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DIGITAL MEDIA EDUCATION AS A TOOL TO COMBAT DISINFORMATION IN ELECTORAL PROCESSES

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ABSTRACT

Introduction: This article analyzes digital media education as a key tool for combating disinformation in electoral processes, in a context of increasing complexity in the information landscape. It addresses the importance of media and information literacy as a means of strengthening voters' critical thinking and improving democratic quality. Methods: The research was conducted through a Systematic Literature Review (SLR) following Kitchenham's methodology. Studies documenting strategies, impacts, and experiences in the implementation of digital media education were reviewed and analyzed, with special attention to the integration of emerging technologies in the electoral field. Results: The analysis identified effective strategies such as media and information literacy programs, cooperation between electoral institutions and media outlets, creation of fact-checking portals, public awareness campaigns, and ongoing training of journalists in fact-checking . Ecuador stood out for the initiatives implemented by the National Electoral Council, in collaboration with local and international entities, to counter disinformation. The evidence reviewed shows significant improvements in voters' ability to differentiate true from false information, although challenges remain related to the rapid evolution of disinformation technologies and the need to tailor actions to each context. Conclusions: Digital media education is an essential component for strengthening citizen resilience against electoral disinformation. Its effectiveness depends on strategies tailored to the local environment, the innovative use of emerging technologies, and sustained cooperation between institutions, media outlets, and technology platforms to generate coordinated and effective responses.

1. INTRODUCTION

Since the dawn of civilizations, information has remained a decisive instrument of power. Today, the unprecedented scale, speed, and personalization of online communication have radically transformed how citizens access and consume news, particularly during elections. While this expansion has democratized access to information, it has also amplified the circulation of misinformation and disinformation capable of shaping public opinion and, potentially, electoral outcomes (Salgado et al., 2024).

Within this context, digital media education emerges as a cornerstone for democratic resilience. It equips voters with analytical, evaluative, and creative competencies that enable them to interrogate sources, trace claims, and recognize manipulation—skills that are essential to protecting electoral integrity (Saquisari, 2025). In practice, media and information literacy (MIL)—understood as the capacity to access, analyze, evaluate, and create content across formats and platforms—functions as a protective layer against the erosion of informed decision-making. By combining digital skills, democratic values, and verification methods, MIL provides a comprehensive pathway to reduce the susceptibility of electorates to deceptive content during campaign cycles (Kurniasih et al., 2024).

Ecuador offers a pertinent policy and institutional benchmark. The National Electoral Council (CNE), under the leadership of its president, Diana Atamaint, recognized early the risks that misinformation and fake news pose to electoral integrity and implemented a suite of mitigation mechanisms: extensive livestreaming of official proceedings, an official mobile application, coordinated action with news organizations and political actors, and strategic use of national networks to circulate accurate, timely information (CNE, 2021). These measures, taken together with civic and media initiatives (e.g., Ecuador Verifica; Fundamedios), illustrate how institutional transparency, timely communication, and civic capacity-building can align with digital media education to contain the spread and impact of electoral disinformation (Chancusig, 2023).

At the same time, the digital information environment has multiplied challenges for legacy media and public institutions. Trust in established outlets has weakened in multiple contexts, and the technical sophistication of manipulation tactics has grown (Tusa & Belén, 2019). High-velocity virality and attention-maximizing content architectures often give deceptive narratives an advantage over slower,

verification-intensive journalism (Shahbazi & Bunker, 2024). Moreover, advances in automated amplification, targeted micro-segmentation, and synthetic media complicate large-scale detection and response. As Citron and Chesney argue, the proliferation of coordinated bot networks, microtargeted messaging, and increasingly convincing deepfakes generates complex public-interest and security risks that outpace traditional countermeasures (Citron & Chesney, 2019). Addressing these threats requires a comprehensive approach that pairs media education with cross-sector collaboration and the development of advanced technological tools for real-time detection and mitigation.

This article makes a distinctive contribution by bridging two often disconnected bodies of knowledge. Unlike previous reviews largely centered on Europe or the United States—where most high-visibility empirical studies have been produced (Guess, Nagler, & Tucker, 2019)—this study integrates Latin American evidence, with particular emphasis on Ecuador, and contrasts it with global strategies. In doing so, it not only broadens the geographic scope of media literacy research but also demonstrates how lessons learned in Ecuador can serve as a reference point for other developing democracies that face similar institutional limitations, socio-digital vulnerabilities, and political pressures.

Methodologically, the article provides a systematic literature review (SLR) of strategies, impacts, and implementation experiences of digital media education aimed at countering electoral disinformation, applying Kitchenham's methodology (Kitchenham, 2004) and explicitly adhering to the PRISMA 2020 statement to ensure transparency and reproducibility in the study selection process (Page et al., 2021). The inclusion of a PRISMA flow diagram further documents the stages of identification, screening, and eligibility, reinforcing methodological rigor.

By systematizing regional evidence and aligning it with global MIL frameworks—such as UNESCO's Media and Information Literacy Curriculum for Educators and Learners (2021)—this review highlights how the Ecuadorian case can inspire scalable, adaptable strategies for electoral bodies, schools and universities, NGOs, and fact-checking partnerships in other developing contexts. In this sense, the Ecuadorian experience is not presented as an isolated example but as a transferable model that contributes to strengthening the generalizability of democratic resilience strategies worldwide.

2. METHODOLOGY

This study employed a Systematic Literature Review (SLR) to analyze strategies of digital media education aimed at combating electoral disinformation. The review followed the structured approach proposed by Kitchenham (2004) for evidence-based reviews in the field of computer science and adapted it to the social sciences and education. In addition, the review process adhered to the PRISMA 2020 guidelines (Page et al., 2021), which ensure transparency in the identification, screening, and inclusion of studies. The bibliographic search was carried out in the period January 2019 to December 2024, a timeframe selected to capture recent research on digital media literacy, electoral disinformation, and emerging technologies applied in democratic processes. This temporal frame responds both to the accelerated technological changes of the last five years and to the relevance of electoral contexts affected by misinformation campaigns in Latin America and other region. Following this framework, the review process was organized into five main stages, summarized in Table 1. These stages provided a structured path for the design of research questions, the definition of analytical criteria, the execution of searches, the evaluation of selected studies, and the synthesis of findings.

Table 1: Stages of the Systematic Literature Review (SLR) following Kitchenham's Methodology.

Stage	Description	Activities
1. Design of research questions	Formulating clear and specific questions	- Use of keywords - Consideration of issues raised in the introduction - Ensure focus and cohesion of the study
2. Development of the analytical framework	Guide for data collection and analysis	- Establish criteria for selecting studies - Define data extraction methods
3. Systematic search	Exhaustive exploration of academic databases	- Selection of reliable databases - Use of defined search strategies
4. Critical evaluation of studies	Selection and analysis of relevant studies	- Application of inclusion and exclusion criteria - Evaluation of the methodological quality of the studies
5. Synthesis and interpretation of findings	Analysis and summary of the collected data	- Use of techniques such as critical analysis - Interpretation of results in relation to research questions - Identification of patterns and trends

Note: Developed based on the structure provided by Kitchenham (2004).

2.1. Design of Research Questions

In this first stage, the objective was to analyze both the effectiveness and the strategies of digital media education as a tool to counter electoral disinformation. The research questions were formulated to ensure focus, coherence, and alignment with the study's purpose.

A detailed protocol was developed that defined the inclusion criteria, the search strategies, and the databases to be consulted. The main keywords used included: digital media literacy, electoral disinformation, voter education, fact-checking, misinformation, democratic integrity, election integrity, digital competence, critical thinking, and information verification.

Based on these foundations, three guiding questions were established:

Question 1. What are the most effective digital media education strategies to combat disinformation in electoral processes?

Question 2. What impact does digital media literacy have on voters' ability to identify and counter disinformation during elections?

Question 3. How can emerging technologies be integrated into digital media education programs to improve their effectiveness against electoral disinformation?

These questions address complementary dimensions of the problem. The first seeks to identify best practices and pedagogical approaches, taking into account variables such as age, educational level, and cultural background of voters. The second focuses on impact assessment, exploring methods to measure how media literacy influences voting behavior and resilience to manipulation.

The third proposes a comparative analysis between traditional civic education methods and innovative approaches supported by new technologies, in order to understand their relative advantages and limitation.

2.2. Development of the Analytical Framework

The criteria for study selection prioritized research that evaluated the effectiveness of digital media education programs in real or simulated electoral contexts. These encompassed studies

measuring the impact of interventions on voters' ability to detect and respond to disinformation, as well as works analyzing shifts in political information-seeking and consumption behavior.

Comparative analyses between traditional civic education approaches and digital media literacy programs were also included, with particular emphasis on research examining the adaptability and scalability of interventions across diverse political and cultural settings.

For data extraction, information was systematically collected from each included study, following the protocol established in the PRISMA 2020 guidelines (Page et al., 2021). The extracted elements comprised:

- The strategies and methodologies employed to counter electoral disinformation.
- Their conceptual definitions, theoretical underpinnings, key components, and implementation practices.
- Reported strengths, weaknesses, and contextual conditions that influenced their effectiveness.

The data were aggregated and organized by type of intervention, including media literacy programs, journalist and electoral authority training, fact-checking initiatives, and digital civic education strategies (Ilbay, 2022). A central dimension of the analytical framework was the assessment of evaluation methods. This involved documenting the measurement instruments, research designs, sample sizes, and reported outcomes. Priority was given to studies providing empirical evidence on how media education improved voters' resilience against disinformation.

Additionally, the framework incorporated an analysis of the digital platforms and social media channels most frequently exploited for electoral disinformation, as well as the dominant techniques and narratives observed in campaigns. This perspective facilitated a clearer understanding of the informational ecosystem in which educational interventions operate.

Finally, the review also considered the limitations of the primary studies and of the systematic review itself, such as risks of bias in study selection, heterogeneity in methodological quality, and the intrinsic challenges of measuring the impact of educational interventions in dynamic and politically sensitive electoral contexts (Ros et al., 2025).

2.3. Systematic Search

The search strategy was developed following the PRISMA 2020 guidelines (Page et al., 2021), ensuring transparency and replicability of the process. Academic databases such as Web of Science, Dimensions AI, Scopus, were systematically explored, complemented with repositories specialized in political science and communication.

The search combined controlled descriptors and free-text terms, including: "digital media education," "information literacy," "electoral disinformation," "fake news," "electoral integrity," "critical thinking in politics," and "democracy." Boolean operators (AND/OR) were applied to refine results and reduce overlaps.

The systematic search covered the period January 2019 to December 2024, with the final searches executed between June and November 2024, yielding 29 eligible studies after applying inclusion and exclusion criteria. The study selection process is illustrated in the PRISMA 2020 flow diagram (Figure 1), which details the identification, screening, eligibility, and inclusion stages of the review.

Table 2: Inclusion and Exclusion Criteria Applied in the Selection of Studies on Digital Media Education and Electoral Disinformation (2019–2024).

Inclusion criteria	Exclusion criteria
- Studies published between 2019 and 2024	- Studies not directly related to electoral processes
- Peer-reviewed research	- Research that does not address digital media education
- Studies focused on digital media education in electoral contexts	- Non-peer-reviewed works
- Works that address disinformation in democratic processes	- Studies in languages other than English or Spanish

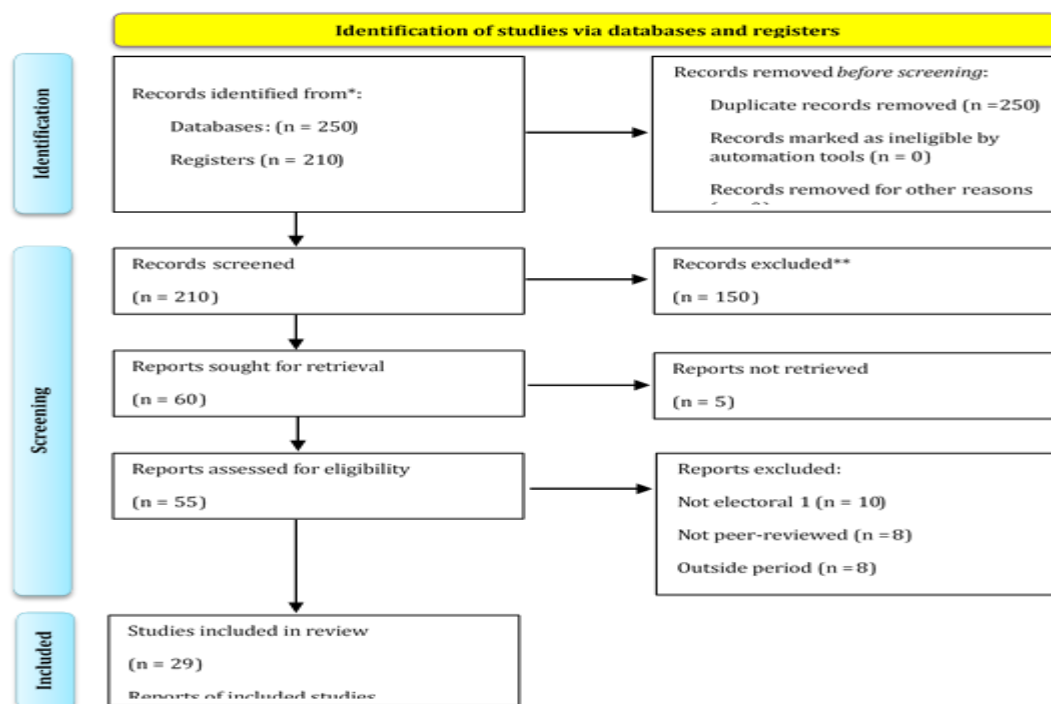**Note: Based on the systematic search strategy aligned with PRISMA 2020 guideline.**

Figure 1: PRISMA 2020 Flow Diagram of Study Selection in the Review of Digital Media Education Strategies against Electoral Disinformation (2019–2024).
Note: Adapted from Page et al. (2021).

3.4. Critical Evaluation of Studies

To ensure methodological rigor, each study was assessed based on three main criteria:

1. Validity of instruments – whether the tools employed were grounded in established theories of media literacy and electoral disinformation, and if they had been validated through pilot testing.
2. Representativeness of samples – whether the study populations reflected the demographics and political contexts of the settings analyzed.
3. Rigor of analysis – considering the appropriateness of statistical or qualitative methods, and the depth of data interpretation.

Special attention was given to how the studies addressed the dynamic challenges of electoral disinformation research, including:

- The rapid evolution of disinformation tactics.
- Variability across political and cultural contexts.
- Ethical concerns related to politically sensitive data.

A systematic scoring procedure was applied to assign quality ratings to each study. Higher-rated studies were considered more robust and were given greater weight in the synthesis of results, following best practices in systematic reviews (Guyatt et al., 2011).

2.5. Synthesis and Interpretation of Findings

Data analysis played a pivotal role in answering the research questions about the effectiveness of digital media literacy as a tool to counter electoral disinformation. This stage of the review focused on systematizing the evidence gathered through the RSL, enabling both a descriptive and interpretative understanding of current practices and their impact on democratic integrity. To structure the extracted data, the attributes of each included study were organized in Table 3.

Table 3: Attributes Extracted from the Selected Studies for the Synthesis of the Systematic Literature Review.

Attributes	Description
Document type	Article, review, report, etc.
Year of publication	Year in which the study was published
Country of the electoral study	Country where the research was conducted
Methodological approach	Quantitative, qualitative, mixed
Media education strategies	Brief description of the strategies used
Technologies used	Platforms, tools or software used
Main results	Key findings of the study
Limitations	Limitations identified by the authors

Note: Developed based on the systematization approach described in Portugal (21).

The synthesis highlighted several dimensions. First, trends in pedagogical strategies were identified, showing how approaches such as critical media literacy, fact-checking initiatives, and civic education campaigns have evolved in response to shifting patterns of disinformation. This facilitated a clearer understanding of how interventions adapt to the complexity of digital ecosystems.

Second, the effectiveness of interventions was analyzed by comparing outcomes across studies. Evidence suggested that programs emphasizing critical thinking and verification skills yielded more consistent results in strengthening voters' resilience to false information, whereas short-term workshops showed more limited impact. Third, the integration of emerging technologies such as artificial intelligence–based monitoring tools, interactive platforms, and virtual reality simulations was documented. These innovations reflect a dynamic effort to enhance engagement and adapt media literacy to globalized electoral contexts. The analysis also identified challenges and opportunities. Common limitations included methodological heterogeneity, the difficulty of measuring long-term behavioral changes, and ethical concerns when working with politically sensitive data. Conversely, opportunities lay in the scalability of programs, the collaboration between electoral authorities and civil society, and the incorporation of cross-cultural perspectives. Finally, the synthesis assessed the impact of interventions on voters' capacity to detect and resist disinformation, consolidating empirical findings into a broader interpretation. This comprehensive view allowed the identification of areas of consensus, persistent gaps, and promising lines for future research. The resulting evidence provides a robust foundation for advancing digital media literacy as a critical component in safeguarding electoral integrity.

3. RESULTS

The results obtained were divided according to each question of the systematic review:

Question 1. What are the most effective digital media education strategies to combat disinformation in electoral processes?

The most effective digital media education strategies to combat disinformation in electoral processes focus on several key aspects: First, media and information literacy is fundamental, as it involves developing educational programs that teach citizens to critically evaluate the information they consume, verify sources, and recognize misleading or manipulated content (Magallón et al., 2022). In the Ecuadorian context, this is particularly relevant given the increase in misinformation on social media during early elections in previous years, such as 2023 and 2021. Despite the fact that the country does not suffer from a lack of interest on the part of its population when it comes to voting, as can be seen in Figure 2. Having a total citizen participation of 82.7% and absenteeism of 17.3% in the 2021 elections. However, misinformation and low confidence in the CNE is influenced by the uncontrolled and dirty campaigns employed by political parties, highlighting the shortcomings of the state entity to correctly perform its control functions during the preliminary stages of the elections.
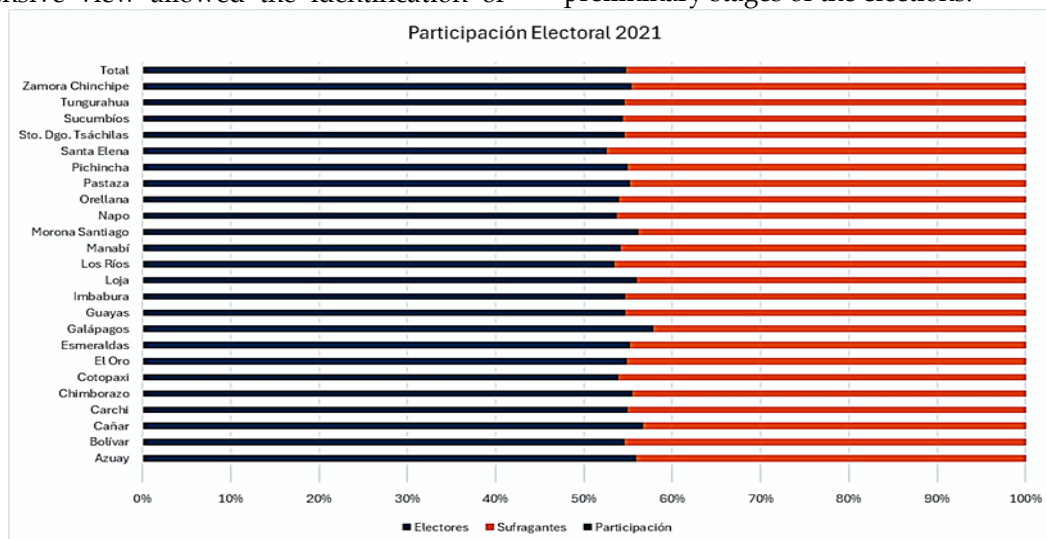

Figure 2: Percentage of Ecuadorians who participated in the 2021 Electoral process.
Note: Prepared based on information provided by the CNE (2022).

As a second strategy, collaboration between electoral institutions, media outlets, and technology platforms stands out. In Ecuador, the CNE exemplifies this practice by renewing its agreement with the Andean Foundation for Media Observation and Social Study, or Fundamedios, to combat disinformation and political violence in the 2023 elections. This type of partnership represents a more coordinated and effective response to the spread of fake news. Fundamedios is an Ecuadorian non - governmental organization dedicated to defending freedom of expression and the right to information in the country. It also acts as an observer of the situation of the media and journalists, documenting and reporting any violations of these fundamental rights (Fundamedios, 2021). The creation of election-specific fact-checking portals has also proven to be a significant tool, as initiatives like Ecuador Chequea provided verified information about candidates and their proposals during the 2023 elections, helping voters make more informed decisions (CNE, 2021). Additionally, implementing public awareness campaigns about the dangers of misinformation and how to identify it is highly effective, as these campaigns must be adapted to the local context and utilize multiple communication channels to reach diverse segments of the population. Finally, ongoing training for journalists and communicators in verification and fact-checking techniques is effective in improving the quality of information reaching the public. In Ecuador, where 5,986 political ads were posted on social media during the pre-campaign for the 2023 regional elections, this training is particularly important to counter the proliferation of unverified content. Therefore, as mentioned Yaguachi (2024), the manual for combating disinformation in Ecuador's 2023 early elections is based on the CNE's previous experiences and seeks to address this problem comprehensively. Some key points to highlight are: That the CNE, as a state agency, has been working on initiatives against disinformation since the 2021 General Elections, in collaboration with organizations such as the United Nations Development Program (UNDP). This demonstrates a continued commitment to the issue and the building of institutional experience, which seeks to address disinformation as a systemic problem that affects electoral integrity and democratic legitimacy, not just as an institutional matter for the entity. This structural approach recognizes the breadth and complexity of the challenge, which is why the institution has consulted with international organizations and adapted experiences to the Ecuadorian context. Since events

have been held with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations entity dedicated to gender equality and the empowerment of women (UN Women), on the impact of fake news, enriching the approach with global perspectives. Therefore, through these inter-institutional relationships, specific cases of disinformation affecting the electoral process have been identified, such as false rumors about CNE officials or alleged irregularities in the vote count, allowing for a more targeted and effective response. The manual seeks to coordinate actions with diverse actors such as the media, political organizations, civil society, and the general public, taking a multidimensional approach that recognizes that combating disinformation requires a collective effort (Cusme, 2023). Likewise, this manual proposes the development of technical standards and trust signals to help identify reliable information, leveraging technology as an ally in the fight against disinformation, emphasizing the importance of institutional self-criticism and the constant adaptation of strategies, avoiding a merely defensive approach. This demonstrates a proactive and flexible attitude toward a constantly evolving problem; the manual is presented as a comprehensive tool to strengthen electoral integrity and citizen trust in the democratic process, amid growing disinformation and political complexity in Ecuador (Chavero & Rodríguez, 2023).

Question 2. What impact does digital media literacy have on voters' ability to identify and counter disinformation during elections?

Digital media education has a significant impact on voters' ability to identify and counter misinformation during electoral processes. Numerous studies show that media literacy interventions can significantly improve people's ability to distinguish between real and fake news. A large-scale study conducted in the United States and India found that a digital media literacy intervention increased the ability to discern between real and fake news by 26.5% in a representative US sample and by 17.5% in an Indian sample (Gómez & Carrillo, 2020). This suggests that providing voters with tools and knowledge on how to evaluate online information can have a positive effect on their critical thinking. Digital media literacy empowers voters to make more informed decisions and resist misinformation. By developing skills such as identifying signs of questionable content, employing fact-checking practices, and performing reverse image searches, citizens can better navigate today's complex media landscape. This is especially relevant given the rise of

technologies such as artificial intelligence, which facilitate the creation of highly realistic misleading content (Tiglla, 2025). In Ecuador, the Ecuador Verifica coalition has made significant efforts to promote digital media literacy as a tool against electoral disinformation. During the 2023 elections, which included regional and early elections, the organization published 399 fact-checks, 72% of which addressed disinformation, demonstrating the magnitude of the challenge posed by disinformation in the country (Verifica, 2023). To counter this phenomenon, the Ecuador Verifica Coalition implemented a large-scale media literacy strategy. In 2023, the coalition trained more than 22,000 people through virtual and in-person workshops, which provided practical tools for citizens to recognize misleading or false content, thus contributing to reducing the spread of disinformation. The "Verifica" initiative, which brings together media outlets, universities, and organizations, focuses on three main objectives: identifying disinformation

networks, verifying the public discourse of politicians and candidates, and promoting digital literacy. This comprehensive approach seeks not only to combat existing disinformation but also to develop citizens' long-term critical capacity. Likewise, these workshops, aimed at young people, teachers, and social service users, provided practical tools to identify false or misleading content, especially in the context of the electoral processes that took place that year. The impact of these initiatives is reflected in participants' improved ability to critically analyze the information they receive, with these empowered citizens demonstrating greater skill in verifying sources, comparing data, and avoiding sharing unverified information. This is particularly relevant in the electoral context, where the spread of disinformation can have significant consequences for public perception and voting results. Table 4 below summarizes the main impacts of digital media education on voters' ability to combat electoral disinformation:

Table 4: Impact of Digital Media Education on Voting Citizens during Election Times.

Impact	Description
Fake news detection	Greater ability to identify misleading or fabricated content
Verification of sources	Improved ability to assess the credibility of information sources
Critical thinking	Development of skills to analyze and question the information received
Responsible behavior on networks	Less tendency to share unverified information
Resistance to manipulation	Greater ability to recognize attempts at emotional manipulation or bias

Note: Prepared based on information found in Verifica (2023)and Cárdenas (2023).

In Ecuador's specific case, during the 2021 elections, the CNE implemented strategies such as live streaming of official information, using mobile apps to provide verified data, and collaborating with media outlets to ensure transparent and accurate communication. These efforts, combined with media literacy initiatives from organizations like Ecuador Verifica, contribute to creating a more informed and resilient electorate in the face of misinformation (CNE, 2021).

Question 3. How are emerging technologies integrated into digital media education programs to improve their effectiveness against electoral disinformation?

newsgames analysis Selected studies reveal several ways in which emerging technologies are integrated into digital media education programs to improve their effectiveness against electoral disinformation, as described in (García & García Avilés, 2021):

- First, we observe widespread use of conversational and interactive narratives that simulate familiar digital environments for users, such as chat rooms and social networks.

Such as Factitious, Bad News, and iReporter employ interfaces that emulate messaging and social media platforms, allowing users to experience firsthand how misinformation spreads in these environments.

- Several of the newsgames analyzed incorporate decision-making systems that force the user to critically evaluate information and its sources. For example, iReporter poses ethical and practical dilemmas about news verification, while Factitious directly challenges players to distinguish between real and fake news.
- Newsgames like Bad News and Factitious They use badges, levels, and scores to positively reinforce correct user decisions. This gamification not only increases engagement (it is the commercial engagement of a customer with a brand), but also facilitates learning through operant reinforcement of desired behaviors in the consumption and evaluation of information.
- Some news games, like iReporter, adjust the difficulty and scenarios presented based on the

user's prior decisions. This ability to tailor the learning experience to each participant has the potential to significantly improve learning effectiveness.

Together, these technological innovations allow for the creation of more immersive, interactive, and personalized learning experiences than traditional media education methodologies (Espinosa, 2025). By simulating the real-life environments and dynamics of digital disinformation, these newsgames offer more effective preparation for addressing this phenomenon in the context of electoral processes. Consequently, the results of the analysis reveal diverse ways in which emerging technologies are integrated into digital media education programs to improve their effectiveness against electoral disinformation in Ecuador. The use of digital platforms and mobile applications to disseminate official information and combat disinformation is observed. Ecuador's National Electoral Council (CNE) implemented the CNE App during the 2021 General Elections, which allowed citizens to access verified information about the electoral process. This integration of mobile technology facilitated direct access for voters to a reliable source of information, countering the spread of fake news. Therefore, the implementation of live broadcasts and national networks is evident as a technological strategy to combat disinformation. The CNE conducted 21 hours of live broadcasts during the electoral process, using digital platforms to maintain constant and transparent communication with citizens. This adoption of streaming technologies allowed electoral authorities to become the primary and legitimate source of information, reducing the space for the proliferation of misleading content (CNE, 2021). Another highlight is the implementation of digital monitoring and data analysis centers. The CNE established a command center, which involved media outlets and political organizations, to monitor electoral information in real time. This integration of data analysis and digital monitoring technologies made it possible to detect disinformation trends early and coordinate timely responses. Likewise, one of the main technologies being incorporated is artificial intelligence (AI). Advanced AI systems can analyze patterns, language use, and context to assist in content moderation, fact-checking, and detecting false information, allowing citizens to have virtual assistants that guide them through the process of critically evaluating the information they find online (Endara, 2023). Online learning platforms are also being used to expand the reach of media education programs, as they allow for large-scale interactive

courses to be offered, reaching a wider and more diverse audience. For example, in the United States, organizations such as Media Literacy Now they are promoting the integration of media literacy into K-12 public schools through digital platforms, allowing millions of students access to up-to-date and relevant instruction (Adjin, 2022). Finally, social media and mobile apps are being used as platforms to disseminate educational content on media literacy and to create learning communities where students can practice their skills in real time. This is particularly relevant given that much of the electoral misinformation spreads through these platforms. Therefore, the integration of these emerging technologies into digital media education programs is creating a more holistic and effective approach to combating electoral misinformation by providing citizens with advanced tools and interactive learning experiences, preparing them to navigate today's complex information landscape and make informed decisions as conscious voters.(Parra & Oliveira, 2018) and (Inobemhe & Asemah, 2024).

4. DISCUSSION

The systematic review revealed several key aspects about the role of digital media education in countering electoral disinformation. The most effective strategies emphasize the development of critical thinking and fact-checking skills among citizens. These include media and information literacy programs, cooperation between electoral institutions and media outlets, the creation of fact-checking portals, awareness campaigns, and ongoing training for journalists. Their effectiveness, however, depends on careful adaptation to local realities, as illustrated in Ecuador by initiatives such as Ecuador Chequea and the collaborative work between the National Electoral Council (CNE) and Fundamedios. Evidence indicates that media literacy interventions significantly improve voters' capacity to identify and challenge false content. Several studies show measurable gains in the ability to distinguish accurate from misleading information, thereby enabling citizens to make more informed decisions and reducing their vulnerability to manipulation. Still, the impact of such interventions varies across cultural and political settings, which points to the importance of context-sensitive approaches. The review also highlighted persistent challenges. Among them are the rapid evolution of disinformation tactics, the need to reach diverse segments of the population, and the methodological difficulty of assessing long-term behavioral change. At the same time, opportunities are emerging,

particularly the use of new technologies such as AI-based monitoring tools, gamified civic education platforms, and interactive applications to enhance engagement and detection capacities. Growing public awareness of misinformation and the expansion of international collaboration further reinforce the potential of these efforts. From a policy perspective, the findings suggest clear pathways for implementation. Electoral bodies, such as the CNE, can incorporate structured media literacy modules into voter education programs, thus reinforcing trust and institutional credibility. Schools and universities should integrate critical media analysis and digital verification skills into their curricula, preparing younger generations to navigate electoral information responsibly. Civil society organizations and fact-checking initiatives can also build on these results to design targeted workshops and campaigns for communities that remain most exposed to disinformation. The joint action of these actors is essential to consolidate a resilient democratic environment. Finally, digital media education must be seen not only as a pedagogical tool but as a structural component of democratic integrity. Future research should focus on evaluating the sustainability and scalability of programs, testing innovative methods to measure resilience against disinformation, and examining the long-term effects of emerging technologies in civic education. In the Ecuadorian case, the growing involvement of electoral authorities and NGOs signals a promising but unfinished path: while progress has been made, the persistence of misinformation in recent electoral contests shows that adaptive, collaborative, and permanent strategies remain indispensable.

5. CONCLUSIONS

Digital media education stands out as a central mechanism to reinforce democratic resilience against electoral disinformation. Beyond specific initiatives or country cases, the evidence reviewed confirms that strengthening citizens' critical thinking and fact-checking skills is key to reducing vulnerability to manipulation and sustaining electoral integrity. The analysis suggests that the consolidation of media literacy should be assumed as a structural policy, not as isolated interventions. Electoral bodies, educational institutions, and civil society organizations have the opportunity to embed these practices into long-term strategies that combine pedagogy, regulation, and public engagement. Future research and practice should first prioritize the longitudinal evaluation of educational programs, since most of the available evidence focuses on short-term interventions. Only by monitoring their effects over time will it be possible to understand whether digital media literacy truly modifies electoral behavior in a lasting way and contributes to strengthening democratic resilience. A second priority lies in the scalability of initiatives. Experiences that have proven effective in specific contexts need to be adapted and extended to broader social and cultural realities. This requires methodological flexibility and the design of strategies capable of maintaining their pedagogical strength while responding to the diversity of political systems and citizen profiles present in Latin America and beyond. Finally, the integration of emerging technologies, especially artificial intelligence, represents both an opportunity and a challenge. On the one hand, AI tools can improve the detection of disinformation, personalize educational content, and foster greater citizen engagement. On the other, their incorporation demands careful consideration of ethical issues and transparency to avoid reproducing biases or undermining trust in democratic institutions. In sum, digital media education not only mitigates the immediate effects of disinformation but also constitutes a structural strategy to strengthen democratic resilience in Latin American and global contexts.

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