

Critical Digital Media Literacy as Core Competence in Communication Education: Evidence from a Blended Learning Case Study

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Abstract: Enhancing digital literacy has become a national priority in Indonesia; however, university students still demonstrate limited critical competencies in analyzing, comparing, and evaluating digital information. This study aims to examine how a blended learning model fosters critical digital media literacy within communication education. This research employed a qualitative approach using a best practice case study design focusing on high-achieving students. Data were collected through classroom observations, reflective assignments, and Focus Group Discussions (FGDs) involving 29 participants, and analyzed using thematic analysis. The findings indicate that blended learning facilitates students' analytical reasoning, cross-platform comparative assessment, and systematic information evaluation. Students demonstrated strong abilities in verifying information credibility, identifying media bias, and reflecting on their own critical thinking processes. This study concludes that blended learning functions as an effective pedagogical space for cultivating higher-order critical digital media literacy competencies in communication students.

Keywords: Critical Digital Media Literacy, Communication Education, Blended Learning, Higher Education, Qualitative Case Study

Abstrak: Peningkatan literasi digital menjadi agenda nasional di Indonesia, namun mahasiswa masih menunjukkan keterbatasan dalam kemampuan kritis untuk menganalisis, membandingkan, dan mengevaluasi informasi digital. Penelitian ini bertujuan untuk mengkaji bagaimana model pembelajaran campuran mendorong pengembangan literasi media digital kritis dalam pendidikan komunikasi. Penelitian ini menggunakan pendekatan kualitatif dengan desain *best practice case study* yang berfokus pada mahasiswa berprestasi tinggi. Data dikumpulkan melalui observasi kelas, tugas reflektif, dan *Focus Group Discussion* (FGD) terhadap 29 partisipan, kemudian dianalisis menggunakan analisis tematik. Hasil penelitian menunjukkan bahwa blended learning memfasilitasi kemampuan berpikir analitis, perbandingan lintas platform, serta evaluasi informasi secara sistematis. Mahasiswa mampu memverifikasi kredibilitas informasi, mengidentifikasi bias media, dan merefleksikan proses berpikir kritis mereka. Simpulannya, *blended learning* merupakan ruang pedagogis yang efektif untuk mengembangkan kompetensi literasi media digital kritis tingkat lanjut pada mahasiswa Ilmu Komunikasi.

Kata kunci: Literasi Media Digital Kritis, Pendidikan Komunikasi, Pembelajaran Campuran, Pendidikan Tinggi, Studi Kasus Kualitatif



Introduction

The Indonesian government has increasingly prioritized the improvement of digital literacy as part of a national development agenda, particularly in the post-pandemic context. This commitment is reflected in the integration of digital literacy within the Sustainable Development Goals (SDGs), which promote access to fair, inclusive, and high-quality education amid ongoing technological change (Kominfo, 2022). National data indicate that although access to digital media continues to increase, the overall level of critical digital literacy among Indonesian citizens remains uneven (Global Disinformation Index, 2022).

Previous studies have shown that Indonesian university students generally possess basic operational skills in using digital media, yet demonstrate limited critical competencies, particularly in evaluating information credibility, identifying media bias, and engaging in reflective media practices (Astuty & Anggraini, 2024; Ulya & Anggraini, 2024). This condition is further supported by findings from the Indonesian Digital Literacy Network (JAPELIDI), which indicate that participatory digital practices are not always accompanied by adequate critical awareness and ethical information behavior (Kurnia, N., 2025)

From a theoretical perspective, media literacy extends beyond the technical capacity to access media and is understood as a cognitive and critical engagement that encompasses the analysis, comparison, and evaluation of media content (W. J. Potter, 2019). In contemporary digital environments, these competencies are closely linked to participatory culture, a context in which individuals function not merely as media consumers but also as creators and distributors of digital content (Jenkins, et al., 2009). Accordingly, fostering critical digital literacy necessitates instructional approaches that prioritize higher-order thinking abilities and metacognitive reflection (Vaghela & Parsana, 2024; Cheng & Singh, 2024; Rahma Hidayati Darwis et al., 2024)

In higher education settings, blended learning is commonly regarded as an instructional approach that integrates online and in-person formats to enhance cognitive depth and encourage active participation (Garrison & Kanuka, 2004). Findings from meta-analyses suggest that blended learning settings tend to outperform exclusively online or conventional classroom instruction in promoting critical thinking and substantive learning outcomes. (Indah et al., 2024; Kusumawardani & Aminatun, 2024; Frawley & Dyson, 2018). Recent research further indicates that blended learning contributes to the enhancement of digital competencies, especially within humanities and communication-related fields (The National Association for Media Literacy Education, 2023; Rakhmonova, 2025; Scolari et al., 2020; Zhang et al., 2016). Since 2021 Digital Literacy has been formally integrated into the higher education curriculum at Telkom University as a foundational course for first-semester students. Due to the COVID-19 pandemic, this course was initially delivered entirely through online learning modalities. However, internal evaluations and empirical observations revealed several pedagogical limitations during the fully online implementation. Students tended to rely heavily on general search engines rather than academic learning materials, frequently utilizing non-credible sources. Moreover, students demonstrated limited ability to critically analyze digital



issues and often failed to apply ethical citation practices. Online learning environments also posed technical and motivational challenges, including unstable internet connections, low participation levels, and reduced engagement during synchronous sessions. This pattern corresponds with prior studies showing that fully online learning may lead the surface-level engagement and reduced critical interaction, particularly when learners lack strong self-regulation and social presence (Arandas et al., 2024).

To address these pedagogical challenges, a blended learning model was introduced in subsequent academic periods, integrating face-to-face instruction with structured online learning activities. Blended learning is widely recognized for its potential to combine the strengths of online flexibility and in-person interaction, thereby fostering higher levels of engagement, collaboration, and critical thinking (Garrison & Kanuka, 2004; Rakhmonova, 2025)

Therefore, this study is positioned as a best practice case study of high-achieving students, examining how blended learning can optimally foster critical digital media literacy skills in the field of communication education. This study therefore investigates how a blended learning design contributes to the development of students' abilities in analyzing, comparing, and evaluating digital information.

Methods

This study employed a qualitative research methodology, following the interpretive research framework proposed by (Creswell and Creswell, 2023). The research participants were students enrolled in the Communication Science program at Telkom University during the 2024/2025 academic year, consisting of 215 students distributed across five classes.

Purposive and homogeneous sampling was applied to select participants who demonstrated exceptional learning outcomes in the Digital Literacy course. Specifically, five student groups that achieved final project scores between 95 and 100 were selected for in-depth analysis. This sampling strategy was intentionally employed to position the study as a best practice case study of high-achieving students, allowing for detailed exploration of optimal pedagogical practices rather than population-level generalization (Creswell & Guetterman, 2019).

Data collection involved three main techniques. First, learning process observation was conducted during both onsite and online sessions. The researcher acted as a participant observer and documented classroom interactions, student discussions, and consultation processes. Second, documentation analysis was carried out on student reflective assignments, assessment rubrics, and final project outputs. Third, Focus Group Discussions (FGDs) were conducted with 29 volunteer participants via Zoom after the semester concluded.

All qualitative materials were examined through thematic analysis, assisted by ATLAS.ti software. The analytical procedure followed six stages (Kiger & Varpio, 2020): data familiarization, initial coding, theme identification, theme clarification, theme articulation, and producing the analytical report. The analytical focus was placed on students' critical digital



media literacy competencies, operationalized through three indicators adapted from (W. J. Potter, 2019): analysis, comparative contrast, and information evaluation.

To enhance credibility and trustworthiness, data triangulation was conducted by comparing findings from observations, reflective assignments, and FGDs. In addition, peer debriefing and external auditing were applied to evaluate the consistency between empirical data, thematic interpretations, and research conclusions.

Result and Discussion

The following section reports the empirical outcomes generated through thematic analysis of student reflections and Focus Group Discussion (FGD) transcripts. As a best practice case study, the analysis focuses on five high-achieving student groups who demonstrated advanced critical digital media literacy competencies. The results are organized according to three main indicators adapted from Potter (2019): analytical skills, comparative assessment (compare–contrast), and information evaluation. An additional emergent theme, metacognitive reflection, is also discussed.

Analytical Skills in Digital Information Processing

The findings indicate that students demonstrated strong analytical competencies in identifying, organizing, and interpreting digital information. Students did not merely consume content passively but actively engaged in analyzing the underlying messages, contexts, and implications of the information encountered across various digital platforms. Such practices reflect the analytical dimension of media literacy, which involves identifying patterns, recognizing message construction, and situating information within broader socio-cultural contexts (W. J. Potter, 2019; W. J. Potter, 2023; Hobbs, 2016).

One participant described how she critically examined psychological content related to mental health on TikTok:

“Awalnya lihat dari TikTok tentang attachment style. Terus saya menganalisis bagaimana attachment itu muncul, kenapa bisa muncul, lalu membandingkan dari beberapa akun. Saya pakai teori psikologi tentang inner child dan bertanya ke orang-orang yang mengalami hal tersebut.”

This statement illustrates students’ ability to connect digital content with theoretical concepts and personal experiences, reflecting higher-order analytical thinking (Cheng & Singh, 2024; Rahma Hidayati Darwis et al., 2024).

Similarly, another participant explained how he analyzed political information across platforms:

“Saya membandingkan konten politik dari Twitter, TikTok, dan YouTube. Di TikTok banyak debat, tapi saya juga baca komentar dan membandingkan dengan ceramah di YouTube.”

This cross-platform comparison reflects the compare–contrast dimension of media literacy, which involves identifying similarities, differences, and inconsistencies across sources



(W. J. Potter, 2019). Research on online search behaviors and information literacy also indicates that strategic comparison across platforms is a key indicator of advanced analytical processing (Botturi et al., 2025; Botturi, 2022). Rather than relying on a single source, students engaged in multi-source triangulation, demonstrating critical online information evaluation practices (Weisberg et al., 2023).

These findings suggest that students developed the capacity to deconstruct digital messages, identify key arguments, and relate them to broader social, political, and psychological contexts.

Analytical thinking was also evident in students' engagement with news framing:

"Di tiga akun politik yang saya ikuti, masing-masing punya framing berbeda. Ada yang pakai komedi, ada yang fokus rekam jejak, ada yang bahas visi misi secara sistematis."

This demonstrates students' awareness of media framing and their ability to critically interpret how information is constructed and presented. Framing analysis is a core component of critical media literacy, as it requires recognizing how language, tone, and narrative structure shape audience perception (W. J. Potter, 2023). These competencies align with contemporary models of critical online information evaluation and higher-order analytical thinking in digital environments (Weisberg et al., 2023; Cheng & Singh, 2024).

Comparative Assessment (Compare-Contrast Skills)

A prominent theme emerging from the data was students' capacity to systematically examine similarities and differences across information drawn from diverse sources and digital platforms. Such practices reflect the compare–contrast dimension of media literacy, which involves identifying similarities, differences, contradictions, and contextual variations across mediated messages (W. J. Potter, 2019 ;W. J. Potter, 2023). Students frequently engaged in cross-platform verification, comparing similar content across Instagram, TikTok, YouTube, Twitter, and news portals.

One participant described her strategy when encountering political content on TikTok:

"Kalau satu akun terlalu pro ke satu paslon, saya langsung cari akun lain. Biasanya buka hyperlink di TikTok dan bandingkan kontennya."

This reflects an active process of comparative assessment, where students did not rely on single sources but systematically sought alternative perspectives. The practice of moving across hyperlinks and platforms corresponds with findings on online search behaviors, which indicate that advanced information literacy involves strategic cross-source comparison rather than linear consumption (Botturi et al., 2025).

Another participant highlighted how comparative skills were used in evaluating commercial information:

"Saya cari nama toko di TikTok, terus bandingkan harga dari beberapa video. Banyak yang bilang murah, tapi pas saya datang langsung ternyata mahal."

This example illustrates applied comparative reasoning in digital consumer contexts. Rather than accepting promotional narratives at face value, students engaged in cross-checking claims and triangulating price information. Studies on digital citizenship and media literacy



indicate that such comparative verification practices are central to responsible digital participation and informed decision-making (Tomé et al., 2024). The ability to interrogate commercial persuasion through comparison also reflects analytical evaluation of persuasive intent, an essential dimension of critical media literacy (Hobbs, 2016).

In relation to broader social concerns, comparative assessment was also applied:

“Saya tidak cuma lihat informasi Palestina dari Instagram, tapi juga dari sisi Israel. Informasinya sangat berbanding terbalik, jadi saya bandingkan dulu sebelum menyimpulkan.”

These examples indicate that students developed the ability to juxtapose information, recognize inconsistencies, and critically assess competing narratives. Potter’s (2019) positions compare–contrast as a central dimension of critical media literacy, a perspective that is also echoed in contemporary models of critical online information evaluation that position multi-source comparison as foundational to informed digital reasoning (Weisberg et al., 2023).

Information Evaluation and Verification Skills

Information evaluation emerged as one of the strongest competencies among participants. Students demonstrated the ability to assess credibility, relevance, bias, and accuracy of digital content. They actively questioned sources, checked references, and verified information through multiple channels. Such practices correspond with contemporary models of critical online information evaluation, which emphasize credibility assessment, cross-source validation, and contextual verification as core competencies in digital literacy (Weisberg et al., 2023). Within media literacy theory, evaluation represents a higher-order cognitive process that requires judgment based on explicit criteria rather than intuitive reaction (W. J. Potter, 2019 ; J. Potter, 2022).

One participant explained how she detected manipulated content:

“Di TikTok banyak video yang sound-nya diedit pakai AI. Kelihatan dari gerak bibir yang tidak sesuai. Jadi saya cari informasi dari sumber lain.”

This example illustrates students’ awareness of technological manipulation and their ability to identify inconsistencies between audio-visual cues. In the era of algorithmic media and synthetic content, such detection skills are increasingly essential (Valtonen et al., 2019). Research on misinformation resilience further demonstrates that media literacy interventions enhance individuals’ ability to detect manipulated or misleading digital content (Moore & Hancock, 2022; Ford et al., 2023). The participant’s decision to seek confirmation from alternative sources reflects structured verification behavior rather than passive acceptance.

Another participant described how he validated religious-historical information:

“Saya tidak hanya percaya dari Instagram, tapi juga membandingkan jurnal dari website lain, lalu bertanya langsung ke romo untuk memastikan.”

This practice demonstrates multi-layered verification: cross-referencing academic materials and consulting domain experts. Such triangulation aligns with empirical findings that



media and information literacy education improves students' capacity to detect inaccuracies and seek authoritative clarification (Al Zou'Bi, 2022).

In evaluating news related to public safety, a participant referred to legal standards:

"Saya cari UU Lalu Lintas Pasal 134–135, bahwa kendaraan yang diutamakan adalah ambulans. Jadi jelas mobil itu salah."

These findings show that students applied formal criteria—such as legal frameworks, expert consultation, and cross-source validation—to evaluate information. This reflects a sophisticated level of information evaluation beyond surface-level media consumption. Studies examining higher-order thinking within problem-based and authentic learning settings indicate that applying formal references—such as legal provisions, regulatory standards, or institutional guidelines—signals a more advanced level of evaluative reasoning (Rahma Hidayati Darwis et al., 2024; Cheng & Singh, 2024).

Metacognitive Reflection on Critical Thinking Process

An emergent theme was students' metacognitive awareness of their own critical thinking processes. Students explicitly reflected on how they analyzed information, formed conclusions, and adjusted their perspectives. Critical media literacy theory conceptualizes metacognition as an individual's capacity to reflect upon, regulate, and evaluate their cognitive processes during media engagement (J. Potter, 2022; W. J. Potter, 2023). In higher-order thinking frameworks, such self-regulation is recognized as a defining feature of advanced cognitive engagement (Cheng & Singh, 2024; Rahma Hidayati Darwis et al., 2024).

One participant noted:

"Setelah mencari berbagai sumber, saya jadi sadar bahwa kita harus mencari kebenaran dalam suatu kondisi supaya tidak mudah percaya."

This statement reflects conscious monitoring of belief formation and evidentiary standards. Contemporary models of Critical Online Information Evaluation (COIE) emphasize that effective digital reasoning requires awareness of one's own cognitive biases and intentional verification strategies (Weisberg et al., 2023). Similarly, research on misinformation resilience demonstrates that metacognitive reflection strengthens individuals' resistance to misleading content by encouraging deliberate rather than automatic processing (Moore & Hancock, 2022; Ford et al., 2023)

Another participant emphasized personal learning development:

"Sekarang saya tidak langsung percaya promosi di TikTok. Saya selalu tanya ke teman yang sudah pernah mengalami supaya tidak tertipu."

This illustrates self-regulated adaptation of evaluative strategies. Rather than reacting impulsively, the student described a shift toward reflective verification behavior. Such adaptive regulation aligns with conceptualizations of social media literacy as an evolving competence involving awareness of persuasion, platform affordances, and personal susceptibility (Cho et al., 2024). Empirical evidence further indicates that media literacy interventions strengthen



learners' ability to examine their evaluative approaches and refine their decision-making processes (Al Zou'Bi, 2022).

Students also reflected on their social role as informed citizens:

"Mulai sekarang anak muda harus aktif menyampaikan aspirasi agar demokrasi berjalan dengan baik."

This reflection extends metacognition beyond cognitive strategy toward civic consciousness. Media literacy scholarship increasingly frames critical reflection as foundational to participatory citizenship in digital culture (Mihailidis, 2013; Jenkins et al., 2016). Digital citizenship education research similarly highlights the importance of reflexive awareness in shaping responsible participation and ethical communication in public digital spheres (Tomé et al., 2024).

These reflections indicate that students not only acquired technical skills but also developed self-awareness regarding their cognitive processes. Such metacognitive engagement is central to critical media literacy as both a cognitive and socio-civic practice (W. J. Potter, 2023). The metacognitive dimension observed in this study suggests that blended learning facilitated not merely skill acquisition but deeper reflective engagement with knowledge construction, belief formation, and civic responsibility. This aligns with higher-order thinking research emphasizing reflection and self-regulation as integral components of sustained critical thinking development in higher education contexts (Cheng & Singh, 2024; Rahma Hidayati Darwis et al., 2024)

Rethinking Critical Digital Media Literacy through Blended Learning

This study adds to the expanding scholarship on critical digital media literacy by providing empirical insights into how blended learning environments facilitate the development of higher-order critical competencies among communication students. Unlike studies that conceptualize digital literacy merely as functional or technical skills, the findings of this research support theoretical perspectives that position digital literacy as a complex socio-cognitive practice involving analysis, evaluation, and reflective engagement with media content (W. J. Potter, 2023; Trejo-Quintana et al., 2025; Fabris, 2018).

The empirical evidence demonstrates that students engaged in blended learning settings do not merely access information but actively deconstruct, compare, and evaluate digital messages across platforms. This aligns with contemporary models of critical online information evaluation that emphasize structured processes of analysis, comparison, and verification in digital environments. Students' ability to recognize framing strategies, identify biases, and verify information suggests that blended learning fosters not only media awareness but also systematic evaluation of information credibility (Weisberg et al., 2023; Bissonnette et al., 2021; Botturi, 2022).

From a theoretical standpoint, the findings reinforce the argument that critical media literacy must be understood as an active and reflective cognitive process rather than a passive form of media consumption (J. Potter, 2022). Students in this study demonstrated advanced



interpretive practices, such as cross-platform verification and engagement with comment sections and expert sources. These practices correspond to contemporary conceptualizations of critical media literacy that emphasize meaning negotiation, reflexivity, and evaluative judgment in mediated communication (Friesem, 2017).

Furthermore, the emergence of metacognitive reflection as a central theme supports Barroso (2022) theoretical framework of critical thinking, which highlights self-regulation and cognitive monitoring as key indicators of advanced thinking skills. Students explicitly reflected on their reasoning processes, expressed awareness of information manipulation, and articulated strategies for verifying digital content. This suggests that blended learning environments may facilitate not only cognitive skill acquisition but also metacognitive development, which is crucial for sustaining critical literacy in complex digital ecosystems (Weisberg et al., 2023; Indah et al., 2024).

Theoretically, this study extends contemporary understandings of participatory digital literacy by illustrating how students transition from passive information consumers to active participants in digital knowledge production. Through social campaign projects and reflective assignments, students engaged in content creation, public discourse, and collaborative meaning-making. This aligns with recent research on participatory media practices in networked environments, which emphasizes ethical participation, social responsibility, and critical engagement rather than mere content production (Jenkins, Ito, Boyd, 2016; Jenkins, et.al., 2016).

Importantly, the findings also resonate with contemporary humanistic and critical pedagogical perspectives that frame literacy as a process of empowerment and social awareness. Students' reflections on political participation, humanitarian issues, and social responsibility indicate that digital literacy, when supported by critical pedagogy, can function as a transformative educational practice rather than merely a technical competency. International media and information literacy frameworks similarly foreground democratic involvement, ethical reflection, and critical examination of social structures (Law et al., 2018; Moore & Hancock, 2022; World Health Organization, 2023).

From a communication studies perspective, this study advances the theoretical linkage between media literacy and communication education. While traditional communication curricula emphasize message production, media effects, and audience analysis, the present findings suggest that critical digital literacy should be conceptualized as a core epistemological competence within communication studies. This competence enables students to critically navigate platform logics, information disorder, and mediated power relations in contemporary digital environments (Sintar, 2023).

The results also align with contemporary studies of algorithmic influence and information disorder, which argue that digital platforms shape users' knowledge through filtering mechanisms, personalization, and visibility regimes. Students' awareness of biased content, sponsored messaging, and manipulated audio-visual materials demonstrates emerging



algorithmic literacy, an increasingly central component of critical media literacy in digital societies (Sintar, 2023)

Moreover, this study supports the theoretical position that digital literacy must be contextually situated within socio-cultural environments. Students' media practices were deeply embedded in everyday experiences, social relationships, and cultural interests—ranging from political debates and social justice issues to popular culture and identity expression. This reinforces contemporary sociocultural perspectives that conceptualize digital literacy as a socially constructed practice shaped by context, interaction, and communicative purpose (Kohnen et al., 2023; Australian Media Literacy Alliance, 2022).

As a best practice case study, this research does not aim for statistical generalization but offers theoretical generalization by illustrating how optimal learning conditions can foster advanced critical media literacy competencies. High-achieving students function as epistemic exemplars, demonstrating what is pedagogically possible when blended learning designs integrate reflective learning, participatory practices, and authentic digital engagement (Kusumawardani & Aminatun, 2024)

Finally, this research advances digital literacy theory by empirically linking blended learning pedagogy with critical cognitive development. While previous studies often examine blended learning in terms of satisfaction or performance outcomes, this study foregrounds its epistemological impact—how blended learning shapes students' ways of knowing, interpreting, and evaluating mediated realities. This positions blended learning not merely as an instructional strategy but as a cognitive ecology that cultivates critical digital subjectivities (Indah et al., 2024).

Blended Learning as a Pedagogical Model for Developing Critical Digital Media Literacy

The findings of this study strongly support existing pedagogical theories that position blended learning as an effective instructional model for fostering higher-order cognitive skills, particularly critical thinking and digital media literacy. Unlike purely online or fully face-to-face learning environments, blended learning integrates synchronous and asynchronous interactions, allowing students to engage in reflective learning processes while maintaining active social interaction with peers and instructors (Indah et al., 2024).

From a constructivist perspective, blended learning aligns with sociocultural learning principles that emphasize the role of interaction, scaffolding, and feedback in cognitive development. The combination of classroom discussions, online reflections, and project-based assignments observed in this study created a learning ecology where students could collaboratively construct knowledge while receiving continuous feedback. This interactive environment is essential for developing critical digital literacy, which requires not only individual cognitive processing but also dialogic engagement with diverse perspectives (Kohnen et al., 2023; Aslı et al., 2025).

The empirical evidence indicates that blended learning facilitated students' ability to engage in analytical reasoning, comparative assessment, and information evaluation. This



finding resonates with meta-analytical studies suggesting that blended learning environments outperform traditional instruction in promoting deep learning and critical thinking outcomes (Zhang et al., 2024; Cheng & Singh, 2024). In particular, the flexibility of blended learning enables students to revisit learning materials, engage in self-paced reflection, and apply theoretical concepts to real-world digital contexts—conditions that are crucial for developing epistemic awareness and critical literacy skills.

Furthermore, blended learning supports experiential and reflective learning cycles in which knowledge is constructed through experience, reflection, conceptualization, and experimentation. In this study, students encountered digital information in their daily media environments, reflected on these experiences through assignments and discussions, conceptualized them using critical literacy frameworks, and experimented with social campaigns on digital platforms. This iterative learning cycle illustrates the ways in which blended learning translates experiential learning principles into digital literacy instruction (Indah et al., 2024; Kusumawardani & Aminatun, 2024).

The role of asynchronous learning components, such as LMS-based reflections and online discussions, is particularly significant for fostering critical thinking. Asynchronous environments provide students with temporal flexibility, allowing them to process information more deeply and formulate reasoned arguments without the pressure of real-time interaction (Ford et al., 2023; Botturi et al., 2025). This supports cognitive engagement and reflective evaluation, which are widely recognized as foundational conditions for meaningful learning in blended environments.

In contrast, synchronous face-to-face sessions contributed to fostering social presence and teaching presence. Classroom discussions, presentations, and consultations enabled immediate feedback, clarification of misconceptions, and collaborative meaning-making. This balance between asynchronous reflection and synchronous interaction is a defining characteristic of effective blended learning design and has been widely recognized as a key factor in enhancing critical engagement and learning satisfaction (Uri & Dewsbury, 2017)

Importantly, blended learning also addresses one of the major limitations of fully online learning environments: the risk of surface-level engagement and cognitive overload. Earlier research indicates that fully online learning environments may result in lower motivation, more passive engagement, and diminished critical interaction, especially among students with limited self-regulatory capacity (Susanti et al., 2021; Schluer, 2025). The findings of this study corroborate this argument, as students reported greater engagement and deeper analytical practices after the introduction of face-to-face components.

From a digital literacy perspective, blended learning provides a pedagogical infrastructure that supports critical media pedagogy, where learners are encouraged to interrogate media representations, question power relations, and reconsider their own media engagement. The integration of online learning spaces with classroom dialogue allowed students to critically examine real digital content—such as political campaigns, social issues,



and commercial promotions—while situating these analyses within academic theoretical frameworks (Friesem, 2017; Valtonen et al., 2019)

Moreover, blended learning fosters learner autonomy, a key component of critical literacy development. Self-directed learning activities in the LMS encouraged students to independently seek information, verify sources, and evaluate credibility before presenting their findings in classroom discussions. This aligns with contemporary models of self-regulated and autonomous learning in digital environments (Botturi et al., 2025; Schluer, 2025).

The study also supports the argument that blended learning enhances metacognitive awareness by creating structured opportunities for reflection. Reflective writing assignments and online discussions enabled students to articulate their reasoning processes, identify cognitive biases, and assess their own learning strategies. This finding is consistent with recent research suggesting that blended environments are particularly effective for cultivating reflective thinking and learning regulation (Weisberg et al., 2023).

Viewed through an instructional design lens, the effectiveness of blended learning observed in this study is linked to its consistency with active learning principles. Active learning frameworks propose that deeper understanding emerges when students participate directly in constructing knowledge through dialogue, problem-solving processes, and collaborative activities (Harianto, 2024; Song et al., 2024). The incorporation of project-based learning and social campaign assignments repositioned students from passive information receivers to active creators of digital content, strengthening their critical engagement with media.

In the context of communication education, these findings are particularly significant. Communication studies increasingly recognize the importance of digital competencies, not only in terms of technical skills but also in critical interpretation, ethical awareness, and strategic communication practices (Tajuddin et al., 2024; Cho et al., 2024). As a pedagogical approach, blended learning links theoretical foundations with authentic media interaction, supporting students in translating communication theory into practice across everyday digital platforms.

Theoretically, this study extends blended learning research by shifting the focus from performance outcomes (e.g., grades, satisfaction) to epistemological outcomes—how students construct knowledge, evaluate truth claims, and develop critical consciousness. While many blended learning studies emphasize efficiency and flexibility, this research highlights its transformative potential in shaping students' cognitive orientations toward media and information. (Indah et al., 2024; Zhang et al., 2024)

Positioned as a best-practice case study, the findings indicate that blended learning may operate as a critical learning environment in which digital literacy extends beyond technical skill acquisition and is developed as a way of thinking. This supports the broader educational argument that critical digital literacy requires pedagogical designs that integrate reflection, dialogue, and authentic media engagement, rather than relying solely on content delivery or technical training (Partti, 2017; Mihailidis, 2013; Martinez & Gomez, 2025)



Taken together, the findings position blended learning beyond a mere instructional technique, framing it instead as a cognitive–social learning ecosystem that facilitates the growth of critical digital media literacy. By combining reflective online learning with interactive face-to-face engagement, blended learning creates optimal conditions for fostering analytical reasoning, comparative assessment, information evaluation, and metacognitive awareness—core competencies required for navigating complex digital communication environments.

The Role of LMS, WhatsApp, and Social Media as a Communication Infrastructure in Blended Learning

Beyond its instructional design, the effectiveness of the blended learning model observed in this study is closely tied to the communication infrastructure that enabled its implementation. The integration of the Learning Management System (LMS), WhatsApp, Instagram and TikTok functioned not merely as technical tools but as socio-communicative environments that mediated learning interactions, knowledge construction, and critical engagement with digital content.

From a communication perspective, digital learning environments can be understood as mediated communication systems in which meaning is produced, negotiated, and circulated through technological interfaces (Tomé et al., 2024; Uri & Tchupo, 2018; Hobbs, 2016). In this study, the LMS served as a formal institutional communication space, while WhatsApp and social media functioned as informal and participatory communication channels. Together, these platforms formed a hybrid communication ecology that enabled continuous interaction between students, peers, and instructors.

The LMS played a central role in structuring learning content, assessment, and academic communication. As previous studies indicate, LMS platforms function as organizational communication systems that coordinate instructional activities, distribute knowledge resources, and regulate learning interactions (Vaghela & Parsana, 2024). In the context of this study, the LMS provided a stable cognitive space where students accessed learning materials, submitted reflective assignments, and engaged in asynchronous discussions. This aligns with research on distance and mediated learning that emphasizes the balance between structure, interaction, and learner autonomy (Threadgill & Price, 2019)

However, the findings suggest that the LMS alone was insufficient to sustain meaningful learning communication. WhatsApp emerged as a crucial complementary medium that facilitated real-time interaction, emotional support, and social presence. This supports research indicating that informal communication platforms enhance social presence and reduce feelings of isolation in digital learning environments (Kohnen et al., 2023). Through WhatsApp, students were able to clarify assignments swiftly, engage in peer discussions, and receive timely instructor responses, reinforcing dialogic communication and continuity in the learning process.



From the perspective of communication theory, WhatsApp can be conceptualized as a form of networked interpersonal communication, where boundaries between formal and informal communication become increasingly fluid (Australian Media Literacy Alliance, 2022). The platform allowed students to engage in participatory communication practices characterized by low barriers to interaction, peer-based support, and collaborative knowledge sharing (Jenkins, et al., 2016). These dynamics are highly pertinent to critical digital literacy, as they foster the expression of perspectives, the interrogation of information, and shared meaning-making among students.

Social media platforms, especially Instagram and TikTok, functioned as authentic public communication spaces where students applied critical literacy skills in real-world contexts. Unlike the LMS, which operates within institutional boundaries, social media represent open digital publics shaped by algorithms, attention economies, and platform politics (Sintar, 2023; Yeoman, 2023). Students' engagement with these platforms exposed them to issues of media bias, misinformation, sponsored content, and algorithmic visibility, thereby providing rich material for critical analysis.

The use of social media in learning aligns with network-based learning perspectives that conceptualize learning as participation within interconnected information and social systems (Valtonen et al., 2019; Trejo-Quintana et al., 2025). Participants in this study were not passive recipients of content but actively interacted with it through commenting, sharing, reposting, and creating social campaign materials. These practices reflect contemporary understandings of networked communication power, where individuals participate in shaping public discourse through digital platforms (Jenkins, Ito & Boyd, 2016)

From a critical media studies perspective, students' awareness of platform manipulation and content framing demonstrates emerging algorithmic literacy. Algorithmic systems play a significant role in shaping information exposure, political opinions, and cultural preferences (Weisberg et al., 2023; Valtonen et al., 2019). Students' ability to recognize sponsored political content, edited audio-visual materials, and biased news framing indicates that blended learning supported not only media literacy but also critical understanding of platform governance and algorithmic influence.

The incorporation of WhatsApp and social media also strengthened social presence, an essential dimension of meaningful online learning environments (Kohnen et al., 2023; Mannell & Smith, 2022). Social presence can be understood as the extent to which learners experience others as authentic and emotionally accessible within mediated contexts. Ongoing interaction through WhatsApp cultivated a sense of community, connectedness, and affective involvement, which subsequently enhanced students' motivation and their readiness to engage in critical dialogue.

Theoretically, this hybrid communication infrastructure can be understood through the lens of *media ecology theory*, which conceptualizes media environments as complex systems that shape human perception, interaction, and knowledge production (Yeh & Swinehart, 2022; Pérez Tornero & Tapio, 2020). In this research, the simultaneous use of the LMS, WhatsApp,



and social media platforms formed a layered media ecology in which each platform performed specific communicative roles: institutional coordination (LMS), interpersonal dialogue (WhatsApp), and public discourse (social media).

This multi-platform configuration reflects the realities of contemporary digital communication, where individuals navigate multiple communication channels simultaneously in their daily lives (Australian Media Literacy Alliance, 2022;Vahedi et al., 2018). By integrating these platforms into learning, the blended learning model mirrored authentic communication practices, thereby enhancing the relevance and applicability of critical digital literacy skills.

Importantly, the findings suggest that critical digital literacy cannot be effectively cultivated within a single-platform environment. Rather, it requires exposure to diverse communication contexts that include formal academic spaces and informal social networks. This supports the argument that digital literacy education must move beyond isolated technical training toward holistic communicative competence across platforms (Pérez Tornero & Tapio, 2020; World Health Organization, 2023)

From an educational communication standpoint, the use of WhatsApp and social media also challenges traditional hierarchies between teachers and students. Communication became more horizontal, interactive, and dialogic, allowing students to negotiate meanings, express opinions, and participate in knowledge construction processes. This aligns with dialogic pedagogy, which emphasizes learning as a communicative process grounded in dialogue, interaction, and shared meaning-making (Baleria, 2019).

Moreover, the presence of informal communication spaces contributed to affective learning outcomes, such as increased confidence, critical awareness, and civic engagement. Students' reflections on political participation, humanitarian issues, and ethical communication indicate that blended learning facilitated not only cognitive but also affective dimensions of learning. This finding is consistent with civic media scholarship, which highlights how digital communication can cultivate civic identity, encourage participation, and strengthen social responsibility (Jenkins, et al., 2016) (Al Zou'Bi, 2022).

In this sense, LMS, WhatsApp, and social media functioned collectively as a critical communication infrastructure that supported the development of digitally literate citizens. Students learned not only how to access and evaluate information but also how to communicate responsibly, participate in public discourse, and engage ethically with digital media environments.

Finally, this study contributes to communication scholarship by reframing educational technologies as communicative systems rather than neutral tools. The effectiveness of blended learning depends not solely on pedagogical structure but also on how communication is configured, mediated, and experienced within and across digital platforms. This perspective aligns with the broader field of communication studies, which views technology as a socio-cultural mediator that shapes interaction patterns, power relations, and knowledge production (Lievrouw, 2014; Pérez Tornero & Tapio, 2020; Fry, 2018)



In conclusion, the integration of LMS, WhatsApp, and social media created a communicative learning ecosystem that enabled sustained interaction, critical dialogue, and authentic media engagement. The hybrid communication system functioned as a key driver in developing critical digital media literacy, thereby situating blended learning beyond a teaching method and redefining it as a communicative practice embedded in today's digital environment.

Theoretical and Practical Implications

The findings of this study hold important relevance for communication education, especially regarding the integration of digital media literacy and critical communication competencies within higher education curricula. The results reinforce the view that critical digital media literacy should not be positioned as a supplementary skill, but rather as a fundamental communication competence intertwined with cultural contexts, pedagogical practices, and civic participation (Mihailidis, 2019; Al Zou'Bi, 2022).

The effectiveness of the blended learning model observed in this study underscores the necessity for communication programs to reimagine curriculum design so that digital literacy is not isolated in a single course but integrated across coursework. Traditional communication curricula often separate technical skills (e.g., media production) from critical analysis and public discourse competencies. Yet as new trends in communication education are emphasized, digital media practices now demand both technical fluency and critical interpretation concurrently, particularly as professional communication increasingly takes place within online platforms and participatory environments (Annisa & Suwanto, 2023), (Schluer, 2025).

This implies that the learning outcomes of communication programs should explicitly include competencies such as: Evaluating digital content within its socio-cultural context; Understanding media power, representation, and framing; Constructing persuasive public communication ethically; and engaging in digital citizenship and civic discourse with reflexivity. These competencies align closely with multiliteracy approaches, which highlight the need for learners to interpret and produce meaning across modalities and platforms in socially relevant contexts (Pérez Tornero & Tapio, 2020; Arena, 2021)

Findings from this study also support the theoretical claim that critical media literacy extends beyond access and technical skill to encompass interpretative practices, critical questioning, and social participation (J. Potter, 2022) Weisberg et al., 2023). This echoes the broader literature that regards critical media literacy as a foundational aspect of democratic participation in digital public spheres where information is abundant and often unverified (Law et al., 2018).

The blended learning design implemented in this research enabled students to apply critical media literacy in authentic communicative contexts—such as social campaigns and interpretation of news narratives—thus demonstrating the practical pedagogical value of connecting academic theory to real-world media environments (Ford et al., 2023)



The integrative use of LMS, WhatsApp, and social media fundamentally reframes how communication occurs in educational settings—from linear and instructor-centered to networked, participatory, and dialogic communication. This change aligns with media ecology perspectives, which view communication technologies not as neutral conduits but as environments that shape patterns of discourse and interaction (Fry, 2018; Pérez Tornero & Tapio, 2020)

More importantly, this blended communication ecology mirrors the actual communicative landscapes where students, and future communication practitioners, will operate. Whether crafting public messaging, analyzing political discourse, or engaging in professional networks, communication students must learn how platforms mediate meaning, influence attention, and structure participation (Australian Media Literacy Alliance, 2022; Yeoman, 2023)

Institutional policies must also align with these pedagogical shifts. Universities and communication faculties need to: Provide infrastructure for blended learning that supports asynchronous and synchronous communication; Offer professional development for faculty in critical digital pedagogy; Recognize the value of informal communication spaces (e.g., social media) as legitimate learning environments when critically integrated. Given the rapid transformation of digital media ecosystems, communication education must also anticipate future platform developments while ensuring students can critically navigate algorithmic, economic, and political dimensions of media (Sintar, 2023; Pérez Tornero & Tapio, 2020).

This study also opens several avenues for future research. First, longitudinal research could investigate whether blended learning effects on critical media literacy are sustained over time or specific to immediate learning outcomes. Second, comparative studies across different cultural or institutional contexts could test the generalizability of best practices identified here. Finally, deeper investigations into how different communication platforms (e.g., emerging social media) shape cognitive and social dimensions of media literacy would further bridge educational theory with communication research.

Conclusion

The blended learning functions not merely as an instructional strategy but as a critical pedagogical space that enables students to actively engage with digital media content in reflective and meaningful ways. Through the integration of face-to-face interaction, asynchronous learning, and authentic digital engagement, students developed the capacity to verify information credibility, recognize media bias, and critically interpret mediated messages across platforms. These competencies are central to contemporary communication scholarship, which progressively highlights critical digital literacy as a central epistemic capability essential for engaging with increasingly complex media environments.

From a theoretical perspective, this study contributes to communication and media literacy literature by empirically linking blended learning pedagogy with critical cognitive development. The results extend existing theories of critical media literacy and participatory



culture by demonstrating how blended learning can cultivate not only digital technical abilities, but likewise the development of critical consciousness and reflective metacognitive capacity. This reinforces the argument that digital literacy education should move beyond functional competencies toward critical and reflective engagement with digital media. Practically, the findings suggest that communication education programs should integrate blended learning designs that combine structured learning management systems with interactive communication platforms and social media environments. Such pedagogical configurations enable students to engage in authentic communication practices while developing critical thinking skills relevant to professional and civic contexts.

Despite its contributions, this study is limited by its focus on high-achieving students, which restricts the generalizability of the findings. As a best practice case study, the results illustrate optimal learning conditions rather than average student experiences. Future research should examine diverse student populations and institutional contexts to explore how blended learning affects varying levels of digital literacy competence. Further longitudinal and comparative research is necessary to evaluate the long-term sustainability and cross-context applicability of critical digital media literacy competencies. To conclude, the findings emphasize the transformative role of blended learning as an instructional and communicative model that supports the development of critically informed, reflective, and socially responsible students within contemporary digital contexts.

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