Original Article

Media Literacy for Children: A Systematic Review

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Abstract

Media literacy is a crucial skill for children to live in a media-saturated world. This systematic review explores the impact of media literacy on children's cognitive, social, and emotional development while addressing challenges and opportunities in implementing effective media literacy education. The search process entailed extensive exploration of key academic databases, including PubMed, PsycINFO, ERIC, and Scopus. Terms like "media literacy", "children", "digital literacy", "critical thinking", "media education", and "cognitive development" were utilized in combination with Boolean operators (AND, OR) and truncation methods to expand or narrow the scope of the search. Additionally, the reference lists of identified studies were examined to uncover further pertinent publications that might have been overlooked during the initial database queries. Findings highlight that media literacy fosters critical thinking, creativity, and emotional resilience, enabling children to critically analyze media messages, resist manipulation, and engage responsibly with digital platforms. However, socioeconomic disparities, lack of standardized curricula, and insufficient teacher training pose significant barriers to widespread adoption. The rapid evolution of digital technologies further complicates efforts to maintain relevant educational strategies. This review emphasizes the importance of policy interventions, including national curricula, teacher training programs, and public-private collaborations to bridge gaps in media literacy education. Future research should focus on longitudinal studies and innovative teaching methods that integrate emerging technologies.

Key words: business technology adoption, cybersecurity, innovation risks, IT risk management, strategic IT planning.

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Introduction

Media literacy has become a crucial skill in the digital age, particularly for children growing up in media-saturated environments. Media literacy refers to the ability to access, analyze, evaluate, create, and act using various forms of communication. As children are exposed to digital content at increasingly younger ages, understanding how they interact with media and developing their media literacy skills has become an essential concern for educators, parents, and policymakers. Through an extensive systematic review, this paper examines the role of media literacy in children's cognitive, social, and emotional development, highlighting both the opportunities and challenges they face in navigating the digital world.

Media literacy is essential for fostering critical thinking, enhancing communication skills, and promoting active citizenship. Children encounter a vast array of media messages daily, including advertisements, entertainment, social media content, and news. Each of these sources shapes their perceptions of reality, social norms, and personal identity. As Sabbar et al. (2023) indicate, sustained exposure to prevailing global narratives can lead individuals to adopt external perceptions of their societies, significantly impacting their self-identity. In other words, understanding cultural context through external sources can directly influence how people view themselves and their own society. Medialiterate children can critically evaluate the intent behind these messages, discern fact from opinion, and recognize biases, thus reducing the likelihood of manipulation or misinformation.

Research has consistently shown that media literacy education can improve children's analytical skills. Hobbs (2017a) argues that media literacy not only helps children deconstruct media messages but also empowers them to produce their own media content responsibly. This dual capacity enhances cognitive skills such as critical thinking, creativity, and digital communication. Tomraee et al. (2022) similarly highlight the importance of critical skill development, demonstrating how technological literacy requires not just understanding tools, but developing a nuanced ability to evaluate their ethical implications, potential biases, and transformative potential across professional domains. Their systematic review emphasizes the need for comprehensive educational approaches that foster critical thinking and responsible technological engagement. As children become media creators, they gain a deeper understanding of media's persuasive techniques, fostering greater media awareness and ethical responsibility.

The cognitive development of children is deeply influenced by their interactions with media. Media literacy education aligns with key

developmental theories, such as Piaget's stages of cognitive development, which emphasize the transition from concrete operational thinking to more abstract, critical reasoning. Younger children, who are typically in the preoperational stage, may struggle with distinguishing reality from media representations. For example, studies by Valkenburg and Peter (2013) suggest that children under the age of seven often perceive fictional media content as real, making them vulnerable to misinformation. While cognitive development is crucial for understanding media, psychological factors also play a significant role in shaping how individuals process and respond to media content. Research highlights that behavioral tendencies linked to social incompatibility can influence media engagement, underscoring the need for approaches that address both cognitive and psychological dimensions (Jamali et al., 2022).

As children mature, they develop the capacity for abstract reasoning, enabling them to interpret symbolic meanings and understand persuasive intent. Media literacy instruction tailored to developmental stages can help bridge these cognitive gaps. Research by Potter (2016) highlights that media literacy training enhances children's ability to recognize media stereotypes, decode complex narratives, and challenge false information. Early introduction of media literacy curricula can thus provide children with the cognitive tools needed to navigate increasingly sophisticated digital environments.

Media literacy also plays a significant role in shaping children's social and emotional development. Social media platforms and digital games offer spaces for identity exploration, social interaction, and self-expression. Zamani et al. (2021) provide crucial insights, demonstrating that while social networks can negatively impact social health through excessive use. They also offer opportunities for social integration and learning when used appropriately. Their study reveals the complex dynamics of digital platforms, emphasizing the importance of developing nuanced strategies for healthy digital engagement. However, these aspects also expose children to cyberbullying, harmful stereotypes, and unrealistic body standards. Media literacy education can mitigate these risks by teaching children to interpret media messages critically, manage online relationships, and understand the consequences of their digital behavior. Mahmoodi-Bakhtiari and Dehghani (2014) examine how language reflects and constructs social identities, highlighting the complex interplay between linguistic choices, gender representation, and cultural narratives. Their research underscores the importance of recognizing diverse narrative styles and representational strategies, which is crucial for enabling children to critically engage with media narratives and comprehend the broader social implications of language in shaping identity and culture.

Social learning theory, proposed by Bandura (1977), underscores the importance of observational learning in shaping behavior. Children often model behaviors they see in media, making it crucial for them to recognize the difference between socially constructive and destructive content. For instance, research by Livingstone and Helsper (2008) indicates that media-literate children are better equipped to resist peer pressure, navigate social conflicts, and develop empathy by understanding diverse perspectives presented in media.

Sabbar and Dalvand's (2018) semiotic analysis extends this understanding by revealing how media representations create complex cultural narratives that potentially could shape children's social perceptions. Their research demonstrates how media literacy goes beyond individual interpretation, highlighting the intricate ways cultural meanings are constructed, negotiated, and transmitted through symbolic systems. By examining how media messages encode and reproduce social norms, the study underscores the importance of helping children critically decode the deeper cultural implications embedded in media content.

Moreover, media literacy improves emotional intelligence by encouraging children to reflect on how media messages make them feel. When children learn to analyze emotional cues in media representations, they can better manage their emotional responses, reducing feelings of anxiety or inadequacy often triggered by idealized media portrayals. Research demonstrates that media narratives can profoundly shape emotional and cognitive perceptions, particularly during times of crisis, where biased or manipulative framing can significantly distort public understanding and emotional responses (Kharazmi & Mohammadi, 2020). Similarly, broader studies on adult populations have shown that access to global media and communication technologies fosters higher levels of awareness and socially responsible behavior, especially in environmental contexts-a dynamic that may also extend to children's ethical and emotional development as they engage with media in a globalized world (Mousavi & Dariush, 2019). By developing critical media literacy skills, children become more resilient to emotional manipulation and can more effectively navigate the complex landscape of media representations. Media literacy programs that incorporate discussions about mental health, self-esteem, and body positivity have been found to improve children's selfconcept and emotional well-being. Particularly as our media are becoming more visual and affective (see for example Shahghasemi, 2020), teaching media literacy to children has become even more important.

Despite its recognized benefits, promoting media literacy among children faces several challenges. One significant barrier is the digital divide, which creates unequal access to media literacy education based on socioeconomic status. As Mohammadi and Kharazmi (2021) emphasize, the reliance on online platforms during critical situations like the COVID-19 pandemic exposes significant barriers, particularly the lack of technological infrastructure. This issue is especially pronounced in developing countries, where inadequate resources limit access to essential online learning tools. Such disparities hinder media literacy education and exacerbate inequalities, making it more difficult for children in these regions to develop the necessary skills for navigating the digital landscape. Generally, Children from lower-income families often have less access to high-quality digital tools, limiting their opportunities to develop media literacy skills. The digital divide also extends to differences in parental support, with more educated parents typically being more involved in guiding their children's media use.

Another challenge is the lack of standardized media literacy curricula in schools. While some educational systems have integrated media literacy into their programs, many schools still treat it as an optional or extracurricular subject. According to Kellner and Share (2019), the absence of a comprehensive, interdisciplinary approach to media literacy education undermines its effectiveness. Teachers may also lack the necessary training and resources to implement media literacy lessons effectively. Similar challenges are evident in other technological education domains, as Hosseini et al. (2021) reveals the necessity of continuous education and interdisciplinary training to effectively utilize emerging technologies while addressing ethical concerns. The study underscores the importance of adaptive learning frameworks that prepare professionals to navigate complex technological landscapes with critical awareness and responsible decision-making.

Furthermore, the rapidly changing media landscape complicates media literacy instruction. New digital platforms, social media trends, and emerging technologies like artificial intelligence require continuous updates to media literacy curricula. Soroori Sarabi et al. (2023) underscore this point, revealing that technological adoption requires a balanced approach that recognizes both innovative potential and associated risks. Their research highlights the critical need for strategic understanding, demonstrating how organizations can optimize technological integration while mitigating potential disruptions and maintaining ethical standards. Children must be equipped with adaptive learning strategies that enable them to navigate these evolving digital environments. Critical media literacy approaches that emphasize participatory learning, media production, and critical analysis are essential in this regard.

Given the growing recognition of media literacy's importance, several policy initiatives have emerged globally. Countries like Finland and Canada have incorporated media literacy into their national education standards, serving as models for other nations. In the United States, media literacy advocacy groups have called for federal and state legislation mandating media literacy education in schools.

Policymakers must prioritize funding for media literacy programs, teacher training, and public awareness campaigns. Public-private partnerships involving technology companies, media organizations, and educational institutions can enhance the reach and effectiveness of media literacy initiatives. Trust in societal institutions is foundational for fostering critical engagement and accountability. Research highlights that trust is built through robust legal frameworks, effective oversight, and active participation from civil society, all of which are essential for creating environments where media literacy can thrive (Kodabakhshi et al., 2021). Media regulation policies should also ensure that children are protected from harmful media content while promoting access to diverse, educational media resources. For these efforts to succeed, it is crucial that policymakers maintain public trust and confidence by ensuring consistent and accountable practices in the implementation of media literacy programs. When policies are inconsistently enforced or lack transparency, it can lead to systemic inefficiencies and undermine the effectiveness of these initiatives (Moein et al., 2023).

Future research should explore how emerging technologies, such as virtual reality and artificial intelligence, impact children's media literacy development. Longitudinal studies examining the long-term effects of media literacy education on children's cognitive, social, and emotional outcomes are also needed. A holistic, interdisciplinary approach that integrates psychology, communication studies, education, and digital media research can provide deeper insights into how children navigate the digital world.

The media now pervades nearly every aspect of life, developing media literacy skills is essential for children's growth and well-being. Integrating virtual education into media literacy can further support this goal by offering flexible, learner-centered environments that promote critical thinking, environmental awareness, and cultural identity, especially for geographically or socially isolated learners (Dariush et al., 2021).

Media literacy empowers children to critically engage with media, fostering cognitive, social, and emotional development while protecting them from potential harms. While significant progress has been made in advancing media literacy education, challenges such as the digital divide, lack of standardized curricula, and rapidly evolving digital technologies persist. Addressing these challenges requires collaborative efforts from educators, policymakers, parents, and media industry leaders. The first step in this regard is to do research on the state of media literacy education to children.

Methodology

This study employed a systematic review methodology to explore the role of media literacy in children's cognitive, social, and emotional development while examining the challenges and opportunities associated with promoting media literacy among children. A systematic review ensures a structured, transparent, and replicable process for identifying, selecting, and analyzing relevant studies (Shahghasemi et al., 2011). The research was guided by specific questions, including: How does media literacy impact children's development? What are the primary challenges in advancing media literacy education for children? And what strategies or interventions have proven effective in enhancing children's media literacy skills?

To ensure relevance and quality, the study established clear inclusion and exclusion criteria. Eligible studies were peer-reviewed articles, books, and reports published in English, focusing on children aged 3–18 years and addressing media literacy education, skills, or interventions. Excluded were non-English publications, opinion pieces lacking empirical evidence, and studies unrelated to media literacy in children. The search strategy involved comprehensive searches across major academic databases such as PubMed, PsycINFO, ERIC, and Scopus. Keywords such as "media literacy", "children", "digital literacy", "critical thinking", "media education", and "cognitive development" were combined using Boolean operators (AND, OR) and truncation techniques to broaden or refine results. Reference lists of selected studies were also reviewed to capture any additional relevant publications missed during the database searches.

The selection process involved several systematic steps. Initially, titles and abstracts were screened to exclude irrelevant studies. Articles passing this initial review underwent full-text examination to determine eligibility based on the predefined criteria. Data extraction was conducted for the final selection of studies, capturing essential details such as research objectives, methodologies, sample characteristics, key findings, and conclusions.

The quality of the selected studies was assessed using standardized tools like the Critical Appraisal Skills Programme (CASP) checklists. These tools provided a framework for evaluating research design, methodological rigor, and relevance to the study's objectives. High-quality studies were prioritized to ensure the reliability of the synthesized findings. A thematic analysis approach was employed to synthesize data, identifying recurring themes and patterns across the studies. The results were organized into categories reflecting cognitive, social, and emotional developmental outcomes, alongside effective strategies and interventions. A narrative synthesis was used to qualitatively summarize the findings, supplemented by quantitative data when applicable.

This systematic review methodology ensured a rigorous and transparent

process for analyzing existing research on media literacy in children. By combining comprehensive data collection, stringent quality assessment, and thematic synthesis, the study provides a reliable foundation for its findings and conclusions. However, limitations should be acknowledged, including the potential for publication bias, the restriction to Englishlanguage studies, and the exclusion of grey literature, which may have omitted valuable insights from non-peer-reviewed sources. Despite these limitations, the methodology ensures that the review offers a robust and nuanced understanding of the subject.

Findings

Buckingham (1993) critically examines the dominant focus on critical reading in media literacy curricula, questioning its underlying assumptions about children's prior media knowledge and its practical application in the classroom. Drawing on his research on children's understanding of television, he highlights the interplay between cognitive, affective, and social factors shaping how children interpret media. He argues that critical media analysis alone is insufficient, as children's media literacy develops through socially embedded discussions rather than purely analytical exercises. The article also reviews classroom-based research, emphasizing the complex processes through which children acquire critical discourses about media. Buckingham critiques the notion that critical thinking can be taught in isolation, advocating for a broader pedagogical framework that integrates analytical skills with creative and participatory learning activities. He calls for a more dynamic media literacy pedagogy that accounts for children's diverse experiences, emotional responses, and cultural contexts, enabling a richer and more meaningful engagement with media content.

Feuerstein (1999) examines the role of media literacy education in providing critical thinking among children aged 10-12. The study assesses how a media litercay program supports students' ability to critically analyze media texts, considering both explicit and implicit media messages. Through a longitudinal research design, the findings reveal that media litercay instruction significantly enhances students' critical thinking skills, particularly when sustained over time. Interestingly, students labeled as low-achievers by their teachers demonstrated greater improvements in critical thinking skills compared to high-achieving peers. This outcome suggests that media litercay programs may serve as an equalizing educational tool, offering disproportionate benefits to students who might struggle in traditional academic contexts. The study raises theoretical questions about the extent to which children can adopt a skeptical stance toward media texts, exploring the developmental limits of critical media analysis at a young age. Feuerstein concludes that integrating media literacy into the curriculum is essential for cultivating reflective, mediasavvy citizens capable of navigating complex media environments.

Hobbs and Frost (2003) investigate the impact of media literacy instruction on high school students' critical analysis skills through a yearlong Grade 11 English media/communication course. Using a nonequivalent group's design, the study compares students receiving intensive media literacy education with a demographically similar control group lacking such instruction. Key measured competencies include reading comprehension, writing skills, critical reading, listening, and viewing of nonfiction informational messages. Their findings reveal that media literacy instruction significantly enhances students' ability to identify main ideas across written, audio, and visual media formats. Improvements were also noted in the quantity and quality of students' writing. Analytical skills such as recognizing media messages' purposes, target audiences, points of view, and construction techniques showed marked development. Furthermore, students became better at detecting omitted information in news broadcasts. These results underscore the effectiveness of integrating critical media analysis into secondary education curricula, suggesting that media literacy fosters essential interpretive and evaluative skills across diverse media formats.

Byrne (2009) investigates the effectiveness of media literacy interventions aimed at reducing children's aggressive tendencies following exposure to media violence. The study involved 156 fourth- and fifth-grade students randomly assigned to two treatment groups and a control group. Both treatment groups received a media literacy intervention designed to mitigate the effects of violent media, but only one group participated in a follow-up cognitive activity reinforcing the intervention content. Findings reveal a critical distinction: children who engaged in the cognitive activity exhibited a significant reduction in their willingness to use aggression immediately after the intervention. Conversely, children who only received the media literacy instruction without the supplemental activity showed an increased willingness to engage in aggressive behavior. Longitudinal analysis indicated that this effect persisted over time, with the noncognitive group remaining more prone to aggression than the control group. These results highlight the importance of integrating cognitive reinforcement tasks into media literacy programs to solidify learning and prevent unintended negative outcomes, a phenomenon the author terms the "boomerang effect". Byrne concludes that media literacy interventions should go beyond passive instruction by incorporating reflective activities that encourage deeper cognitive processing to ensure positive behavioral outcomes.

Hobbs and Jensen (2009) provide a comprehensive overview of the

historical development, current practices, and future directions of media literacy education in the United States. They trace the field's evolution from its roots in 20th-century educational technology and media studies, emphasizing its interdisciplinary nature that bridges media studies, cultural studies, and education. Central to their discussion is the creation of the Core Principles of Media Literacy Education in 2007, which established a unified framework reconciling two dominant perspectives: the "protectionist" approach focused on shielding students from media's harmful effects and the "empowerment" model emphasizing active participation and critical engagement. The authors identify two critical challenges shaping the future of media literacy education. First, the integration of media literacy into K-12 curricula alongside the expanding use of educational technology raises questions about effective pedagogical strategies. Second, media literacy's intersection with the humanities, arts, and sciences presents both opportunities for interdisciplinary learning and challenges in defining its role within a broader educational framework. Hobbs and Jensen call for continued cross-disciplinary collaboration and policy development to ensure media literacy remains a central component of education in the digital age.

Jusoff and Sahimi (2009) explore the effects of television exposure on young children's development, highlighting both risks and the potential benefits of media literacy education. They identify key developmental concerns linked to excessive television viewing, including delayed language and cognitive development, behavioral issues, attention disorders, increased aggression, and a heightened risk of childhood obesity. The paper attributes these negative outcomes to the growing volume of children's television programming and the increasing number of hours young children spend watching TV. The authors argue that promoting media literacy can mitigate these adverse effects by teaching children to critically engage with media content rather than passively consuming it. Media literacy education can enhance children's understanding of media messages, helping them distinguish between reality and fiction while fostering healthier media consumption habits. The paper concludes that incorporating media literacy into early childhood education is essential to reducing harmful media effects and supporting balanced cognitive, emotional, and social development in young children.

Bagheri et al. (2022) provide complementary insights into engagement strategies, demonstrating how different interactive mechanics can significantly influence user interaction and learning. Their research explores the sophisticated ways digital platforms design engagement, revealing the psychological and behavioral mechanisms that shape user experiences and participation.

Pereira et al. (2012) discuss the development of educational resources

aimed at enhancing media literacy among children and adolescents through the "Media Education in Booklets" project conducted at the University of Minho, Portugal. The authors identify a critical gap in media literacy education: the limited availability of practical, research-based resources that effectively translate scholarly knowledge into accessible learning materials. In response, the project, supported by the Evens Foundation, produced three instructional booklets addressing key areas of media literacy. The first booklet focuses on mediating television use both at home and in school, emphasizing critical viewing skills. The second explores video games, highlighting their potential for creativity, intercultural exchange, and understanding associated risks. The third addresses the Internet and social networks, examining how digital communication reshapes social relationships and interactions. The authors argue that media literacy education must move beyond theoretical discussions by providing tangible resources that bridge the gap between research and real-world application. This initiative underscores the importance of contextualized, ageappropriate media literacy tools that support educators, parents, and children in navigating the evolving media landscape.

Livingstone (2014) examines how children develop social media literacy by learning to navigate risky opportunities on social network sites (SNSs). Drawing on cross-national interviews and focus groups, the study explores how children interpret the technological, textual, and social affordances of SNSs as they encounter potential risks and benefits. The research frames social media literacy as a developmental process in which children progress from passive recipients to active participants and, ultimately, empowered actors within their online social environments. Findings suggest that children aged 9–11 are primarily concerned with distinguishing reality from deception online. By ages 11-13, their focus shifts toward entertainment, even when content is transgressive or fabricated. Adolescents aged 14–16 demonstrate a more nuanced engagement, balancing social and emotional complexities while reevaluating the value of online interactions. The study highlights how evolving peer and parental relationships shape children's perceptions of online risk, emphasizing the need for educational strategies that support adaptive, critical engagement with SNSs.

Šramová (2014) explores the critical role of media literacy in mitigating the impact of marketing consumerism on children, who are increasingly targeted by advertisers. The paper draws on Piaget's cognitive development theory, explaining that children under eight lack the cognitive capacity to recognize the persuasive intent of advertisements. As children progress through four developmental stages, their ability to distinguish between commercial messages and reality depends on the maturation of their cognitive processes. The study highlights the negative consequences of excessive commercialization, including lowered self-esteem, materialistic value orientations, and unhealthy consumer habits. Šramová emphasizes that these impacts can be mitigated through comprehensive media literacy education in schools and families. Teaching children to critically analyze marketing messages can enhance their ability to recognize persuasive content, reducing their vulnerability to consumer manipulation. The paper concludes that fostering media literacy from an early age is essential for developing informed, reflective consumers capable of navigating the complex marketing environment of contemporary media.

Šupšáková (2016) examines media education as a pathway to media literacy among children and youth, focusing on the Slovak context while drawing comparisons with other European Union countries. The study reviews theoretical frameworks, analyzes research findings, and presents the author's own empirical research on media use among Slovak primary school children. The findings indicate that television and the Internet dominate children's media consumption for information gathering, while personal communication with family and friends increasingly occurs through phone calls and text messaging. The study also explores how children identify with different media types and content, emphasizing the need for a curriculum that reflects the evolving digital landscape. Comparative analysis of media education policies across EU countries highlights diverse pedagogical approaches, providing a foundation for improving Slovakia's media literacy curriculum. The author calls for updating media education content in primary schools to align with current media trends, ensuring that children develop critical thinking, responsible media use, and digital citizenship skills.

Pfaff-Rüdiger and Riesmeyer (2016) explore media literacy as a socially embedded process, emphasizing its role in children's broader social development. Drawing on self-determination theory and a needs-oriented approach, the study conceptualizes media literacy not merely as a set of technical skills but as an evolving social competency shaped by interaction and participation. The authors argue that as media technologies become increasingly intuitive and integrated into everyday life, media literacy development is inherently tied to social practices.

Their analysis focuses on how media literacy is mediated through social processes involving family, peers, and educational contexts. They highlight that children's ability to critically engage with media emerges from collaborative experiences where norms, values, and media practices are negotiated and shared. This perspective reframes media literacy as dynamic and context-dependent, requiring supportive environments that foster both individual autonomy and social belonging. The authors conclude that promoting media literacy involves creating participatory learning settings

that encourage active engagement and critical reflection, linking personal media experiences to broader societal roles and responsibilities.

Aarsand and Melander (2016) examine how young children develop media literacy through guided participation in everyday interactions at home and school. Using an ethnomethodological approach, the study analyzes video-recorded activities involving four children aged 6-7, focusing on online calling and word processing tasks. The findings reveal that media literacy development is a socially embedded process involving verbal, embodied, and social competencies shaped through adult-child and peer interactions. Children internalize norms and guidelines through these interactions, adapting and reapplying them across contexts. The study highlights spatiality and temporality as critical dimensions influencing how media literacy activities are structured and experienced. Additionally, the integration of old and new technologies in literacy practices reflects broader cultural and historical understandings of media use. The authors argue that children's media literacy extends beyond technical skills, encompassing social norms and collaborative practices that facilitate meaningful participation in digital environments. These insights suggest the need for educational strategies that recognize the dynamic, contextdependent nature of media literacy development.

Hobbs (2017b) explores the measurement of digital and media literacy children and competencies among teens, emphasizing the multidimensional nature of media literacy as a "constellation of competencies". Hobbs discusses two primary paradigms in media literacy education: empowerment, which fosters critical thinking and creative production, and protection, which mitigates media-related risks. Various assessment methods are reviewed, including performance-based measures that evaluate learners' abilities to analyze and create media, as well as selfreport surveys that capture attitudes, knowledge, and behaviors. Hobbs highlights that each assessment approach reflects specific educational goals and contextual values. The analysis also considers the cognitive and affective domains of media literacy learning, noting that students' emotional responses and teachers' motivations play significant roles in shaping learning outcomes. The chapter underscores the need for comprehensive evaluation frameworks that account for these complex interactions, offering insights into how media literacy education can be advanced through improved assessment practices.

Diergarten et al. (2017) investigate the impact of media literacy on preschool children's ability to learn from educational films and hypermedia environments. The study involves 150 children with a mean age of 5.33 years, assessing media literacy using a computer-based test and measuring learning outcomes through recognition and inference tasks. Hierarchical

regression analyses reveal that media literacy significantly predicts knowledge acquisition, surpassing even intelligence as a determinant. The authors also consider variables such as media usage and socioeconomic status but find that media literacy consistently explains more variance in learning outcomes. This finding underscores the importance of developing media literacy skills early in life to enhance children's educational experiences across different media formats. The study contributes to the broader discourse on educational media by emphasizing the critical role of media literacy in cognitive development and learning efficacy among young children.

Bulger and Davison (2018) critically examine the evolving role of media literacy in combating misinformation and improving critical thinking in the digital age. They highlight the increasing investment in media literacy initiatives by educators, policymakers, technologists, and philanthropists, emphasizing its potential to promote informed media consumption. The authors frame media literacy within the dual paradigms of protection from harmful content and active civic participation, outlining five key thematic areas: youth engagement, teacher training, parental support, policy development, and evidence-based evaluation. While acknowledging positive program outcomes, such as improving news literacy, evaluating partisan content, and enabling critical responses during breaking news events, the authors caution against overestimating media literacy's effectiveness. They note a significant gap in long-term evaluation data and point to cases where media literacy programs have led to overconfidence in media judgment, reducing their intended impact. The authors stress that media literacy should not be seen as a universal solution but rather as a component of a broader media ecosystem requiring continuous assessment and adaptation. They recommend improving evaluation frameworks, fostering interdisciplinary collaboration, and strengthening policy support to ensure media literacy's sustainability and effectiveness in a rapidly changing media landscape.

Rasi et al. (2019) explore media literacy education across the lifespan, emphasizing the need for age-specific pedagogical strategies. This research highlights that media literacy competencies develop in response to changing life roles, societal conditions, and technological advancements. Young children require foundational skills in interpreting media content, while adolescents benefit from critical thinking and responsible online behavior training. For adults and parents, media literacy education can support both professional development and family media management. Older adults face unique challenges, with media literacy playing a crucial role in maintaining cognitive health, evaluating health-related information, and fostering social connections. The authors adopt a life course perspective, arguing that media literacy evolves dynamically due to historical, social, and policy shifts. A comprehensive review of existing literature reveals current practices in media literacy education, instructional methods, and future needs for various age groups. The study underscores the necessity of adaptive educational frameworks that respond to the diverse and evolving media literacy demands of a global, digital society.

Yankovych et al. (2019) examine the development of media literacy technologies for senior preschool children in Ukraine, focusing on the implementation of media education within preschool establishments. The study highlights the relevance of early media literacy education, emphasizing the preschool period as a critical stage for fostering critical thinking skills. The authors describe a three-component structure for preschool media education, integrating cognitive, emotional, and practical dimensions. The research is situated within a national media education experiment conducted from 2017 to 2022 across Ukrainian preschools, particularly in Ternopil and Khmelnytskyi regions. Key challenges identified include limited educator training and resource availability. In response, the study advocates for targeted professional development programs to equip preschool educators with the skills needed to implement media education effectively. Psychological factors influencing young children's media literacy development, such as attention span, comprehension ability, and emotional sensitivity, are also examined. The findings demonstrate the feasibility and necessity of incorporating media literacy into early childhood education, recommending systematic policy support and curricular integration. The study concludes that media literacy education at the preschool level can significantly enhance children's critical thinking and responsible media engagement, laying the foundation for lifelong media competencies.

Icen (2020) investigates the impact of activity-based media education on the development of critical media literacy among fifth-grade students. Conducting a case study with 18 students from a public school, the research uses a rubric-based assessment and semi-structured interviews to evaluate students' media literacy competencies. The findings indicate that students can acquire critical media literacy skills through structured, activity-based learning experiences. The study suggests that integrating media literacy education either as a standalone course or within other subjects from the first grade can significantly enhance students' ability to critically evaluate media content. Given the close relationship between media literacy and critical thinking, Icen recommends employing teaching methods that encourage questioning, analysis, and reflective thinking. These approaches can strengthen students' capacity to navigate and interpret media messages effectively, preparing them for active, informed participation in the digital world.

Cannon et al. (2020) explore the intersection of media literacy education, curriculum policy, and children's rights, emphasizing the implications of its removal from the UK's national curriculum in 2014. Drawing on the United Nations Convention on the Rights of the Child (UNCRC), particularly the right to express identity, the authors argue that the exclusion of media literacy undermines children's ability to critically engage with and produce media content. They highlight how prior curriculum frameworks integrated media studies, fostering digital citizenship and self-expression. The paper situates this policy shift within a broader trend of deprioritizing children's rights in educational policy across England and Northern Ireland. The authors advocate for the reintroduction of media literacy into primary and secondary curricula to support identity formation, critical thinking, and active citizenship in an increasingly media-saturated world. Their call for action is grounded in a rights-based approach, emphasizing the need for equitable access to media education as a fundamental aspect of democratic participation and personal development.

Sarfi et al. (2021) address these concerns by exposing how corporate interests, such as those of major technology companies, can significantly shape educational practices and influence the credibility of information production. Their work emphasizes the necessity for educators to foster critical media literacy competencies that enable students to navigate these complex power dynamics effectively.

Mateus (2021) argues that media literacy is essential for fostering active citizenship in a mediatized world, emphasizing the need for critical engagement with media beyond mere technical proficiency. The article highlights three foundational principles for media literacy education: internet access as a human right, the necessity of developing critical media literacy skills, and the role of media policy in empowering citizens. Mateus underscores that media literacy extends beyond device usage, involving an understanding of media's socio-cultural effects, particularly in the context of misinformation and biased reporting heightened by the COVID-19 pandemic and political unrest. The article also stresses the importance of integrating media literacy into teacher education programs, ensuring that educators are equipped to cultivate these competencies in students. By framing media literacy as a tool for empowerment rather than protection, Mateus calls for policies that promote continuous professional development for teachers and equitable access to digital resources. This perspective situates media literacy as a crucial component of democratic participation, enabling individuals to critically navigate and influence the digital public sphere.

Conclusion

This systematic review highlights the pivotal role of media literacy in empowering children to live and work well through complexities of the digital age. Media literacy, encompassing the ability to critically access, analyze, evaluate, and create media content, fosters crucial cognitive, social, and emotional skills. It enables children to develop critical thinking and creativity, understand media biases, and resist manipulation. Moreover, media literacy facilitates emotional resilience by helping children interpret media messages thoughtfully, manage their responses to idealized portrayals, and build a positive self-concept. Socially, it equips children to engage constructively with peers and broader digital communities, promoting ethical and responsible media usage. In this regard, educating ethics holds paramount importance, as research by Sabbar et al. (2019) indicates that individuals, even those with a high level of education, often lack awareness of ethical guidelines in their area of expertise. This underscores the necessity of ethical education. as one should not assume that individuals inherently understand the ethics relevant to their field.

However, the findings also bring attention to persistent challenges in integrating media literacy education effectively. Socioeconomic disparities limit access to high-quality resources and digital tools, disproportionately affecting children from underprivileged backgrounds. The lack of standardized curricula across educational systems hampers consistent implementation, while inadequate teacher training leaves many educators ill-prepared to deliver media literacy lessons. Additionally, the fast-paced evolution of digital media, including the rise of artificial intelligence, virtual reality, and immersive platforms, complicates efforts to keep educational strategies current and relevant.

Policy-level interventions are essential to address these barriers, including the establishment of national standards for media literacy curricula, increased funding for educational resources, and initiatives to train educators comprehensively. Collaborative efforts between policymakers, educators, parents, and media organizations can enhance the reach and impact of media literacy programs. Public-private partnerships could also drive innovation in creating accessible, engaging, and adaptive educational materials to meet diverse needs. Integrating virtual education into media literacy can further support this goal by offering flexible, learner-centered environments that promote critical thinking, environmental awareness, and cultural identity, especially for geographically or socially isolated learners (Dastvar et al., 2023). Media literacy programs must be inclusive, culturally responsive, and adaptable to developmental stages, ensuring their effectiveness for all children regardless of socioeconomic or cultural backgrounds.

Future research must focus on understanding the long-term impacts of media literacy education through longitudinal studies and identifying best practices for integrating emerging technologies into teaching. A multidisciplinary approach combining insights from education, psychology, communication studies, and digital media is vital to designing robust educational frameworks. Media literacy's intersection with broader societal challenges, such as misinformation, cyberbullying, and the ethical use of technology, also warrants further exploration to maximize its potential benefits.

Ethical considerations

The author has completely considered ethical issues, including informed consent, plagiarism, data fabrication, misconduct, and/or falsification, double publication and/or redundancy, submission, etc.

Conflicts of interests

The author declares that there is no conflict of interests.

Data availability

The dataset generated and analyzed during the current study is available from the corresponding author on reasonable request.

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