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تحية طيبة وبعد ،،،

تتقدم إليكم جامعة بدر بالقاهرة بالشكر على ما تبذلونه من جهد مادي ومعنوي لإصدار المجلة،
فتميزكم المشهود خير قدوة، ممتنين لعملكم الدؤوب وتفوقكم الباهر، ونتمنى لكم المزيد من
النجاحات المستقبلية.

تحريراً في يوم الأربعاء الموافق 2024/08/07.

رئيس مجلس الأمناء

د/ حسن القلا

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Integrating Media Literacy and Psychological Literacy Through Critical Thinking: A Scoping Review of Social Media Research

Ahmed Hassan El-Saman *

Media department School of Humanity and Social Sciences

Email: a_elsaman@hotmail.com

ahmed-hasan@buc.edu.eg

A B S T R A C T

This paper presents the first scoping review to explore the intersection of Media Literacy (ML), Psychological Literacy (PL), and Critical Thinking (CT) in the context of social media. A scoping review methodology was selected to address this emerging area by examining definitions, practical applications, and frameworks in existing literature. The findings confirm that while ML is supported by an established body of research and frameworks, it often lacks integration with the psychological factors that shape social media engagement. PL, emphasizes self-awareness, reflection, and applying psychological concepts to real-world contexts, complementing ML which focuses on media creation and consumption. The review identifies CT as a possible bridge linking ML skills and psychological insights, yet it reveals a lack of frameworks that integrate these dimensions. To address this gap, the paper proposes the SAMAN-UGT framework, to integrate PL's cognitive basis and ML's structural awareness based on CT. This framework integrates knowledge base, CT, communication, and social responsibility, detailing competencies and sub-competencies aligned with Uses and Gratifications Theory motives (cognitive, affective, entertainment, personal integration, social integrative) to promote responsible social media use, through a user-centered model across four core and 12 sub-competencies. Ultimately, this framework provides structured, interdisciplinary guidance for educators and policymakers, to cultivate critical, ethical, and psychologically informed digital citizens amid evolving digital and AI challenges.

Keywords:

Critical Thinking; Psychological Literacy; Media Literacy; Social Media; Scoping review; SAMAN-UGT framework; Uses and Gratifications Theory

1. Introduction

In an era of unprecedented connectivity, social media delivers vast amounts of information in rapidly evolving formats, posing significant challenges across disciplines. This pervasive influence of social media on information consumption and mental well-being underscores the urgent need to integrate Media Literacy (ML) which equips individuals to critically analyze media content and detect misinformation, and Psychological Literacy (PL) which promotes the application of

psychological principles to personal and societal interactions. Despite their synergistic potential, these fields remain largely disconnected in both research and practice. Scholars find that Critical Thinking (CT) is a shared foundational competency (Andersson & Danielsson, 2021; Vernier et al., 2018). Indeed, CT is widely recognized as central to ML (Potter, 2013), and its relevance to PL is increasingly acknowledged (Cranney et al., 2022; Pownall et al., 2023), because CT is indispensable for navigating complex social media environments, and its skills are foundational for mitigating the psychological impacts of media exposure (Potter, 2022).

From a PL perspective, CT enables individuals to recognize how cognitive biases and emotional responses influence decision-making, particularly in educational contexts (Tommasi et al., 2023). This application supports key undergraduate learning outcomes, including analytical reasoning, self-regulation, and ethical judgment (Cranney et al., 2022; Harris & Lipschultz, 2022; Hulme et al., 2015). In contrast, within ML, CT is well established as a core skill, with (Feuerstein, 1999) demonstrating that media literacy education enhances critical thinking abilities. Interpretations of CT vary across disciplines which shapes its role in both media and psychological literacies (Lai, 2011; Thonney & Montgomery, 2019).

However, differing conceptualizations of CT across disciplines present a challenge, likely due to varying emphases on cognitive, affective, and contextual dimensions (Altun & Yildirim, 2023). This variance highlights the need for interdisciplinary collaboration, to integrate insights from many disciplines such as psychology, media, education, and communication technologies to address the challenges of the evolving media ecosystem and to strengthen understanding and application across domains (Institute of Medicine, 2005). This need is reflected in the work of (Tommasi et al., 2023) advocates for a cognitive approach to CT and ML that emphasizes how individuals analyze, connect, and reconstruct information to deepen comprehension. This is particularly relevant in the context of social media. Merging PL and ML could enrich ML by incorporating insights into the cognitive and emotional processes shaping user behavior (Hulme et al., 2015). Although PL is less institutionalized than ML (Privitera et al., 2024), it plays a vital role in helping individuals apply psychological knowledge to real-world situations, improving communication, empathy, and social dialogue (Tanaka et al., 2013; Tommasi et al., 2023).

This paper proposes CT as an interdisciplinary bridge between PL and ML. CT is a set of cognitive skills and dispositions shaped by psychological and contextual factors (Orhan, 2023; Terras et al., 2015). Absence of such a bridge is a gap this paper tries to fill. To address this gap, we introduce the **Social Media and Navigation based on Uses and Gratification Theory (SAMAN-UGT)** framework, which integrates PL and ML with CT as the central linking mechanism. This framework aims to inform interventions that strengthen critical media competencies and promote psychologically informed digital engagement, responding to (Schreurs & Vandenbosch, 2021) call for tools that help students critically analyze online interactions.

1.1. Theoretical framework

UGT proposed by (Katz, E. et al., 1973), is among media effects theories that examine how media consumption impacts individuals and how they actively select media to fulfill specific psychological and social needs and motivations. According to the theory, media users are purposive in **their consumption**, with media engagement serving to fulfil certain needs or gratifications, including psychological needs.

The theory offers a valuable framework for understanding the active role of **social media users**, allowing them to determine when and how they engage with media. UGT gives an important role for users' motivations as it outlines the key social media motivations: cognitive (information, truth-seeking), affective (emotion, mood), personal integration (identity, esteem), social integration (connection, community), and entertainment. A key dimension of the theory with significant implications for both PL and ML is the concept of selective exposure, which refers to the tendency of individuals to seek out media that reinforces their existing attitudes and beliefs while avoiding contradictory information (Knobloch-Westerwick, 2015). From a PL perspective, Katz's theory is particularly relevant as it investigates how media consumption affects and is affected by psychological well-being, including emotional regulation and self-awareness. For instance, engaging with positive media content can enhance emotional resilience and promote better self-regulation, whereas exposure to harmful media can lead to increased stress and diminished mental health (Potter, 2013). This theory directly reflects core key social media engagement concepts such as cognitive needs, social integration, and identity expression, which helps explain media selection patterns and their common relationship with critical thinking skills.

1.2. Research Aim and Questions

In response to the growing challenges of dis/misinformation, and emotional manipulation in social media environments, this study aims to enhance the integration of PL and ML to foster CT to inform the development of an evidence-based approach that promotes reflective and informed participation. Drawing on the methodological principles of scoping reviews, including their ability to identify gaps in current literature (Arksey & O'Malley, 2005), and to inform future frameworks through synthesizing interdisciplinary insights (Munn et al., 2018) this research applies a scoping review to address the following three questions:

Q1. How has existing research explored the role of CT within PL and ML in the context of social media?

Q2. A) What PL-ML frameworks currently exist to foster critical thinking in social media contexts?

Q3. What competencies are required to integrate PL-ML to foster CT according to Uses and Gratifications Theory?

2. Methodology

This scoping review aims to gather research papers from any time available regarding CT in its relation to PL and/or ML. The scoping review methodology used in this study is based on (Arksey & O'Malley, 2005) approach and reporting on the PRISMA ScR Extension for Scoping Reviews (Tricco et al., 2018). Utilizing a priori codes

derived from the literature and add new codes where necessary. The codes of findings, search, screening, and selection are shown in table 1.

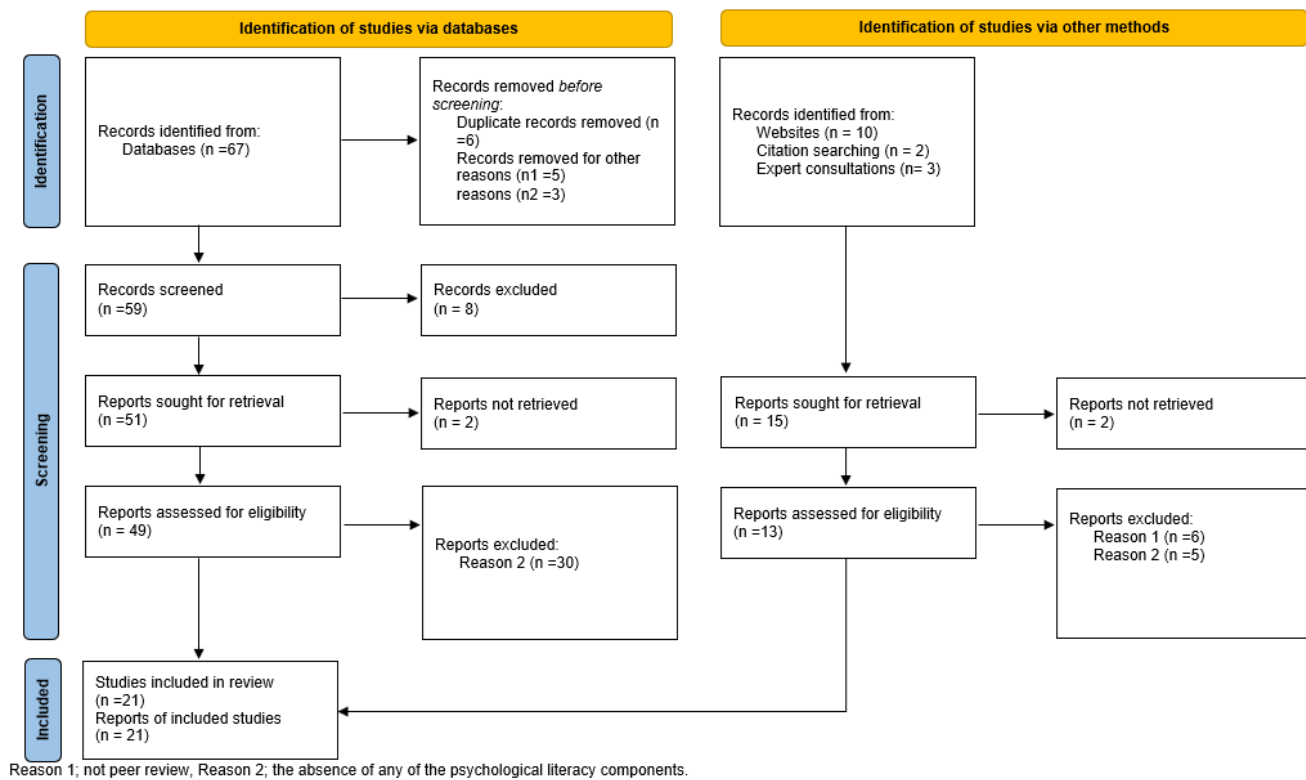
Table 1. Codes of findings, search, screening, and selection

<i>Category</i>	<i>Description</i>
<i>Interdisciplinary Link</i>	Explicit connections between CT and ML and/or PL or its components (e.g., self-regulation, emotional awareness, cognitive, psychology, individual trait, effect).
<i>Study Design</i>	Journal articles employing any research methodology (e.g., qualitative, quantitative, mixed methods).
<i>Findings</i>	Key insights on the role of CT in facilitating ML and/or PL, including its impact on information processing or behavior regarding social media content
<i>Implications</i>	Applications for social media use, educational practices, policy development, or directions for future interdisciplinary research.

2.1. Search strategy

The Scopus database was searched to meet the requirement of presenting “the full electronic search strategy for at least one database” (Tricco et al., 2018, p. 11). Search strings combined terms related with ML, PL, and CT. An initial pilot search on November 27, 2024, using (“Media Literacy” AND “Psychological Literacy” AND “Critical Thinking”) yielded no results. After testing various combinations, the refined search string (“Critical Thinking” AND [“Media Literacy” OR “Psychological Literacy”] AND “Social Media”) produced 67 records on Scopus. Additionally, the same formula was applied to Google Scholar, yielded 10 more records. Expert reviewers from the Clinical Psychology Department at BUC recommended three seminal articles, bringing the total to 80 records. Following title and abstract screening, 30 articles were excluded, and 58 were exported to Zotero for reference management. A snowball search (Wohlin, 2014) of the retained articles’ reference lists added two relevant records. After full-text assessment, 51 articles were evaluated for eligibility, with 21 retained for analysis, as illustrated in Figure 1.

Fig.1 PRISMA flow diagram of search, screening, and selection of evidence records.



2.2. Selection strategy

- Articles were selected for review if they met the **following** eligibility criteria for inclusion: Reports on CT and social media with explicit dealing with ML and/or PL.
- The result of the search using (“Psychological Literacy” AND “Critical Thinking”) formula yielded only 4 records from Scopus, that is why the search included any of PL components, such as cognitive; psychology, individual trait; effect. Papers in which no mention of any of the previous PL components were excluded.
- English peer-reviewed, excluding grey literature, and non-English papers.
- Publications at any time.
- In cases where multiple records concerning the same study were identified only the most recent publication was included (1 record only).

A list of the inclusion and exclusion criteria is provided in Table 2.

Table 2. Record selection inclusion and exclusion criteria for title/abstract screening and full-text eligibility analysis.

CRITERIA	INCLUSION CRITERIA	EXCLUSION CRITERIA
POPULATION	Any user of social media or at any age	No Exclusion.

CONCEPT	-Research examining the relationship between CT, ML, and/or PL. PL or any of its components	-Articles that do not address CT, ML and PL
CONTEXT	- Research conducted in the context of social media platforms.	-Absence of social media or online platforms.
FRAMEWORK ALIGNMENT	- Studies utilizing any framework linking CT with ML and/or PL.	No Exclusion.
STUDY DESIGN	-Peer-reviewed articles, including qualitative, quantitative, and mixed-methods studies, and theoretical papers.	- Non-peer-reviewed articles.
LANGUAGE	- Articles published in English.	- Articles published in any other languages.
PUBLICATION DATE	Published any date	No Exclusion.

2.3 Data Extraction and Analysis

In accordance with the questions framed in the introduction, data linked to the review's purposes were extracted. The selected $n = 21$ contributions were analyzed based on the indications for conducting a systematic scoping review (Arksey & O'Malley, 2005; Briner & Denyer, 2012). This stage allowed the researcher to develop a clear overview of the records researched to comprehend possible linkages between items, and identify possible subfields of themes during the synthesis.

3. Results

To address research Q1., " How has existing research explored the role of CT within PL and ML in the context of social media?" This scoping review examines two key dimensions: definitions and applications of the three terms to reveal the conceptual, and knowledge bases. The interplay among CT, ML, and PL is analyzed through themes extracted from the 21 studies. The details of the elements extracted from the 21 records are presented in Appendix 1. Table 3 shows the themes extracted from the two main dimensions of literature:

Theme	Description	Dimension	Studies
Conceptual Integration	Definitions linking PL, ML, and CT, emphasizing cognitive and analytical skills.	Definitions	Potter (2022); Schreurs & Vandenbosch (2021)

Knowledge Base	Foundational understanding of psychological and media literacy principles.	Definitions	(Facione, 2015); (Arke, 2005)
Communication Engagement	Applying CT to interpret and navigate social media interactions effectively.	Applications	Schreurs & Vandenbosch (2021);(Machete & Turpin, 2020)
Media Production	Using CT to create responsible and informed social media content.	Applications	Potter (2022); (Buckingham, 2019)
Interdisciplinary Synergy	CT as a strengthen for both PL and ML for resilience against misinformation.	Definitions/Applications	(Hobbs, 2017); Machete & Turpin (2020)

Table 3: Extracted Themes from Scoping Review (N=21)

In terms of definitions, ML definitions focus on the ability to access, interpret, CT, source verification, and create communications across various contexts (Zamir et al., 2024; Terras et al., 2015). Scholars, including (Borčić & Holy, 2023; Department of Media and Communication Studies, Faculty of Arts and Social Sciences, University of Malaya, Kuala Lumpur, Malaysia. et al., 2019), highlight ML's role in countering misinformation and enhancing CT in digital environments. PL is defined as the values-driven application of psychological knowledge to personal, professional, and societal goals (Cranney et al., 2022; Tanaka et al., 2013), and as a pedagogical approach to address societal issues. CT is defined as reflective reasoning, metacognitive competence, and rational analysis for decision-making and bias evaluation and its foundational skills, including logical reasoning, argument evaluation, and awareness of conceptual relationships (Valtonen et al., 2019; Vernier et al., 2018).

On the other hand, applications focus on competencies and practical manifestations regarding the three concepts. ML practical dimension involves promoting collaborative analysis, using AI tools, curating content, identifying biases, recognizing agendas, interpreting framing techniques, and verifying source to foster critical engagement. (Mihailidis & Cohen, 2013; Valtonen et al., 2019; Vernier et al., 2018).

The scoping review reveals that ML is closely tied to CT, particularly for filtering misinformation and navigating digital environments. (Shin & Zanuddin, 2019; Borčić & Holy, 2023) focus on evaluating media messages, identifying misinformation, and developing critical perspectives on media content that can shield individuals from misleading information. (Valtonen et al., 2019) highlight the integration of ML education with computing education to enhance students' ability to critically engage

with digital media. Technological advancements further strengthen ML's role in fostering CT. (Zamir et al., 2024) demonstrate that knowledge of machine learning techniques can help in detecting misinformation and assessing sentiment in news articles, providing a data-driven approach to CT. (Terras et al., 2015; Tommasi et al., 2023) emphasize the relationship between online content creation and identity formation. (Orhan, 2023) highlights how social and cognitive factors influence what individuals produce and share, and that CT plays a greater role than ML alone in students' ability to detect fake news. ML encourages active participation through media analysis, collaborative learning, and social interventions (Jarman et al., 2024; Vernier et al., 2018). Overall, ML focuses on analytical skills and media awareness, while PL provides a cognitive and behavioral perspective, emphasizing the psychological mechanisms influencing digital environments.

PL emphasizes internal processes and how individuals engage with media content and how to interpret and respond, including how individuals process and internalize information, highlighting the psychological influences of digital engagement, such as echo chambers, disinformation effects, and cognitive biases in media consumption, providing a deeper understanding of online behaviors and how to deal with manipulation (Akram et al., 2022; Beauvais, 2022). (Arafah & Hasyim, 2023; Tanaka et al., 2013) suggest that psychological factors including motivation, identity formation, and the cognitive challenges of digital expression shape media creation. PL frames CT as an intentional application of psychologically literate person to achieve personal and professional goals (Cranney et al., 2022). PL applies psychological insights to develop CT training programs and to understand motivations for online content production (Terras et al., 2015; Tommasi et al., 2023). PL could inform training programs designed to improve critical engagement in digital spaces (Tommasi et al., 2023). (Akram et al., 2022) assert that disinformation disproportionately affects individuals with lower CT skills, making it difficult for them to differentiate between misinformation and systemic manipulation. Applying both literacies supports misinformation detection, ethical content creation, and adolescent behavior modification (Borčić & Holy, 2023; Jarman et al., 2024; Zamir et al., 2024).

Regarding social media, it has been explored as both a challenge and a tool for developing critical thinking. (Galindo-Domínguez et al., 2024) note that increased use of social media for academic purposes correlates with higher critical thinking development. (Jarman et al., 2024) advocate for holistic interventions to address behavioral drivers in young social media use. However, (Cheng et al., 2024) warn that excessive reliance on social media can hinder critical thinking, despite its potential as a cognitive development tool.

To sum up, ML emphasizes external media engagement, while PL focuses on internal reflection and self-awareness, while CT creates synergy for navigating social media, as shown in table 4.

Concept	Definition	Basic Skills	Application	References
ML	Competency in CT, source verification, and creating communications across contexts.	Identifying biases, recognizing agendas, interpreting framing techniques, and source verification.	Countering misinformation, ethical content creation, collaborative media analysis, and navigating media environments.	Zamir et al. (2024); Terras et al. (2015); Shin & Zanuuddin (2019); Borčić & Holy (2023); Mihailidis & Cohen (2013)
PL	Values-driven application of psychological knowledge to personal, professional, and societal goals; a pedagogical approach to societal challenges.	Decision-making, problem-solving, and applying psychological insights.	Developing CT training programs; applying psychological principles to understand online behavior and societal issues; informing personal, professional, and community decisions.	Cranney et al. (2022); Tanaka et al. (2013); Hulme et al. (2015); McGovern et al. (2010)
CT	Reflective reasoning, metacognitive competence, and rational analysis for decision-making and bias evaluation.	Logical reasoning, evaluating arguments, and understanding logical connections.	Evaluating information, challenging biases, and supporting informed decisions in digital contexts.	Valtonen et al. (2019); Vernier et al. (2018); Orhan (2023); Cheng et al. (2024)
Common Ground (ML & PL)	Both foster higher-order thinking and reflective analysis through CT.	Critical evaluation and reflective reasoning.	Enhancing resilience against misinformation and promoting responsible digital engagement.	Mihailidis & Cohen (2013); Cranney et al. (2022)

Table 4. Comparing ML and PL regarding CT and extracted skills

The table compares ML and PL, noting their shared reliance on CT for higher-order thinking and reflective analysis to counter misinformation and foster responsible

digital engagement. It synthesizes the definitions, basic skills, and applications of PL, ML, and CT, emphasizing their interplay in social media contexts. It highlights PL focuses on applying psychological knowledge for personal and societal goals, ML emphasizes on evaluating and creating media content, and CT's role as reflective reasoning that bridges both.

3.1 Frameworks

Regarding Q2. about existing PL or/and ML frameworks, that foster critical thinking in social media contexts, scholarly analysis identifies a singular documented framework Social Media Literacy Model (SMiLE) suggested by Schreurs and Vandenbosch. The model presents a structured framework to comprehensively conceptualize social ML by explaining how social ML can empower users and enhance and facilitate a deeper exploration of social media content (Schreurs & Vandenbosch, 2021). The review found no other framework linked PL to CT, this absence highlights a significant theoretical and empirical deficit.

3.2 Competencies

To address Q3 about required competencies to integrate PL-ML and foster CT, this scoping review synthesizes essential competencies from the PL and ML corpus and their interaction with CT. Such competencies could propose a novel framework for systematic integration then the paper links these competencies to core UGT motivations based on (Katz, E. et al., 1973; Ruggiero, 2000).

Drawing on previous discussion, this study identifies the following key components as the foundation of SAMAN-UGT structured framework as follows:

Knowledge Base: This competency encompasses platform selection and engagement driven by cognitive, affective, social influence, persuasion, and personal needs. It entails understanding internal processes and psychologically related concepts, including emotional regulation, cognitive biases, group dynamics, and emotional psychology. It is essential for analyzing psychological tactics in social media ecosystems. This competency encompasses the next subcompetencies:

Knowledge Base Sub competencies:

1. Understanding psychological and media concepts (e.g., social influence, cognitive biases) to analyze social media tactics and grasp related psychological and media theories.
2. Emotional Regulation: Know how to manage emotions in digital interactions
3. Platform Selection: Choosing platforms based on cognitive/social needs.

This competency aligns with the cognitive motivation of UGT (information seeking, understanding). Supporting citation; (Cranney et al., 2022).

CT: This competency involves evaluating information, identifying biases, and assessing source credibility to navigate social media effectively and analyze messages, including detecting misinformation. It fosters informed decision-making, resilience to misinformation, emotional regulation, and the integration of internal and external processes through reflective judgment.

CT Sub competencies:

1. Evaluating information: reliably to navigate social media and detect misinformation and false content and bias identification to recognize media content biases.
2. Credibility Assessment: Evaluating information and source reliability.
3. Judgement: Reflective Judgment by Integrating processes for decision-making

This competency aligns with the cognitive motivation of UGT (truth seeking).

Supporting citation; (Arafah & Hasyim, 2023; Borčić & Holy, 2023; Essalhi-Rakrak & Pinedo-González, 2023; Polanco-Levicán & Salvo-Garrido, 2022; Potter, 2004; Shin & Zauddin, 2019; Vernier et al., 2018).

Communication: A core attribute of both ML and PL, this competency encompasses social engagement, obtaining and disseminating information, and articulating psychological principles across contexts to foster informed engagement and dialogue.

Communication Sub competencies:

1. Engaging in informed social dialogue and collaborative engagement by participating in interactive dialogue.
2. Effective Articulation: Conveying psychological/media concepts.
3. Information Dissemination: Sharing accurate information.

This competency aligns with UGT's entertainment and affective motivations (emotion, mood and social integrative) Supporting citation; (McGovern et al., 2010).

Social Responsibility: Both ML and PL emphasize ethical participation, cultural competence, and understanding the social and cultural effects of media use. This involves adhering to ethical principles such as confidentiality, informed consent, and responsible social behaviors, as well as recognizing cognitive biases and social influence.

Social Responsibility Sub competencies:

1. Cultural competence to understand diverse contexts.
2. Ethical Practice: Upholding confidentiality and consent.
3. Impact Awareness: Recognizing societal effects of media.

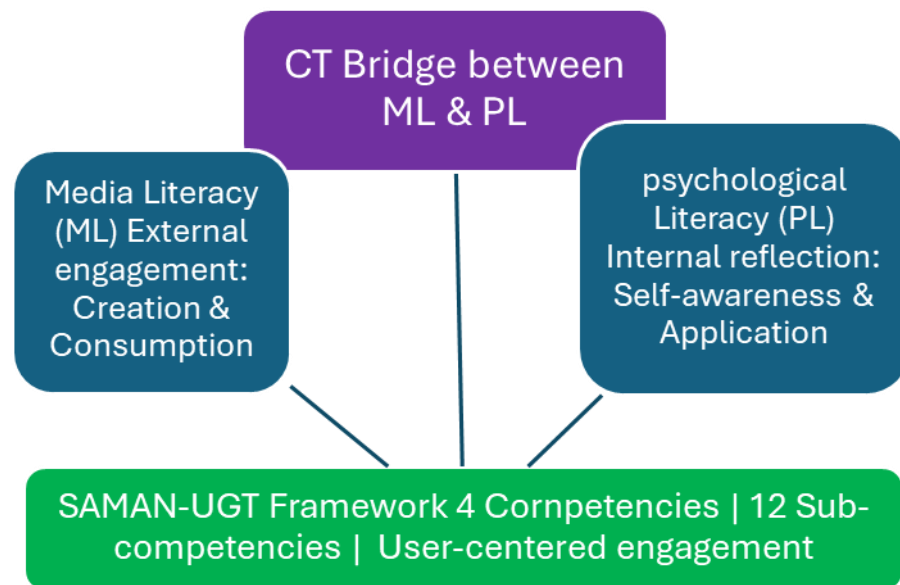
This competency aligns with UGT's integration (identity, esteem), social integration (connection, community), entertainment and affective motivations. Supporting citation; (Hulme et al., 2015).

The following table shows the main competencies of SAMAN-UGT

Competency	Sub competencies	UGT Motivation	Supporting References
Knowledge Base	1. Understanding psychological and media concepts. 2. Emotional Regulation 3. Platform Selection	Cognitive	Cranney et al. (2022); Katz et al. (1973); Zamir et al. (2024)
CT	1. Evaluating information. 2. Credibility Assessment 3. Judgment.	Cognitive (truth seeking)	Potter (2004); Shin & Zauddin (2019); Vernier et al. (2018); Borčić & Holy (2023); Polanco-Levicán & Salvo-Garrido (2022)
Communication	1. Informed collaborative engagement 2. Effective Articulation 3. Information Dissemination	Entertainment, Affective (emotion, mood management and Social Integrative)	McGovern et al. (2010); Valtonen et al. (2019)
Social Responsibility	1. Cultural competence 2. Ethical Practice 3. Impact Awareness	Personal Integrative (identity, esteem), (connection, community), Entertainment, Affective	Cranney et al. (2022); Hulme et al. (2015); Shin & Zauddin (2019); Jarman et al. (2024); Borčić & Holy (2023); Zamir et al. (2024)

Table 5 SAMAN-UGT Motivation-Informed Framework for Critical Social Media Navigation

Table 5 outlines the four core competencies, each broken down into specific sub-competencies in alignment with UGT motives. These 12 competencies collectively provide a structured theoretical framework for integrating ML and PL to enhance individuals' abilities in navigating, engaging with, and evaluating social media content as shown in Graph 2.



Graph 2. ML integration with PL through CT to build **SAMAN-UGT framework**

This graph shows how ML (external engagement) and PL (internal insight) are integrated through CT to build competencies for evidence-based decision-making. Applying these competencies enables individuals to assess information credibility, mitigate cognitive biases and psychological manipulations, and facilitate evidence-based decision-making. These three elements feed into the SAMAN-UGT framework, which organizes competencies linked to specific UGT motivations.

4. Discussion

This paper presents a pioneering scoping review on the intersection of ML, PL, and CT within social media, a methodology selected for its suitability to emerging topics. Drawing on existing literature the review examines definitions, practical applications and existing frameworks to investigate how these interconnected concepts are addressed. This analysis affirms that ML has a well-established body of scholarly research and practical framework. Such a conclusion comes in accordance with Potter who found that ML is broadly defined in the studies he examined (2021). However,

the rapid evolution of social media platforms, the blurring between different platforms and the importance of adopting interdisciplinary approaches necessitate a more understanding of the psychological factors that influence how individuals deal with social media content.

This is where PL can be relevant, while ML addresses external engagement in the creation and consumption of media content, PL addresses internal interaction. Therefore, integrating ML and PL could provide a more holistic framework for developing communication skills and generate a literate person in dealing with social media. The findings of the scoping review highlight CT as a crucial link, enabling individuals to integrate ML skills with psychological insights.

Scholarly analysis identifies a singular framework, highlighting a significant theoretical and empirical deficit. This framework overlooks the psychological dimensions of the process. This gap underscores the need for a comprehensive approach. To fill this gap and meet this need, the paper proposes the SAMAN-UGT framework, which identifies four main competencies and 12 supplementary competencies required for effective engagement with digital social media. The proposed SAMAN-UGT framework integrates perspectives from both literacies through CT and the lens of UGT. Such integration creates synergy, enhances individuals' skills in navigating social media, making a shift from media's effects on passive audiences to the active role of users, thereby enabling the assessment of those skills. This proposed framework responds to calls by (Jarman et al. 2024; Polanco-Levicán & Salvo-Garrido, 2022) to integrate cognitive, emotional, social, and technological factors to ML, and to call from Tommasi et al. (2023) who advocate for a cognitive approach to CT and ML, focusing on how individuals analyze, connect, and reconstruct information to deepen understanding.

SAMAN-UGT Framework organizes competencies into knowledge base, critical thinking, communication, and social responsibility, each linked to specific UGT motivations. The framework could analyze individuals' media engagement by positioning CT as the essential bridge connecting ML as an external engagement and PL as an internal psychological insight and emphasizing the cyclical and integrative nature of media and psychological literacies in fostering informed, ethical, and user-centered engagement. SAMAN-UGT framework incorporates the psychological dimensions of user interaction, an element absent in ML. Such incorporation is crucial as AI increasingly blurs the boundaries between fact and fiction.

Implications This review's originality lies in its expansion of the discussion on CT, PL and ML in the context of media. This study underscores the complementary nature of ML and PL in fostering CT, communication, engagement, and media production. By integrating their unique strengths, educators and policymakers can better equip individuals to navigate the complexities of media and maybe AI ecosystems in a more effective way. SAMAN-UGT framework could be used to assess such preparation. It provides a structured approach to understand the cognitive, emotional, and behavioral dimensions of interacting with media, thereby enhancing users' ability to critically evaluate information, regulate emotions, and engage responsibly in digital spaces. The

implications of this study extend to education and policy, emphasizing the need for integrated curricula that combine technical skills with psychological awareness and cultivate critical thinkers capable of navigating the complexities of today's digital world.

6. Limitations and Future Directions

Beyond theoretical knowledge and practical implications, this contribution has several limitations, which also point toward future research opportunities: First, to ensure high academic quality, our review was deliberately limited to peer-reviewed journal articles published in English. This focus may have excluded relevant works from other sources, or those in other languages. Future studies could broaden the search criteria to provide a more comprehensive synthesis.

Second, the proposed SAMAN-UGT framework is theoretical and needs to be applied empirically to assess individuals' capabilities in quantitative research to validate the framework's dimensions and clarify the relationships between its core competencies.

Abbreviations: CT: Critical Thinking; ML: Media Literacy; PL: Psychological Literacy; UGT: Uses and Gratification Theory.

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Appendix 1

N	Reference	Definitions	Applications
1.	Zamir et al., 2024	ML is the ability to critically assess the credibility and authenticity of online content. This ability involves CT, verification skills, and source awareness to enable critical content evaluation.	ML empowers individuals to critically evaluate content, discerning between credible information and misinformation. Introduces a technique for detecting misinformation and applying ML to counter fake news.
2.	Jarman et al., 2024	Social ML includes the ability to critically assess idealized social media content.	Call for holistic interventions to improve adolescents' CT on social media.
3.	Galindo-Domínguez et al., 2024		Using social media for academic purposes supports higher CT development.
4.	Faccio et al., 2024		Promotes CT to change typical behaviors in daily life.
5.	Cheng et al., 2024	CT is a key higher-order skill fostered through social media engagement.	Social media use magnitude enhances students' CT; ML education can support balanced usage.
6.	Essalhi-Rakrak & Pinedo-González, 2023	Media literacy requires critical and ethical use of media to counter disinformation.	

7.	Tommasi et al., 2023	ML includes understanding media through cognitive psychology and CT.	Suggests psychology-based training programs to foster CT.
8.	Arafah & Hasyim, 2023	CT stems from digital skills in content selection and truth-seeking.	Promotes content creation and critique grounded in digital ethics.
9.	Borčić & Holy, 2023	ML fosters CT needed to interpret media and recognize misinformation.	Urges critical evaluation of media content shaped by ownership and culture.
10.	Cernicova-Buca & Ciurel, 2022	News literacy is the ability to critically assess news from source to presentation.	
11.	Akram et al., 2022	Critical social ML builds cognitive resilience against disinformation.	Disinformation targets users with weak CT using tailored strategies.
12.	Beauvais, 2022	CT shields individuals from fake news shaped by internal and external sociocognitive factors.	Recommend ML, fact-checking, regulation, and digital solutions to counter misinformation.
13.	Cranney et al., 2022	PL is the intentional, values-driven use of psychology to achieve personal and societal goals.	Applies psychological and multidisciplinary CT for goal achievement.
14.	Polanco-Levicán & Salvo-Garrido, 2022	CT is essential due to the information overload on social media.	Social ML spans technical to socio-emotional skills.
15.	Shin & Zanuuddin, 2019	ML prioritizes the ability to decode and critically evaluate media messages ML includes CT to	Explores ML's influence on cognition, emotion, and behavior.

		interpret textual and social meanings and media power dynamics.	
16.	Valtonen et al., 2019	CT involves reflective reasoning and evaluating beliefs.	Integrates ML and computing education to build critical and competent media users.
17.	Vernier et al., 2018	ML prioritizes the ability to critically evaluate media messages CT is a metacognitive skill fostering rational analysis and questioning biases.	Recommend collaborative media tasks to develop CT.
18.	Terras et al., 2015	ML is the ability to access, understand, and create communication across contexts.	Links media and content production to identity through psychological understanding.
19.	Tanaka et al., 2013	PL promotes applying psychological knowledge to societal and ethical issues.	Encourages real-world engagement to foster PL.
20.	Mihailidis & Cohen, 2013	Curation is a key ML competency for the digital generation.	Integrates curation pedagogy into ML education to enhance evaluation and participation.