond traditional media-literacy frameworks. Future journalists need to understand not only whether information is true or false, but also how algorithms influence visibility,

how synthetic media is produced, how AI-generated information can contain errors, and how technological systems can shape public attention.

Therefore, there is a need for an integrated conceptual examination of how journalism education can transform media literacy from a general audience competency into a core professional competency involving critical thinking, verification, digital awareness, algorithmic literacy, AI literacy, and ethical judgement.

The present study addresses this gap by bringing these dimensions together within a journalism-education framework.

7. Objectives of the Study

The study has the following objectives:

1. To examine the concept and historical evolution of media and information literacy.
2. To analyse the growing challenge of misinformation and disinformation in the contemporary digital media environment.
3. To examine the relationship between media literacy and responsible journalism.
4. To identify the major challenges faced by journalism education in preparing students to confront misinformation and information disorder.
5. To examine the changing professional competencies required of journalism students in the digital and AI-driven information environment.
6. To analyse the significance of fact-checking, source verification, and digital verification in contemporary journalism education.
7. To examine the responsibilities of journalism educators and institutions in developing media-literate and ethically responsible journalists.
8. To propose recommendations for strengthening media literacy within Journalism and Mass Communication curricula.

8. Research Questions

To maintain a focused and manageable research design, the study addresses the following four research questions:

RQ1. How has media literacy evolved in response to transformations in the media environment?

RQ2. What challenges does misinformation pose to contemporary journalism and journalistic credibility?

RQ3. What media literacy competencies are essential for journalism students in the contemporary digital and AI-driven information environment?

RQ4. What pedagogical and institutional responsibilities should journalism education undertake to prepare students to identify, verify, and responsibly communicate information?

These four questions directly correspond with the objectives of the study and provide a clear analytical pathway from the historical development of media literacy to the contemporary responsibilities of journalism education.

9. Methodology

9.1 Research Design

The present study adopts a qualitative, exploratory, and conceptual research design to examine the signif

icance of media and information literacy in the contemporary misinformation environment and to analyse the changing responsibilities of journalism education.

The study does not attempt to statistically measure media-literacy levels among journalism students or educators. Instead, it critically examines existing scholarly literature, institutional frameworks, academic discussions, research reports, and contemporary developments relating to media literacy, misinformation, journalism education, digital journalism, fact-checking, verification, algorithmic communication, and artificial intelligence.

A qualitative conceptual approach is appropriate because the central purpose of the study is to understand changing educational requirements, professional competencies, ethical responsibilities, and relationships among media literacy, misinformation, journalism, and emerging technologies.

9.2 Nature and Scope of the Study

The study is interdisciplinary in nature and draws upon scholarship from Journalism and Mass Communication, Media Studies, Communication Studies, Education, Digital Media Studies, Information Literacy, and Journalism Ethics.

The scope of the study encompasses five interconnected areas: the evolution of media literacy; the emergence and expansion of misinformation and disinformation; the transformation of journalism in the digital environment; the changing competencies required of journalism students; and the responsibilities of journalism educators and institutions.

Particular attention is given to the contemporary digital environment characterised by social-media platforms, user-generated content, algorithmic recommendation systems, mobile communication, digital verification practices, and generative artificial intelligence.

9.3 Sources of Data

The study relies primarily on secondary sources. These include peer-reviewed journal articles, scholarly books, academic publications, institutional reports, international policy documents, journalism education frameworks, and credible research publications dealing with misinformation, digital journalism, verification, media literacy, and emerging technologies.

Major institutional sources include UNESCO's publications on Media and Information Literacy and journalism education, as well as relevant research reports concerning digital news consumption, misinformation, verification, and artificial intelligence.

The study also draws upon established theoretical literature relating to media literacy, gatekeeping, journalism ethics, and the social responsibility of the press.

9.4 Method of Analysis

The selected literature and documentary sources were examined through thematic and critical analysis.

The analysis identifies recurring concepts, arguments, challenges, and relationships relating to media and information literacy; misinformation and information disorder; source evaluation and verification; fact-checking and digital journalism; journalism education and curriculum development; professional ethics and public responsibility; algorithmic influence on news distribution; and generative artificial intelligence and journalism.

The identified themes were then interpreted in relation to the research questions and theoretical framework.

The study subsequently synthesises these themes to develop an integrated understanding of the competencies and institutional responsibilities required for contemporary journalism education.

9.5 Theoretical Orientation

The study adopts a multi-theoretical orientation rather than depending upon a single communication theory.

Three theoretical perspectives provide the primary foundation:

Media Literacy Theory provides the conceptual basis for understanding critical engagement with media and information.

Gatekeeping Theory helps explain how information is selected, filtered, prioritised, and distributed within traditional and digital media environments.

Social Responsibility Theory of the Press provides the ethical foundation for examining journalism's responsibility to provide accurate, fair, independent, and socially responsible information.

These three perspectives are complementary. Media Literacy Theory addresses the cognitive and critical competencies required to evaluate information; Gatekeeping Theory explains the mechanisms through which information gains visibility and reaches audiences; and Social Responsibility Theory establishes the ethical obligations associated with journalistic communication.

Together, they provide a suitable theoretical foundation for analysing the changing responsibilities of journalism education in the age of misinformation.

10. Theoretical Framework

10.1 Media Literacy Theory

Media Literacy Theory forms the central conceptual foundation of the present study. At its core, media literacy emphasises the ability of individuals to critically access, interpret, analyse, evaluate, and create media messages. Rather than treating audiences as passive receivers of information, media literacy recognises them as active interpreters who should understand how media messages are constructed and how social, economic, political, technological, and cultural factors influence their production.

In the contemporary information environment, this perspective has become increasingly important because individuals encounter information from numerous sources with varying degrees of credibility, transparency, accountability, and intention.

For journalism students, Media Literacy Theory acquires a professional dimension. They are not simply consumers of media messages; they are future producers and disseminators of information. Consequently, media literacy in journalism education must include critical thinking, source evaluation, evidence assessment, contextual interpretation, verification, digital awareness, ethical reasoning, and responsible content creation.

10.2 Gatekeeping Theory

Gatekeeping Theory provides a second important theoretical perspective for the study. Traditional journalism involved identifiable human gatekeepers. Reporters, editors, news organisations, and editorial institutions determined which events became news and how those events were framed and presented to audiences.

The digital environment has significantly complicated this process. Information is now selected and amplified not only by journalists and editors but also by social-media platforms, search engines, recommendation systems, influencers, content creators, and audience engagement patterns.

Consequently, gatekeeping has increasingly moved through multiple levels:

Editorial Gatekeeping → Digital Gatekeeping → Algorithmic Gatekeeping

This transformation has important implications for journalism education. A journalism student must understand both traditional editorial decision-making and the technological systems that influence the visibility and circulation of information.

10.3 Social Responsibility Theory

Social Responsibility Theory provides the ethical foundation for the study. Journalism is not merely a commercial activity. It performs an important democratic function by providing citizens with information necessary for informed participation in public life.

Consequently, accuracy, fairness, independence, accountability, public interest, and responsibility constitute important professional values.

In an environment characterised by misinformation, the social responsibility of journalism becomes even more significant. The publication of unverified information may contribute to public confusion, reputational damage, social conflict, institutional distrust, or democratic harm.

Journalism education must therefore ensure that technological competence does not replace ethical judgement.

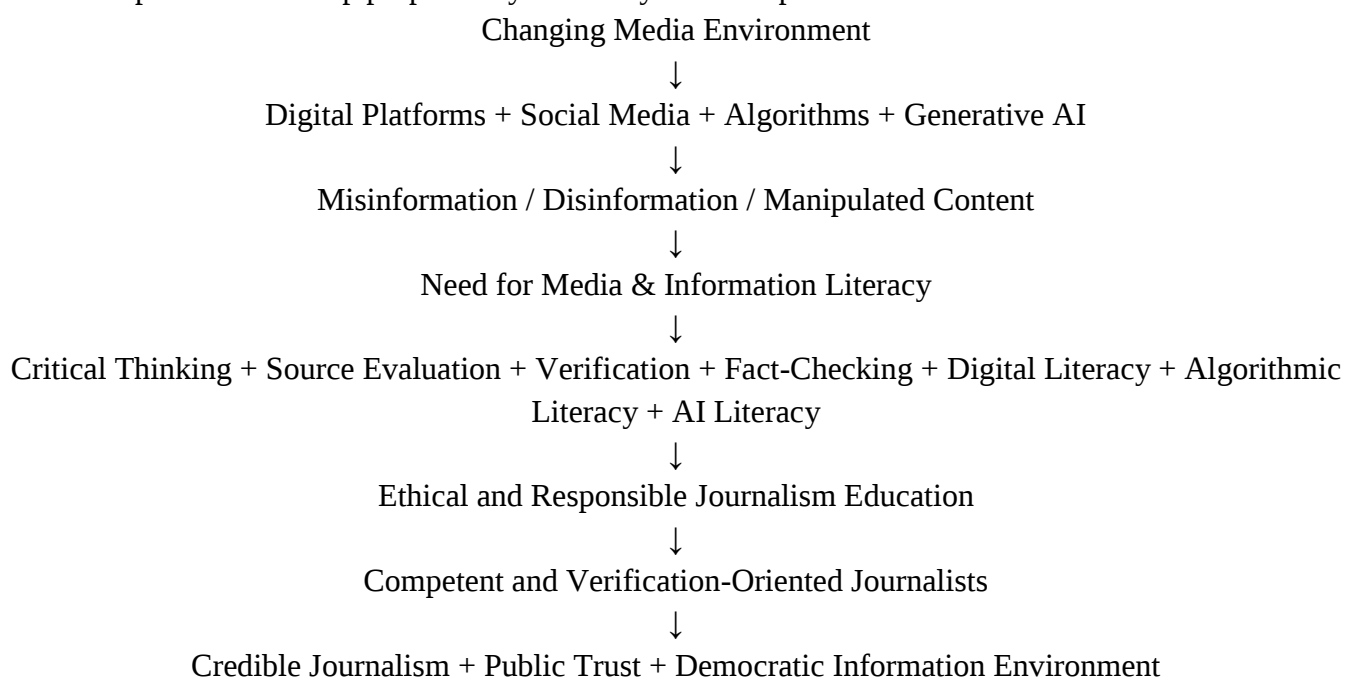
10.4 Integration of the Theoretical Perspectives

The three theoretical perspectives complement one another in explaining the contemporary information environment. Media Literacy Theory explains the ability to critically understand, evaluate, and create media and information. Gatekeeping Theory explains how information is selected, filtered, prioritised, amplified, and distributed through human and technological systems. Social Responsibility Theory explains the ethical obligations associated with producing and disseminating information to society.

Together, these perspectives establish the central theoretical proposition of the study: journalism education in the age of misinformation must develop journalists who can critically evaluate information, understand the technological systems that influence its circulation, verify evidence, and exercise ethical responsibility in deciding what information should reach the public.

10.5 Conceptual Model of the Study

The conceptual relationship proposed by this study can be represented as:



This model demonstrates that media literacy is not an isolated educational concept. It connects technological transformation with journalistic competency, professional ethics, public trust, and democratic communication.

11. Media Literacy and the Contemporary Journalism Ecosystem

The contemporary journalism ecosystem is fundamentally different from the traditional mass-media environment. In the conventional model of journalism, information generally moved through a relatively linear process in which an event was observed by a reporter, processed by an editorial organisation, and subsequently communicated to an audience.

The traditional communication flow could broadly be represented as:

Event → Reporter → Editor → News Organisation → Audience

The digital environment has introduced a considerably more complex structure:

Event → Multiple Sources → Digital Platforms → Algorithms → Users → Sharing and Commentary → News Organisations → Re-circulation

This transformation has significant implications for journalism practice. Journalists increasingly encounter information after it has already circulated among thousands or millions of users. A social-media post may become the initial source of a news story. A photograph may become viral before its date and location are established. A video may be shared widely before its authenticity is verified. A statement may be attributed to a public figure without evidence of its original source.

In such an environment, journalists are increasingly required to perform verification before amplification.

This represents a significant transformation in journalistic practice.

Traditional journalism could broadly be understood as:

Find → Report → Edit → Publish

Contemporary digital journalism increasingly requires:

Find → Verify → Contextualise → Evaluate → Report → Monitor → Correct, if necessary

This transformation demonstrates the increasing importance of media literacy in professional journalism. Journalists must understand not only how information is produced but also how it travels through digital networks, how it gains visibility, how it is manipulated, and how audiences interpret it.

Media literacy therefore becomes part of the professional infrastructure of contemporary journalism.

12. Misinformation as a Challenge to Contemporary Journalism

Misinformation creates multiple and interconnected challenges for contemporary journalism.

One of the most significant challenges is the speed gap between information circulation and professional verification. Social-media platforms can distribute information within seconds, while responsible journalistic verification may require considerable time. Journalists may therefore face pressure to publish rapidly in competitive digital environments.

A second challenge is the volume of information. Contemporary journalists encounter an enormous quantity of user-generated content every day. The professional problem is no longer simply finding information but determining which information is credible, relevant, significant, and worthy of verification.

A third challenge concerns visual misinformation. Photographs and videos can be edited, manipulated, mislabelled, taken from different events, or generated artificially. Because visual material often creates a

strong impression of authenticity, misleading images can be particularly powerful.

A fourth challenge is the erosion of public trust. When audiences repeatedly encounter conflicting claims, fabricated stories, manipulated content, and misleading information, they may become uncertain about which sources deserve trust. This can create a broader problem in which reliable journalism and unreliable information are perceived as equally uncertain.

A fifth challenge involves political, ideological, and commercial manipulation. False or misleading information may be deliberately circulated to influence political opinions, public behaviour, institutional legitimacy, or commercial decisions.

A sixth challenge arises from generative artificial intelligence. AI technologies can produce increasingly realistic text, images, audio, and video. This increases the difficulty of distinguishing authentic material from synthetic content and creates new responsibilities for journalists.

These challenges indicate that misinformation is not simply a technological problem. It is also a professional, educational, ethical, social, and democratic challenge.

13. Essential Media Literacy Competencies for Journalism Students

The contemporary journalism environment requires a broader competency framework than traditional journalism education has generally emphasised. Journalism students need technical abilities, but they also require critical, analytical, verification-oriented, ethical, and technological competencies.

13.1 Critical Thinking

Critical thinking is the foundation of media literacy. Journalism students must learn to question information rather than accepting claims simply because they appear credible, popular, emotionally persuasive, or widely circulated. A critical journalist asks whether the available evidence actually supports the claim. Students should be trained to distinguish facts from opinions, assumptions, interpretations, rumours, speculation, and deliberate manipulation.

13.2 Source Evaluation

The credibility of journalism depends significantly upon the credibility of its sources. Students should learn to identify the original source of information, determine whether the source possesses relevant knowledge or authority, examine the evidence provided, and establish whether the information can be independently confirmed.

13.3 Verification Skills

Verification has become one of the most important competencies in contemporary journalism. Students should be trained to verify names, dates, locations, quotations, documents, photographs, videos, statistics, social-media posts, and claims through independent sources.

The central professional principle should be: Do not amplify before you verify.

13.4 Fact-Checking

Fact-checking involves systematically examining factual claims and comparing them with reliable evidence. Journalism students should understand how to identify verifiable claims, locate authoritative evidence, compare competing claims, and communicate corrections clearly.

13.5 Visual Literacy

The growth of digital journalism has increased the importance of visual literacy. Journalists must be able to examine whether photographs and videos accurately represent the claims attached to them. A genuine photograph can become misinformation when it is presented with a false date, location, event, or description.

13.6 Digital Literacy

Digital literacy involves more than basic familiarity with digital devices. Journalism students should understand digital search techniques, online databases, social-media platforms, digital archives, open-source information, collaborative tools, and digital publishing environments.

13.7 Algorithmic Literacy

Algorithms increasingly influence which information becomes visible to audiences. Journalism students therefore need to understand recommendation systems, engagement metrics, personalisation, platform logic, and algorithmic amplification.

13.8 Artificial Intelligence Literacy

Generative artificial intelligence has created both opportunities and risks for journalism. Students should understand how AI can assist with research, transcription, translation, data analysis, and language editing, while also understanding factual inaccuracies, fabricated references, bias, synthetic media, privacy concerns, copyright questions, and lack of transparency.

13.9 Ethical Reasoning

Technical competence without ethical judgement can create new forms of journalistic harm. Students must learn to consider accuracy, fairness, privacy, public interest, proportionality, accountability, and potential consequences before publication.

Media literacy therefore reaches its highest professional value when critical thinking and technological competence are combined with ethical responsibility.

14. Challenges Before Journalism Education

Journalism education itself faces several challenges in responding effectively to misinformation and technological transformation.

14.1 Curriculum Lag

Technological change often occurs faster than curriculum revision. University curricula may take several years to change, whereas digital platforms, verification technologies, and AI systems can develop substantially within a much shorter period. Consequently, journalism education risks preparing students for an information environment that no longer exists.

14.2 Faculty Preparedness

The responsibility for developing media-literate students cannot be separated from the preparedness of journalism educators. Teachers require continuous professional development in digital verification, fact-checking, social-media analysis, algorithmic systems, open-source research, and artificial intelligence.

14.3 Theory–Practice Gap

Students may understand misinformation conceptually without possessing sufficient practical experience in verifying real-world content. Journalism education should therefore move beyond classroom discussion and provide opportunities for students to investigate actual claims, photographs, videos, social-media posts, and digital documents.

14.4 Rapid Development of Artificial Intelligence

The rapid evolution of generative AI creates an additional challenge for journalism institutions. Universities must determine how AI should be incorporated into journalism education without compromising originality, transparency, academic integrity, journalistic independence, or accountability.

14.5 Resource Inequality

Not all journalism institutions possess equal access to digital verification tools, specialised databases, te-

chnology laboratories, professional subscriptions, or training opportunities. Resource limitations can therefore create inequalities in students' preparedness for digital journalism.

15. Responsibilities of Journalism Educators and Institutions

The responsibility for developing media-literate journalists cannot be placed entirely on students.

Journalism educators have a responsibility to create learning environments in which students are encouraged to question information, investigate evidence, examine sources, and defend their editorial decisions.

Teachers should model verification-oriented journalism in their own classroom practices. When presenting examples, educators should encourage students to identify the source, examine evidence, verify context, and consider alternative interpretations.

Journalism institutions also have a responsibility to integrate media literacy across the curriculum rather than restricting it to a single course.

Reporting, editing, digital journalism, broadcast journalism, media ethics, research methods, public relations, advertising, and communication theory can all incorporate media-literacy competencies appropriate to their respective areas.

For example, reporting courses can include verification exercises; digital journalism courses can introduce visual and social-media verification; media ethics courses can examine the consequences of publishing misinformation; and research-methodology courses can teach evidence evaluation.

Institutions can also establish practical verification laboratories in which students investigate viral claims, photographs, videos, and digital content.

Collaboration with professional news organisations, fact-checking organisations, technology specialists, and media-research institutions can further strengthen students' practical exposure.

Ultimately, journalism education should cultivate a professional culture in which accuracy is valued above speed, evidence above assumption, and public interest above virality.

16. The Role of Fact-Checking and Verification in Journalism Education

Fact-checking and verification have become central competencies in contemporary journalism.

In traditional journalism, verification was largely integrated into the reporting and editorial process. In the digital environment, journalists increasingly encounter information that has already circulated through social-media platforms, messaging applications, websites, and online communities.

Consequently, verification has become a more visible and specialised professional practice.

Journalism students must learn to distinguish between a claim, evidence, and independently verifiable fact.

A widely shared post cannot be considered credible simply because it has attracted substantial engagement. Similarly, the presence of a photograph or video does not automatically establish the authenticity of the claim associated with it.

Verification training may include source tracing, reverse-image searching, date verification, location verification, cross-platform comparison, archive-based verification, document verification, visual analysis, geolocation techniques, and consultation of authoritative sources.

However, journalism education should avoid reducing verification to a collection of digital tools.

Tools change rapidly. The deeper and more durable objective is to develop a verification mindset.

A journalist should instinctively pause before publishing information that is uncertain, emotionally provocative, unusually sensational, or rapidly viral.

Verification should therefore become an integral component of journalism education rather than an additional technical skill.

17. Algorithmic Gatekeeping and Journalism Education

The traditional gatekeeper in journalism was primarily the editor or news organisation. Digital platforms have introduced another layer of gatekeeping in which algorithms influence which stories become visible to audiences.

Recommendation systems may prioritise content according to previous user behaviour, engagement patterns, predicted interests, and other platform-specific signals.

This development creates an important distinction between journalistic news value and algorithmic visibility.

A story may be highly significant from a public-interest perspective while receiving limited engagement. Conversely, sensational, emotional, controversial, or provocative content may receive considerable visibility because it generates engagement.

This creates a new educational responsibility for journalism institutions.

Students should understand how platform logic can influence public attention and how journalists may themselves become influenced by metrics such as clicks, views, shares, comments, and engagement rates.

Algorithmic literacy should therefore become an important component of contemporary journalism education.

Students should be encouraged to ask: Why is this content appearing in my feed? Who determines its visibility? What information is being prioritised? What information may remain invisible? Does audience engagement correspond to public importance?

These questions expand the traditional understanding of gatekeeping and help students recognise the relationship between journalism, technology, platform power, and public attention.

18. Generative Artificial Intelligence and Journalism Education

Generative artificial intelligence represents one of the most significant technological developments affecting contemporary journalism.

AI systems can assist journalists with transcription, translation, summarisation, data processing, research support, language editing, document analysis, and other newsroom tasks.

At the same time, generative AI can produce inaccurate information, fabricated references, synthetic photographs, manipulated audio, realistic videos, and persuasive but false narratives.

The central educational question is therefore not whether journalism students should learn artificial intelligence, but how they should learn to use it responsibly.

Journalism education should distinguish between AI as an assistance technology and AI as a source of factual authority.

An AI-generated response should never automatically be treated as verified information. Journalists remain responsible for the accuracy of the material they publish regardless of whether the original information was produced, suggested, translated, summarised, or assisted by an AI system.

Students should consequently be trained in AI-assisted research with human verification; identification of potentially AI-generated or manipulated content; verification of AI-produced claims; awareness of algorithmic bias; transparency regarding appropriate AI use; protection of confidential and sensitive information; copyright and intellectual-property considerations; and ethical accountability for AI-assisted journalism.

The central educational principle should therefore be:

AI may assist journalism, but it cannot replace journalistic responsibility.

This principle should guide the development of AI-related components within journalism curricula.

19. Media Literacy and Journalism Ethics

Media literacy cannot be separated from journalism ethics.

A technically skilled journalist may know how to locate information rapidly, analyse digital content, use verification technologies, and employ artificial intelligence. However, professional journalism requires more than technical competence. It requires ethical judgement.

The ethical dimensions of misinformation become particularly important when information concerns individuals, communities, political actors, public institutions, or sensitive social issues.

Publishing unverified information may cause reputational harm. Misleading visual material may create unnecessary fear or social tension. Context-free information may distort public understanding. AI-generated content may create false impressions of reality.

Journalism students should therefore be trained to consider the potential consequences of publication alongside questions of accuracy and newsworthiness.

Ethical media literacy requires students to understand that not everything that can be published should necessarily be published.

The public-interest test, proportionality, privacy, fairness, minimisation of harm, transparency, accountability, and correction are essential components of responsible digital journalism.

Media literacy consequently functions as both a cognitive competency and an ethical practice. The media-literate journalist does not merely ask whether information is technically accessible; the journalist asks whether it is sufficiently verified, contextually fair, and ethically appropriate for public communication.

20. From News Literacy to Verification-Oriented Journalism Education

The changing information environment suggests the need for a conceptual transformation in journalism education.

Traditional journalism education has often emphasised:

Reporting → Writing → Editing → Production

Contemporary journalism education needs to expand this model:

Reporting → Verification → Contextualisation → Critical Analysis → Ethical Decision-Making → Digital Production → Continuous Monitoring

This does not mean that traditional journalism skills have become irrelevant. Reporting, writing, editing, interviewing, storytelling, media law, and ethics remain essential.

Rather, new competencies must be integrated with these established foundations.

The future journalist should therefore be both a storyteller and a verifier, both a digital communicator and a critical information analyst, and both a technology user and an ethical decision-maker.

This transformation is particularly important because professional journalism increasingly competes with non-journalistic information producers.

When audiences can receive thousands of claims directly through digital platforms, the distinctive value of journalism increasingly depends upon accuracy, verification, context, credibility, independence, and accountability.

The future strength of journalism therefore lies not simply in producing information faster, but in establishing which information deserves public trust.

21. Analysis and Critical Discussion

The analysis of the literature and conceptual perspectives demonstrates that misinformation should not be understood merely as a technological problem. It represents a multidimensional challenge involving journalism, education, ethics, technology, society, democracy, and public trust.

The transformation of the information environment has altered the traditional relationship between information producers and audiences. In the conventional media system, professional journalists and editors occupied a relatively central position in determining which information reached the public. In the contemporary digital environment, however, information is produced and circulated through a complex network involving journalists, citizens, influencers, political actors, platforms, algorithms, and artificial intelligence systems.

This transformation has significantly increased the importance of media literacy within journalism education.

A central finding of the analysis is that media literacy has evolved from a predominantly audience-oriented competency into a professional journalism competency. Historically, media literacy focused largely on helping audiences understand and critically interpret media messages. In the contemporary environment, journalism students must possess these abilities while also applying them to professional newsgathering, verification, editorial decision-making, and public communication.

The second major analytical observation concerns the changing nature of verification. In the traditional newsroom, journalists generally worked from identifiable sources and institutional information channels. Today, journalists frequently encounter information through social-media posts, messaging platforms, citizen-generated content, websites, videos, and AI-assisted systems. The journalist must therefore verify information that may already have travelled through multiple communication networks.

This changes the professional sequence from:

Find → Report → Publish

to:

Find → Verify → Contextualise → Evaluate → Report → Monitor → Correct, if Necessary.

The third important observation concerns the relationship between misinformation and journalistic credibility. When inaccurate information circulates widely, the public may become uncertain about which sources deserve trust. Professional journalism therefore faces a dual challenge: it must counter misinformation while simultaneously maintaining its own standards of accuracy and credibility.

The fourth major issue is algorithmic influence. The digital information environment has introduced technological forms of gatekeeping alongside traditional editorial gatekeeping. Algorithms influence which content becomes visible, recommended, amplified, or repeatedly encountered by audiences.

The fifth major analytical issue concerns generative artificial intelligence. AI has created genuine opportunities for journalism, particularly in areas such as transcription, translation, research assistance,

data processing, and language support. At the same time, AI can generate inaccurate information and highly convincing synthetic media.

The sixth major issue is the relationship between technology and ethics. Technological competence without ethical judgement can increase rather than reduce journalistic harm. Therefore, contemporary journalism education requires the integration of three dimensions:

Critical competence + Technological competence + Ethical competence

The analysis consequently supports the proposition that the future of journalism education should be based on a verification-oriented, critical, ethical, and technologically informed educational model.

22. Major Findings

Based on the conceptual and thematic analysis, the study identifies eight major findings.

Finding 1: Media Literacy Has Become a Professional Journalism Competency

Media literacy can no longer be understood exclusively as a general civic or audience skill. For journalism students, it has become directly connected to professional reporting, verification, editorial judgement, and ethical decision-making.

Finding 2: Misinformation Has Transformed the Nature of Journalistic Verification

Misinformation has changed the role of verification within journalism. Journalists increasingly encounter information after it has already circulated through digital networks. Consequently, verification is no longer simply an internal editorial procedure. It has become a central professional function.

Finding 3: Digital Literacy Alone Is Insufficient

The ability to use smartphones, social-media platforms, search engines, and digital publishing tools does not automatically make an individual media literate. Professional media literacy requires critical thinking, source evaluation, evidence assessment, verification, contextual understanding, ethical reasoning, and awareness of manipulation.

Finding 4: Algorithms Have Created New Forms of Gatekeeping

Traditional editorial gatekeeping has not disappeared, but it now operates alongside algorithmic and platform-based forms of gatekeeping. Algorithms can influence which news stories receive visibility and which remain relatively invisible.

Finding 5: Artificial Intelligence Literacy Is Becoming Essential

Generative AI creates both opportunities and risks for journalism. AI can assist journalists with several newsroom tasks, but it can also produce factual errors, fabricated information, synthetic media, and misleading content.

Finding 6: Journalism Education Requires Curricular Transformation

Media literacy, fact-checking, digital verification, visual literacy, algorithmic literacy, and AI literacy should not be treated as isolated technological topics. They should be integrated into the broader Journalism and Mass Communication curriculum.

Finding 7: Verification Must Become a Habit Rather Than a Separate Skill

Effective verification requires more than teaching students individual digital tools. Students should develop the habit of questioning unusual claims, checking original sources, examining evidence, seeking independent confirmation, and considering context before publication.

Finding 8: Ethical Responsibility Remains Central to Journalism

Technological competence cannot replace professional responsibility. Accuracy, fairness, independence, accountability, public interest, and minimisation of harm remain fundamental principles of journalism.

23. Discussion

The findings demonstrate that the relationship between media literacy and journalism education is becoming increasingly inseparable.

Traditional journalism education primarily prepared students to work within professional media institutions. Contemporary journalism students, however, enter an information environment in which information is produced and circulated through institutional and non-institutional channels.

This creates two interconnected responsibilities for journalism education.

The first is to prepare students to produce credible journalism.

The second is to prepare them to navigate an information environment in which credibility itself is constantly contested.

A future journalist must understand how information moves through social networks, how algorithms influence visibility, how misinformation is constructed, how visual content can be manipulated, and how generative AI can create convincing synthetic material.

The findings also reinforce the continuing relevance of Gatekeeping Theory. Gatekeeping has not disappeared in the digital environment. Instead, it has become more complex. Human editorial gatekeeping now operates alongside algorithmic, platform-based, and networked forms of gatekeeping.

The findings also demonstrate the continuing relevance of Social Responsibility Theory. Technological transformation does not eliminate journalism's obligation to serve the public interest. On the contrary, the proliferation of misinformation makes professional responsibility even more important.

Media Literacy Theory connects these dimensions by providing the critical competencies required to evaluate information.

Therefore, the three theoretical perspectives together provide a coherent explanation of the changing role of journalism education.

The central implication is that journalism education should not merely teach students to become efficient content producers. It should prepare them to become critical information professionals capable of determining what information can responsibly be communicated to the public.

24. Implications for Journalism Education

The findings of this study have significant implications for Journalism and Mass Communication programmes.

24.1 Media Literacy as a Core Curriculum Principle

Media literacy should be treated as a fundamental curriculum principle rather than as a single optional topic. Its components can be integrated across reporting, editing, digital journalism, broadcast journalism, media ethics, research methodology, public relations, advertising, and communication studies.

24.2 Practical Verification Training

Journalism students should receive systematic practical training in source verification, fact-checking, visual verification, digital investigation, and social-media verification. Practical exercises should form an important component of journalism education.

24.3 Algorithmic and AI Literacy

Contemporary journalism curricula should introduce students to algorithmic systems and artificial intelligence. Students should understand how algorithms influence information visibility and how AI can affect journalism production and verification.

24.4 Faculty Development

Journalism educators require continuous professional development to remain familiar with emerging technologies, verification methodologies, digital platforms, and AI-enabled journalism. Curriculum transformation cannot succeed without corresponding faculty development.

24.5 Theory–Practice Integration

Journalism education should connect theoretical concepts with practical newsroom situations. Students should be encouraged to analyse real cases of misinformation and undertake structured verification exercises.

24.6 Institutional Collaboration

Universities can strengthen journalism education through collaboration with professional news organisations, fact-checking organisations, media-research institutions, and technology experts. Such partnerships can expose students to current professional practices.

25. Recommendations

Based on the findings and discussion, the study proposes the following recommendations.

25.1 Integrate Media Literacy Across the Curriculum

Media literacy should be incorporated across Journalism and Mass Communication courses rather than being restricted to a single paper or unit. Every major area of journalism education should include appropriate elements of source evaluation, verification, critical analysis, and ethical communication.

25.2 Establish Practical Fact-Checking and Verification Training

Journalism departments should introduce structured practical training in fact-checking and digital verification. Students should regularly work with real-world examples involving social-media claims, photographs, videos, quotations, documents, and misleading contextual information.

25.3 Introduce AI Literacy in Journalism Education

Journalism curricula should include responsible use of generative AI. Students should learn both the professional applications and limitations of AI, including factual accuracy, bias, transparency, privacy, copyright, synthetic media, and accountability.

25.4 Develop Algorithmic Literacy

Students should be introduced to the basic principles of algorithmic recommendation, platform logic, personalisation, engagement metrics, and algorithmic amplification.

25.5 Establish Journalism Verification Laboratories

Universities should consider establishing dedicated verification laboratories or practical verification units within journalism departments. Such laboratories can provide students with structured opportunities to investigate viral claims and develop professional verification skills.

25.6 Strengthen Faculty Development

Institutions should organise regular workshops, training programmes, refresher courses, and professional-development activities for journalism educators.

25.7 Promote Ethical Decision-Making

Media literacy should always be connected with journalism ethics. Students should learn to evaluate public interest, privacy, potential harm, fairness, accuracy, context, and accountability before publication.

25.8 Encourage Collaboration Between Academia and Industry

Journalism departments should develop stronger relationships with news organisations, fact-checking

institutions, media-research organisations, and technology specialists.

25.9 Develop Continuous Curriculum Review Mechanisms

Because digital technologies and information environments change rapidly, journalism curricula should be periodically reviewed.

25.10 Promote a Culture of Verification

The most important recommendation is to establish verification as a professional culture within journalism education.

Evidence before assumption.

Verification before amplification.

Accuracy before speed.

Public interest before virality.

Accountability before convenience.

26. Conclusion

The transformation of the media environment has fundamentally changed the conditions under which journalism operates. Contemporary journalists work within an information ecosystem characterised by social media, user-generated content, algorithmic distribution, misinformation, disinformation, manipulated media, and rapidly developing artificial intelligence.

In such an environment, journalism education cannot remain limited to conventional reporting, writing, editing, and production skills.

Future journalists require the ability to critically evaluate information, identify unreliable sources, verify claims, interpret visual evidence, understand digital platforms, recognise algorithmic influence, use emerging technologies responsibly, and make ethical editorial decisions.

The present study argues that media literacy should be repositioned as a core professional competency within journalism education.

It should not be treated merely as a skill that audiences require to protect themselves from misinformation. For journalists, media literacy is directly connected to the fundamental professional responsibility of establishing the credibility, accuracy, relevance, and context of information before communicating it to the public.

The study further demonstrates that misinformation cannot be addressed through technological solutions alone. Verification tools, artificial intelligence, digital platforms, and fact-checking technologies can assist journalists, but they cannot replace human critical judgement and professional accountability.

The future of journalism education therefore requires an integrated model combining:

Critical Thinking + Media Literacy + Verification + Digital Literacy + Algorithmic Literacy + AI Literacy + Ethics

Such an approach can prepare journalism students to function effectively within increasingly complex information environments.

The central conclusion of this study is that journalism education must move from a predominantly content-production-oriented model towards a verification-oriented, critical, ethical, and technologically informed educational model.

In the age of misinformation and generative artificial intelligence, the professional value of journalism will depend increasingly on credibility and trust.

The journalist's greatest value may therefore not lie in being the first person to publish information, but in being among the most trusted professionals to establish what is true, what is uncertain, what requires further verification, and what the public genuinely needs to know.

27. Limitations of the Study

The present study is qualitative and conceptual in nature and is primarily based on secondary literature, scholarly publications, institutional frameworks, and research reports.

It does not include primary empirical data collected from journalism students, journalism educators, professional journalists, or media organisations. Consequently, the findings should be interpreted as analytical and conceptual rather than statistically generalisable.

Another limitation is the rapidly changing nature of digital technologies. Developments in artificial intelligence, algorithmic systems, social-media platforms, and verification technologies may evolve faster than academic research and curriculum frameworks.

The study also does not undertake a comparative empirical assessment of journalism curricula across different universities or countries. Such comparisons could provide additional evidence regarding institutional preparedness.

Future empirical research involving students, educators, working journalists, newsroom editors, and journalism institutions could complement the conceptual findings of this study.

28. Future Research Directions

The present study provides a conceptual foundation for further empirical investigation. Future research may examine the media-literacy competencies of journalism students through quantitative surveys, competency assessments, or experimental studies. Such research could measure students' abilities to identify misinformation, evaluate sources, verify visual content, recognise synthetic media, and assess AI-generated claims.

Future studies may also compare journalism curricula across universities to determine the extent to which media literacy, fact-checking, algorithmic literacy, and AI literacy have been formally incorporated.

Another important area for research is the preparedness of journalism educators. Studies could examine teachers' knowledge, confidence, professional-development needs, and institutional support for teaching digital verification and responsible AI use.

Comparative research across regional, national, and international journalism education systems could further identify effective pedagogical models.

Research may also investigate the relationship between verification-oriented journalism education and public trust in news. Such studies could explore whether stronger verification competencies among journalism students translate into improved journalistic accuracy and audience confidence.

Finally, longitudinal research is required because the information environment continues to evolve rapidly. Future scholarship should examine how emerging forms of synthetic media, automated journalism, algorithmic recommendation, and AI-assisted news production reshape the professional competencies expected of journalists.

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21. 30. Final Academic Statement

22. The present study establishes that media literacy has moved beyond its traditional understanding as an audience-oriented educational competency and has become an essential professional capability for contemporary journalism.
23. The increasing prevalence of misinformation, disinformation, manipulated media, algorithmic gatekeeping, and generative artificial intelligence requires journalism education to undergo a corresponding transformation.
24. The study therefore proposes a shift from conventional content-production-oriented journalism education towards a model centred on:
25. Critical Thinking → Media Literacy → Verification → Digital Competence → Algorithmic Awareness → AI Literacy → Ethical Responsibility
26. This integrated approach can contribute to the preparation of journalists who are not merely capable of producing information, but capable of evaluating, verifying, contextualising and responsibly communicating information in the public interest.