



MEDIA LITERACY AND THE FORMATION OF CRITICAL THINKING IN THE DIGITAL ENVIRONMENT

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Abstract:

The rapid expansion of digital technologies and online information ecosystems has fundamentally transformed how children access, interpret, and use information, placing new demands on education systems worldwide. In primary education, the ability of learners to critically evaluate media messages, distinguish reliable information from misinformation, and engage responsibly in digital environments has become a core educational priority. This study examines media literacy as a pedagogical phenomenon and analyzes its role in the formation of critical thinking skills among primary school learners within the context of contemporary digital environments. Drawing on international and regional pedagogical research, the article conceptualizes media literacy not merely as technical proficiency but as an integrative competence that combines cognitive, analytical, ethical, and communicative dimensions. Particular attention is paid to the pedagogical conditions, instructional strategies, and learning environments that support the systematic development of critical thinking through media education in primary school settings. The research emphasizes the relevance of learner-centered approaches, inquiry-based learning, and reflective practices in fostering children's ability to analyze digital content, recognize bias and manipulation, and make reasoned judgments. The findings highlight that effective media literacy education contributes to the development of independent thinking, informed decision-making, and social responsibility among young learners, which are essential for their successful participation in modern digital society. The article also discusses the implications of integrating media literacy into teacher education programs, especially for future primary school teachers, underscoring its importance for

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improving educational quality and safeguarding learners in complex digital information spaces.

Keywords: Media literacy, critical thinking, digital environment, primary education, information evaluation, digital competence, media education, pedagogical strategies, learner-centered learning.

Introduction

The digital transformation of contemporary society has profoundly reshaped the ways in which information is produced, disseminated, and consumed. For children of primary school age, digital media have become an integral part of everyday life, influencing learning practices, social interaction, and the formation of worldview. Alongside the educational opportunities offered by digital technologies, the modern media environment presents significant challenges, including information overload, the spread of misinformation, manipulative content, and blurred boundaries between factual information and opinion. In this context, the formation of media literacy and critical thinking skills emerges as a central task of modern education, particularly within primary education, where the foundations of cognitive and social development are established.

Media literacy is increasingly understood as a complex, multidimensional competence that goes beyond the ability to use digital devices or access online resources. It encompasses the capacity to analyze, interpret, evaluate, and create media content while understanding the social, cultural, and ideological contexts in which media messages are produced. For young learners, developing such competencies is closely linked to the cultivation of critical thinking, defined as the ability to reason logically, question assumptions, evaluate evidence, and make informed judgments. The integration of media literacy into primary education therefore serves not only to protect children from harmful or misleading content but also to support their intellectual autonomy and active participation in learning processes.


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The pedagogical significance of critical thinking in primary education lies in its role as a foundational cognitive skill that supports lifelong learning. At the early stages of schooling, children begin to develop habits of inquiry, reflection, and reasoning that shape their future academic and personal development. When embedded within media literacy education, critical thinking enables learners to engage thoughtfully with digital texts, images, and audiovisual materials, fostering awareness of credibility, bias, and intent. This is particularly important in digital environments, where information is often fragmented, rapidly changing, and presented in persuasive or emotionally charged formats.

Teacher preparation plays a decisive role in the effective implementation of media literacy education. Future primary school teachers must possess not only subject knowledge and pedagogical skills but also a clear understanding of media processes and critical thinking methodologies. In pedagogical universities, the integration of media literacy into teacher education programs supports the development of professional competencies necessary for guiding young learners in navigating digital information spaces. Educators who are themselves media literate are better equipped to design learning activities that encourage analysis, discussion, and reflection, rather than passive consumption of information.

In the context of ongoing educational reforms and digitalization initiatives, the issue of media literacy gains particular relevance for developing education systems. The alignment of national educational goals with global trends in digital competence and critical thinking requires systematic pedagogical approaches and evidence-based instructional models. This article addresses these challenges by examining theoretical and practical aspects of media literacy and its role in shaping critical thinking in primary education. By analyzing contemporary pedagogical research and educational practices, the study seeks to contribute to a deeper understanding of how media literacy can be effectively integrated into the learning process to support the holistic development of primary school learners in a complex digital environment.

Methods

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This study employs a qualitative–analytical research design aimed at examining the pedagogical potential of media literacy education in fostering critical thinking among primary school learners in digital environments. The methodological framework is grounded in interdisciplinary approaches that integrate pedagogical theory, media studies, and educational psychology. Such an approach makes it possible to analyze media literacy not only as an instructional content area but also as a process that shapes learners’ cognitive, reflective, and evaluative abilities.

The primary method used in the study is a systematic analysis of scholarly literature, including international research articles, policy documents, and pedagogical frameworks related to media literacy, critical thinking, and primary education. Sources were selected based on their relevance, academic credibility, and focus on child-centered and school-based media education. The literature analysis allowed for the identification of key concepts, models, and pedagogical conditions that underpin the effective integration of media literacy into primary education curricula. Special attention was paid to studies addressing inquiry-based learning, reflective pedagogy, and competency-based education, as these approaches closely align with the development of critical thinking.

In addition to theoretical analysis, the study applies a comparative pedagogical method to examine different instructional strategies used in media literacy education. This method involves comparing traditional content-based teaching approaches with interactive and learner-centered models, such as problem-based learning, project-based learning, and guided media analysis. Through comparison, the research highlights the advantages of pedagogical practices that actively engage learners in questioning, discussion, and interpretation of media content, as opposed to passive reception of information. This comparison provides insight into how teaching methods influence the depth and quality of critical thinking development in primary school students.

The study also incorporates elements of pedagogical modeling to conceptualize an integrated framework for media literacy education in primary schools. This model outlines the relationships between learning objectives, instructional content, teaching methods, and expected learning outcomes related to critical

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thinking. Pedagogical modeling serves as a tool for synthesizing theoretical findings into a coherent structure that can be adapted for teacher education and classroom practice. The model emphasizes age-appropriate media texts, guided analysis, collaborative learning, and reflective activities as core components of effective instruction.


To ensure methodological validity, the research adopts a principle of triangulation by cross-referencing findings from different sources and theoretical perspectives. This approach enhances the reliability of conclusions by identifying recurring patterns and consistent pedagogical recommendations across diverse studies. Ethical considerations are addressed through careful interpretation of research findings, avoiding overgeneralization and respecting the developmental characteristics of primary school learners.

Overall, the chosen methods enable a comprehensive examination of media literacy as a pedagogical phenomenon and its role in shaping critical thinking within digital environments. By combining theoretical analysis, comparative methods, and pedagogical modeling, the study provides a robust methodological foundation for understanding how media literacy education can be systematically implemented in primary education to support learners' cognitive development and prepare them for informed participation in digital society.

Results

The analysis of theoretical and pedagogical sources demonstrates that media literacy education has a measurable and meaningful impact on the formation of critical thinking skills among primary school learners. One of the key results of the study is the identification of a strong relationship between structured media literacy instruction and learners' ability to analyze and evaluate digital information. Educational practices that integrate guided media analysis, age-appropriate digital texts, and reflective discussion consistently contribute to the development of questioning skills, logical reasoning, and evidence-based judgment in young learners.

The findings indicate that primary school students who engage in media literacy activities show improved awareness of the credibility and purpose of media


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messages. Learners become more capable of distinguishing factual information from opinion, recognizing persuasive techniques, and identifying elements of bias or emotional manipulation in digital content. These abilities are closely associated with core components of critical thinking, such as interpretation, analysis, and evaluation. The results suggest that even at an early age, children can meaningfully engage with complex media concepts when instructional strategies are aligned with their cognitive and developmental characteristics.

Another significant result concerns the role of pedagogical approaches in shaping learning outcomes. Interactive and learner-centered methods, including problem-based tasks, collaborative analysis of media texts, and guided questioning, were found to be more effective than traditional transmissive teaching models. When students are encouraged to ask questions, justify their opinions, and reflect on alternative perspectives, their critical thinking skills develop more deeply and sustainably. The results highlight that the quality of teacher mediation is a decisive factor in transforming media content into a tool for cognitive development rather than a source of passive consumption.

The study also reveals positive outcomes related to learners' communicative and social skills. Participation in media literacy activities fosters dialogue, cooperation, and respectful exchange of ideas among students. As children discuss and evaluate media messages together, they learn to articulate their thoughts clearly, listen to others, and consider diverse viewpoints. These social dimensions of learning reinforce critical thinking by situating it within collaborative and dialogic contexts, which are particularly effective in primary education.

In addition, the results underscore the importance of teacher preparedness in achieving successful media literacy outcomes. Studies reviewed in the analysis indicate that teachers who possess a solid understanding of media literacy concepts and critical thinking methodologies are more likely to design effective learning activities and guide students' analytical processes. Conversely, limited teacher competence in media education can reduce instruction to technical skills, diminishing its impact on critical thinking development. This finding

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emphasizes the need for systematic inclusion of media literacy training in teacher education programs.

Overall, the results confirm that media literacy, when implemented through purposeful pedagogical strategies, functions as a powerful catalyst for the formation of critical thinking in primary education. The integration of analytical tasks, reflective practices, and interactive learning environments enables young learners to navigate digital information spaces more consciously and responsibly, laying the groundwork for informed learning and civic engagement in later stages of education.

Discussion

The results of this study reinforce the view that media literacy occupies a central position in the contemporary educational agenda, particularly in relation to the development of critical thinking in primary education. The findings align with existing pedagogical theories that conceptualize critical thinking as a skill cultivated through active engagement, reflection, and meaningful interaction with learning content. In digital environments characterized by rapid information flow and diverse media formats, media literacy serves as a mediating framework through which young learners can develop analytical and evaluative competencies in an age-appropriate manner.

One of the key points emerging from the discussion is that media literacy should not be treated as an isolated subject or a set of technical skills. Rather, it functions most effectively when embedded across the curriculum and integrated into everyday learning activities. The results suggest that when media analysis is connected to reading, language development, social studies, and creative tasks, learners are more likely to transfer critical thinking skills across contexts. This interdisciplinary integration supports the development of coherent cognitive strategies, enabling students to approach information critically regardless of the subject area or media format.

The role of the teacher emerges as particularly significant in interpreting and guiding learners' interactions with digital media. The discussion highlights that critical thinking does not develop automatically through exposure to digital

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technologies. Instead, it requires intentional pedagogical scaffolding, including the use of guiding questions, structured discussion, and reflective exercises. Teachers act as facilitators who help learners articulate their reasoning, challenge assumptions, and consider alternative interpretations of media messages. This reinforces socio-constructivist perspectives on learning, which emphasize the importance of dialogue and social interaction in cognitive development.

Another important aspect concerns the developmental characteristics of primary school learners. The discussion acknowledges that critical thinking at this stage differs in form and complexity from that of older students. However, the findings demonstrate that young learners are capable of engaging in foundational critical thinking processes, such as identifying key ideas, questioning sources, and expressing reasoned opinions, when instruction is appropriately adapted. Media literacy provides concrete and engaging materials that resonate with children’s everyday experiences, making abstract cognitive skills more accessible and meaningful.

The discussion also addresses challenges associated with implementing media literacy education in practice. These include limited instructional time, insufficient teacher training, and variability in access to digital resources. Such constraints can hinder the systematic development of critical thinking if media literacy is reduced to sporadic activities or focused solely on technical competencies. The findings suggest that addressing these challenges requires institutional support, curriculum alignment, and targeted professional development for teachers. Pedagogical universities play a crucial role in this process by preparing future educators to integrate media literacy and critical thinking into their professional practice.

In a broader educational context, the discussion emphasizes that fostering critical thinking through media literacy contributes not only to academic outcomes but also to the social and ethical development of learners. By learning to evaluate information responsibly and engage thoughtfully with digital content, children develop habits of mind that support informed decision-making and responsible participation in society. Thus, media literacy education in

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primary schools represents an investment in both educational quality and the long-term development of learners in an increasingly complex digital world.

Conclusion

The study demonstrates that media literacy plays a decisive role in the formation of critical thinking among primary school learners within contemporary digital environments. As digital media increasingly shape children’s learning experiences, social interactions, and perceptions of reality, the ability to critically engage with information becomes a foundational educational objective. The findings confirm that media literacy, when understood as an integrative pedagogical competence rather than a purely technical skill, provides an effective framework for developing analytical, evaluative, and reflective thinking from the early stages of schooling.

The analysis highlights that the systematic integration of media literacy into primary education supports learners’ ability to question information sources, recognize bias and persuasive intent, and make reasoned judgments based on evidence. These skills are central components of critical thinking and are essential for navigating complex digital information spaces. Media literacy activities grounded in guided analysis, discussion, and reflection enable children to move beyond passive consumption of digital content and to become active, thoughtful participants in the learning process.

An important conclusion of the study is that the effectiveness of media literacy education largely depends on pedagogical approaches and teacher competence. Learner-centered, inquiry-based, and dialogic teaching methods significantly enhance the development of critical thinking, while traditional transmissive approaches limit its potential. Teachers who possess strong media literacy competencies are better positioned to scaffold learners’ thinking, encourage questioning, and create meaningful learning situations that connect digital content with cognitive development. This underscores the strategic importance of integrating media literacy and critical thinking training into pedagogical university curricula for future primary school teachers.

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The study also emphasizes that critical thinking in primary education should be viewed as a developmental process rather than an immediate outcome. At this stage, critical thinking manifests through basic analytical actions, reflective questioning, and the ability to articulate simple judgments. Media literacy offers concrete and engaging contexts through which these foundational skills can be nurtured in developmentally appropriate ways. Over time, such early experiences lay the groundwork for more advanced forms of critical reasoning and independent learning.



In conclusion, the formation of critical thinking through media literacy represents a vital direction for modern primary education in digital environments. Its successful implementation requires coherent curriculum design, institutional support, and continuous professional development for teachers. By fostering media-literate and critically thinking learners from an early age, education systems contribute to the preparation of individuals who are capable of informed decision-making, responsible digital participation, and lifelong learning in an increasingly information-rich society.

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