Truth Warriors: Enhancing the Students' Critical Thinking Skills through Media and Information Literacy in the Battle against Fake News

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ABSTRACT

The role of Media and Information Literacy (MIL) is to greatly contribute to the development of students' critical thinking in analyzing facts and evaluating reliable sources on online media to help safeguard academic integrity. MIL paves the way for scrutinizing essential facts, discerning accurate information, and fostering critical thinking. This scoping review analyzed valuable insights and implications from peer-reviewed journals, published studies, and related articles relevant to the topic. This paper highlights the importance of integrating media and information literacy into education by shaping students' critical thinking skills to eradicate fake news and misinformation. The review adhered to the PRISMA extension for scoping reviews and the PPC framework. The eligibility criteria include problems, concepts, context, language, subject area, types of sources, database, and period (2020-2025). After the researchers had iteratively revised the clusters, the following thematic clusters were finalized for the present review: (1) false information presented as news; (2) ability to access, analyze, evaluate, and create media; and (3) critical thinking regarding media and understanding power dynamics. Despite the challenges, MIL plays a crucial role in enhancing students' critical thinking skills, helping them analyze media messages, recognize biases, and make informed decisions. To spread MIL effectively, educational curricula should integrate it at all levels, educators should be trained to teach it, community programs and digital platforms should be leveraged for outreach, and collaboration across sectors like education, media, and government should be encouraged to create comprehensive media literacy initiatives. Collectively, these efforts can help build a more media-literate society capable of critically navigating the complex information landscape.

Keywords: media and information literacy, critical thinking, fake news, misinformation, disinformation

INTRODUCTION

The rapid evolution of digital technology and the increasing reliance on the internet have revolutionized how we access and share information. While this has created numerous opportunities for learning and communication, it has also given rise to the widespread dissemination of misinformation and fake news. The proliferation of false information poses a significant challenge, particularly in the context of education, where young minds are still developing their ability to critically analyze and assess the information they encounter. In this era, media and information literacy (MIL) emerged as a crucial tool in empowering students to navigate the complexities of the digital world.

Media and information literacy equips individuals with the skills to critically evaluate media messages, understand the sources of information, and discern the credibility of content. These skills are essential not only for academic success but also for fostering informed, responsible citizenship in an increasingly interconnected world. Critical thinking, as a fundamental component of MIL, encourages students to question, analyze, and evaluate information rather than accepting it at face value. By enhancing critical thinking skills, students can

more effectively identify and challenge false narratives, reducing the influence of fake news on their perceptions and beliefs.

This research aims to explore the role of media and information literacy in improving students' critical thinking skills, particularly in combating the spread of fake news. By examining how MIL can be integrated into educational practices, this study seeks to understand how fostering these competencies can empower students to make informed decisions and become more discerning consumers of information. Ultimately, this research hopes to contribute to the ongoing conversation about how educational institutions can equip students with the tools necessary to critically engage with the vast amount of information available in the digital age.

Research Questions

This scoping review aims to explore the prevalent topics of the emerging research field of media and information literacy in combating fake information and promoting the critical thinking skills of students. To achieve the objective, we are to reply to the following review questions:

1: What are the major challenges and concerns related to media and information literacy in combating fake information and promoting critical thinking skills?

2: What are the roles of media and information literacy in students' critical thinking skills?

3: What are ways to spread media and information literacy?

METHODOLOGY

Protocol

A study protocol was meticulously developed before the current scope review. The researchers attest that this review report accurately, faithfully, and openly describes the review that was carried out. There were no documented procedure violations. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) extension for Scoping Reviews (Tricco et al., 2018) and the structure put forward by Arksey and O'Malley (2005) served as the foundation for this scoping review, and any deviations from the original study design were suitably explained.

Search Eligibility Criteria

In the present review, the problem, concept, and context (PCC) framework was applied to state the eligibility criteria and structure the review, as shown in Table 1.

Table 1. Eligibility Criteria

Criterion	Inclusion	Exclusion	Rationale
Problem	Fake Information	All publications going beyond	This review deals with how students combat fake news and develop critical thinking skills.
Concept	Media and Information Literacy	Other Literacy Concepts	This review aims to determine the prevalent topics of the emerging research field of media and information literacy.
Context	Junior High School, Senior High School, and Higher Education	Other contexts	The review will investigate the development of critical thinking skills among students.
Language	English	Other languages	This scoping review focuses on published journals and articles written in English, as

			lingua franca of the nations.
Time Span	2020-2025	Previous years	This period is acceptable as it gives
Types of Sources	All published articles, even peer-reviewed journals relating to the theme	Unavailable sources and unpublished research	The review aims to get a comprehensive discussion relating to the themes.
Geographical Location	Any location	None	This review aims to identify the local and international perspectives.
Database	Scopus and peer-reviewed journals Google Scholar, Eric, Science Direct	unpublish and other bases other than Scopus and peer-review	The Scopus and peer-reviewed articles are selected because they have reliable citations and impressive coverage of literature.
Areas of Research	Teaching and Learning; Education	Other areas	The review focuses on education, specifically teaching and learning.

Search Strategy

As of January 2025, the search was carried out to achieve the goal and provide answers to the review questions. A comprehensive search was performed among various academic databases, namely Google Scholar, Eric, ScienceDirect, and Peer-Reviewed Journals, to conduct this Scopus review, which was extensively searched to find pertinent publications that met the inclusion criteria. The inclusion criteria for articles should be relevant to the significance of media and information literacy in promoting students' critical thinking to fight the proliferation of fake news in the present time. The search was only limited between 2020 to 2025 and written in English. Additionally, peer-reviewed literature was included in this scoping review. To choose the best terms for a search, the review questions, goals, and body of existing literature were examined. The terms "media and information literacy," "critical thinking skills," "fake information," and "role of media and information literacy" were used in the search; other possible keywords were included in pre-protocol searches, but they did not yield any pertinent results. Titles, abstracts, and keywords were screened to determine whether full-text publications were eligible for review.

Study Selection

Initially, both authors found studies that met the requirements for qualifying. Each author reviewed the titles of the discovered documents, followed by the abstracts and keywords, after employing the Scopus and peer-review criteria (period, subject area, and language). Second, the documents were marked with "to include" or "to exclude" by each reviewer. The writers reached a mutual consent agreement in the event of disagreement. No contentious matter necessitates lateral knowledge. The publishers provided the full texts. Every reviewer studied the entire material carefully and conducted a separate independent analysis. Publications that qualified were found.

Data Extraction

The title and review questions were determined under the PCC framework. Pre-protocol searches made us identify the basic structure of the extracted data for the review:

1. data from the reviewed documents relating to the role of media and information literacy in promoting critical thinking to students;

2. data from the reviewed publications regarding major challenges and concerns related to media and information literacy in combating fake information and promoting critical thinking skills;
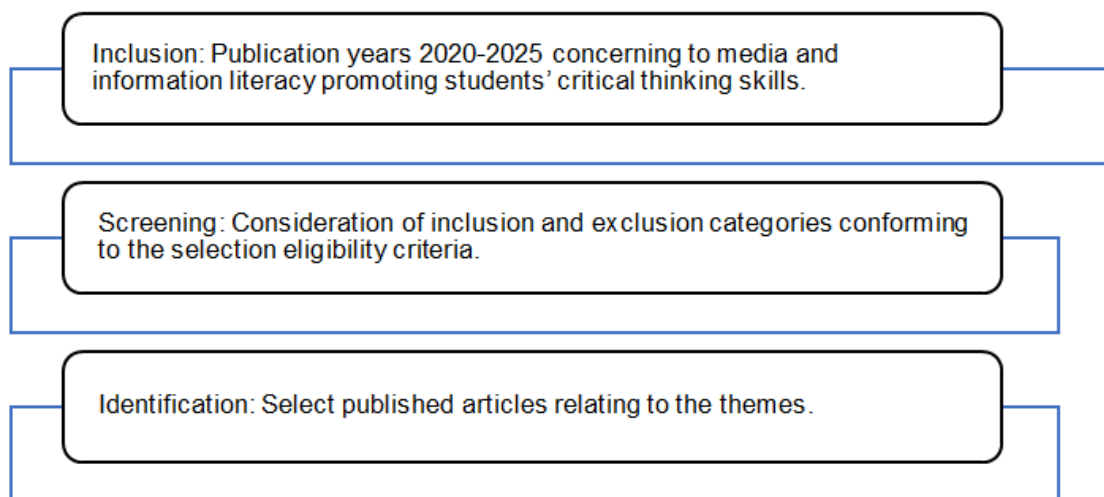
3. data from the articles under review containing information on authorship and integrity issues relating to the role of media and information literacy in promoting students' critical thinking skills.

RESULTS

Search and Selection Results

The search results were finalized as of February 17, 2025. Initially, we found a total of fifteen (15) documents in the Scopus database and ten (10) peer-reviewed articles. After we had applied the selected Scopus and peer-review filters (language; subject area, time), the total decreased from twenty-five (25) to fifteen (15) studies. Then we screened the titles and abstracts. Ten (10) documents were deemed irrelevant and excluded from the review. As not all full texts were found, we analyzed only fifteen (15) publications, with the other ten (10) publications eliminated as non-eligible. Figure 1 shows the PRISMA flowchart depicts the whole identification and screening procedure.

Figure 1 Selection of Publications for Review

Inclusion: Publication years 2020-2025 concerning to media and information literacy promoting students' critical thinking skills.

Screening: Consideration of inclusion and exclusion categories conforming to the selection eligibility criteria.

Identification: Select published articles relating to the themes.

Bibliometric Characteristics of the Research Field

The fifteen (15) documents included in the present review were analyzed on the following aspects: yearly distribution, types of documents, authors, and countries of affiliation, journals, or documents included in the review. They all give information about important trends, notable academics, and highly regarded publications.

Documents Ultimately Included in the Review

The review provided journals, articles, editorials, and reviews meeting the primary objective and eligibility criteria. Table 2 presents the publication author, year, and publication title. These published studies and articles provided insights and findings in understanding the phenomenon, promoting critical thinking skills through media and literacy education as well as the implications to mitigate the widespread of fake news in the present time.

Table 2 Published articles included in the review

References	Publication Title
1. Andersson, 2021	It's Critical: The Role of Critical Thinking in Media and Information Literacy
2. De Abreu, 2021	Gatekeeping Misinformation with Media Literacy Education
3. Halpern, 2024	Critical Awakening: Enhancing Student's Agency through Critical Media Literacy

4.	Hobbs, et al., 2022	Measuring the Implementation of Media Literacy Instructional Practices in Schools: Community Stakeholder Perspectives
5.	Johnson, N. R et al. 2021	Scales for Assessing News Literacy Education in the Digital Era
6.	Lewandowsky, S. et al., 2021	Countering Misinformation and Fake news through Inoculation and Prebunking
7.	Marlatt, 2020	Encounter and Counter: Critical Media Literacy in Teacher Education
8.	Mrisho, et al., 2023	Media literacy: Concept, Theoretical Explanation, and its Importance in the Digital Age.
9.	Reem Al- Zou'bi, 2021	The impact of media and information literacy on acquiring critical thinking skills by the educational faculty's students
10.	Shah et al., 2024	Fostering Critical Thinking Skills in Tertiary-Level Students for Media and Information Literacy
11.	Thevenin, 2022	Making Media Matter: Critical Literacy, Popular Culture, and Creative Production (1st ed.)
12.	Tommasi et al., 2023	Enhancing Critical Thinking Literacy and Media Literacy in the context of IVET: A Systematic Scoping Review
13.	Trope, A., et al., 2021	Media, Making & Movement: Bridging Media Literacy and Racial Justice through Critical Media Project
14.	Washington, J., 2023	Combating Misinformation and Fake News: The Potential of AI and Media Literacy Education
15.	Wuyckens, et. al, 2022	Untangling Media Literacy, Information Literacy, and Digital Literacy: A Systematic Meta-review of Core Concepts in Media Education.

Hypothetical Thematic Clusters

While pilot-searching the Internet, we outlined probable thematic clusters that were tested and explored during the search, identification, screening, and elimination of the documents subject to the eligibility criteria. After the researchers had iteratively revised the clusters, the following thematic clusters were finalized for the present review: (1) false information presented as news; (2) ability to access, analyze, evaluate, and create media; and (3) critical thinking regarding media and understanding power dynamics. Table 3 shows the discussion of each thematic cluster. The clusters fully conformed to the research questions and covered the main findings of the fifteen (15) selected documents.

Table 3 Hypothetic Thematic Clusters

Thematic Clusters	Cluster Descriptions
1. False information presented as news	The expected results show that learners have a moderate capacity for critical thinking when it comes to understanding and assessing media content. This emphasizes how vital it is to raise their critical thinking abilities so they can analyze an array of media information efficiently.
2. Ability to access, analyze, evaluate, and	A key component of teaching media literacy is teaching students how to look for reliable sources of information and how to answer their queries. This examines these problems and offers some suggestions for comprehending how social media contributes

create media	to the spread of false information.
3. Critical thinking regarding media, understanding power dynamics	Given how common media is and how it shapes our perceptions of the world, we must have a strong framework for analyzing and interpreting it. Additionally, it pushes students to interact critically with media content, investigate how the media either supports or undermines established power systems, and question the sources of information. In this setting, critical thinking enables people to become more knowledgeable and engaged participants in the media landscape as well as the broader societal conversations surrounding influence and power.

LITERATURE REVIEW

The clusters completely addressed the research questions and highlighted the key findings based on the fifteen selected documents where:

Major Challenges and Concerns Related to Media and Information Literacy

Weakens Public Trust

Misinformation, disinformation, and fake news can have a destructive influence on public discourse. The more this type of false information permeates, the lower is the trust in general towards media, state and private institutions, and in all conventional sources of information (Wardle & Derakhshan, 2017).

As the information deluge sweeps through social media and online channels around the world, the distinction between fake and real news gets more difficult to pinpoint. While misinformation involves sharing something that is not true, albeit unwittingly, disinformation implies deliberate falsification aimed at deception. Such information was, until now, termed under one head- fake news, including anything from made-up stories to gross exaggerations concocted to sway or misinform the reader. This has proven incredibly damaging in a world constantly turning toward online sources for news and information.

Neglecting Information Environment

One of the key points made by Lewandowsky et al. (2021) is that, on social media and websites, the massive barrage of information available fosters information overload and makes it difficult for individuals to discern what is fake news and what is misinformation.

Uneven Execution in Schools

Even though it is acknowledged that media literacy is important, it rarely finds a way into curricula in an integrated, systematic fashion. According to Hobbs et al. (2022), the absence of adequate support in terms of preparation on the part of teachers, and the absence of resources allocated for the steady provision of comprehensive media literacy education, result in highly variable and fragmented learning for students regarding critical thinking and media engagement.

Teacher Preparedness

As per a discussion by Marlatt (2020) on the topic, teachers do not often themselves receive adequate training in critical media literacy or training at all in order to teach students how to develop this sense of critical discernment in their use of media. Therefore, students, in the same vein, develop the necessary skills for identifying or combating fake news.

Ambiguous Role and Over-reliance to AI

AI can bring about the end of fake news, but, as posited by Washington (2023), it will also aid in the spread of misinformation. Concerns were raised that the very tools meant to fight misinformation— fact-checking AI tools— might come under the manipulation of malicious actors to keep spreading false information.

The overreliance on AI systems poses a threat in the undermining of human judgment towards critically assessing media. If people trust automated systems too much to debunk misinformation, they might become negligent about further developing their critical thinking skills, as already tackled by Tommasi et al. (2023).

The Roles of Media and Information Literacy in Student's Critical Thinking Skills

Enhancing Critical Thinking Skills

MIL helps students develop the ability to critically analyze media messages, understand their underlying structures, and assess their credibility. By engaging with diverse media, students learn to question assumptions, recognize biases, and evaluate the validity of information, which is foundational for critical thinking. As Andersson (2021) suggests, media literacy is integral to fostering an analytical mindset.

Promoting Awareness of Misinformation and Bias

Media literacy education equips students with the tools to identify misinformation and detect biases in media sources. De Abreu (2021) discusses how learning to recognize misleading or false content helps students resist being misled, thereby sharpening their capacity for informed decision-making. This awareness is essential for cultivating independent, critical thinkers.

Encouraging Reflection and Perspective-Taking

By teaching students to engage with different perspectives, MIL encourages reflection on various viewpoints and cultural contexts. Halpern (2024) argues that when students critically engage with media narratives, they become more attuned to the complexities of social, political, and cultural issues, enabling them to reflect on their own beliefs and assumptions. This strengthens their overall critical thinking skills.

Fostering Active Participation in Society

Media and information literacy empower students to take agencies in navigating media landscapes and to become active participants in societal discussions. As Mrisho et al. (2023) note, critical media literacy encourages students to not only consume media but also engage in creating and critiquing media, promoting a sense of responsibility and deeper critical engagement with issues around them.

Developing Cognitive Skills for Problem-Solving

MIL promotes the development of cognitive skills such as problem-solving, evaluation, and decision-making. By evaluating the reliability of media content, students build the ability to assess arguments, solve problems, and make informed decisions. Shah et al. (2024) emphasize that fostering these cognitive skills through media literacy helps students approach challenges with a more reasoned, evidence-based mindset.

Ways to Spread Truthful Information through Media Literacy

Integrating MIL into Educational Curriculum

One effective way to spread MIL is by embedding it within formal education. Studies like those by Hobbs et al. (2022) and Marlatt (2020) suggest integrating media literacy into K-12 and higher education curriculums to ensure that students develop these skills early. By incorporating MIL into core subjects, students will continuously engage with critical thinking skills in a structured environment.

Train Educators to Deliver MIL

Teachers and educators need specific training in critical media literacy to effectively teach students. Marlatt (2020) emphasizes the importance of teacher education programs that equip instructors with the tools to incorporate media literacy into their teaching. Professional development workshops and resources on MIL can help teachers confidently address media-related challenges in the classroom.

Community-based Media Literacy Program

Community initiatives can play a significant role in spreading MIL by providing outreach programs to diverse audiences, particularly to underserved groups. As De Abreu (2021) points out, these programs can be tailored to different age groups and cultural contexts, promoting media literacy outside of the classroom. Local libraries, non-profits, and civic organizations can host workshops, events, and discussions to engage the community.

Leveraging Technology and Social Media

Given the digital landscape, using technology and social media platforms is crucial to spreading MIL. As Washington (2023) highlights, digital tools and platforms can be utilized to create interactive online campaigns, videos, and courses that teach people to navigate media critically. These platforms can reach broader audiences, especially youth, and provide accessible ways to engage with media literacy content.

Encouraging Collaboration among Sectors

Spreading MIL can be more effective if there is collaboration between educational institutions, media outlets, and policymakers. Shah et al. (2024) and Thevenin (2022) stress that government agencies, media organizations, and educators must work together to create comprehensive media literacy frameworks that align with social goals. Public campaigns, partnerships, and media literacy standards can help unify efforts and amplify the message on a larger scale.

DISCUSSION

In attaining the objective to determine the prevailing directions of research on the role of media and information literacy in combating fake information and promoting the critical thinking skills of students, media and information literacy play a vital role in shaping the critical thinking skills of the students. The published journals show that learners have a moderate capacity for critical thinking when it comes to understanding and assessing media content. This emphasizes how vital it is to raise their critical thinking abilities so they can analyze an array of media information efficiently. Media and information literacy must be intensified to combat fake news and enhance the students' critical thinking. In the same way, how educators promote this in the teaching and learning process.

CONCLUSION

The emerging field of media and information literacy has become more complex due to the technological advancement and prompt spread of information, this scoping review discussed problems with fake news, emphasized the importance of critical thinking skills, and suggested ways to promote MIL in education.

In conclusion, the peer-reviewed journals, relevant studies, and related published articles highlight significant challenges in media and information literacy (MIL), particularly in combating fake information, which include the overwhelming volume of content online, the rapid evolution of misinformation tactics, and the cognitive biases that hinder individuals' ability to critically assess media. Despite these challenges, MIL plays a crucial role in enhancing students' critical thinking skills, helping them analyze media messages, recognize biases, and make informed decisions.

By fostering reflection, perspective-taking, and active engagement with media, MIL empowers students to become more discerning and active participants in society. To spread MIL effectively, educational curricula should integrate it at all levels, educators should be trained to teach it, community programs and digital platforms should be leveraged for outreach, and collaboration across sectors like education, media, and government should be encouraged to create comprehensive media literacy initiatives. Collectively, these efforts can help build a more media-literate society capable of critically navigating the complex information landscape.

RECOMMENDATION

Based on the findings of the scoping review, the following are recommended:

Integration of MIL to Curriculum

Media and Information Literacy (MIL) should be seamlessly integrated into school curriculums across all educational levels, from K-12 to higher education. This integration would involve embedding MIL into various subjects such as language arts, social studies, and even STEM courses, ensuring that students are exposed to critical thinking and media analysis regularly. By doing so, students will not only learn how to engage with the media but also develop the skills to evaluate sources, recognize biases, and discern facts from misleading content. Structured integration ensures that media literacy is a foundational skill, rather than an afterthought, and helps students become lifelong critical consumers of media.

Teachers' Capacity Buildings for Teaching MIL

Educators should be provided with specialized training programs and professional development opportunities focused on teaching MIL. Teachers must be equipped with the necessary knowledge and tools to effectively incorporate MIL into their teaching. This includes training on identifying misinformation, understanding the dynamics of digital media, and fostering critical thinking among students. Capacity-building workshops can enhance teachers' confidence and competence in guiding students through media analysis. Moreover, ongoing support through peer learning and collaborative platforms can ensure that educators continuously update their skills in line with new media trends, ultimately improving their ability to nurture critical thinking in students.

Active Forums on Fighting Fake News

Organizing active forums, discussions, and workshops that focus on combating fake news can be a powerful tool for engaging the community in MIL. These forums can bring together students, educators, media professionals, and community leaders to discuss strategies for identifying misinformation, share insights on current fake news trends, and educate the public on how to engage with media critically. Collaborative efforts through these forums can encourage individuals to become more vigilant in their media consumption and build a collective approach to fight misinformation. Such initiatives can also empower students to take leadership in raising awareness and initiating campaigns within their own communities, spreading the importance of media literacy beyond the classroom.

By doing so, these will surely strengthen media literacy education, develop teacher-student capacity, and foster public engagement in the fight against fake news. Through these steps, we can build a more media-literate society capable of critically analyzing and mitigating the complex spread of false information over the media.

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