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A Critical Review Of Literature On Inclusive Communication In Building Equitable Digital Literacy : Risks Of Disinformation And Access Gaps

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Abstract
This article synthesizes and critiques recent research on Inclusive Communication in building equitable digital literacy and findings on the risks of disinformation and access gaps, discussing the intersection between digital literacy and the risks of disinformation and access gaps, and providing directions for future research. There are findings through patterns and objectives, future inclusive research in this area should include (a) incorporating data related to previous digital literacy development (b) exploring issues related to digital literacy equality, disinformation risks, and digital access gaps (c) identifying the results and impacts of digital literacy use, both positive and negative (d) considering the risks of disinformation and access gaps that are still related to digital literacy. Continuous attention to the development of equitable digital literacy that reaches all groups who wish to access it, as well as basic research on the adoption of digital literacy development and reducing the risk of disinformation and access gaps, will be important for understanding the need for support related to equitable digital literacy.
Keywords: *Inclusive Communication, Digital Literacy, Impact and Risks, Disinformation, and Access Gaps.*

INTRODUCTION

Technological developments have fundamentally changed the way society obtains, produces, and distributes information. This digital transformation has opened up opportunities for the creation of a more participatory public space, but it also presents serious challenges related to equal access, digital literacy, and the proliferation of disinformation. In this context, inclusive communication has become a strategic approach that not only focuses on providing access to technology but also ensures that every individual, regardless of their social, economic, cultural, or physical background, can participate equally in the digital ecosystem (UNESCO, 2021).

The concept of equitable digital literacy refers to an individual's ability to access, understand, evaluate, and critically utilize digital information, taking into account factors of equality and social justice (Livingstone et al., 2022). However, efforts to build inclusive digital literacy are not without two major risks: first, disinformation, which spreads rapidly through social media and threatens the quality of public discourse; second, the digital divide, which still limits the participation of vulnerable groups such as people in remote areas, people with disabilities, and individuals with limited economic resources (Van Dijk, 2020).

Existing literature reviews indicate that inclusive communication approaches can strengthen communities' ability to identify misinformation while reducing the impact of digital exclusion. However, existing research tends to be fragmented, with separate focuses on studies of digital literacy, disinformation, and the digital divide, resulting in no comprehensive synthesis that integrates all three within a single conceptual framework.

The importance of critical digital literacy and intercultural communication competencies as a means of countering social fragmentation that can arise in the virtual world. They show that inquiry-based learning strategies and digital activism can create a more equitable and inclusive digital space. (Dooly & Darvin, 2022)

The Inclusive Communication in Building Equitable Digital Literacy approach integrates three main dimensions: 1) digital communication that considers cultural and ideological diversity (critical digital literacy); 2) inclusive access and digital education; and 3) adaptation of learning practices and strategies to reach all segments of society without exception. This approach is essential for creating a digital ecosystem that is fair, participatory, and empowering.

This article aims to present a critical review of the international literature on inclusive communication in building equitable digital literacy, highlighting the interconnection between the risks of disinformation and access gaps. This approach is expected to provide a deeper understanding of how inclusion-oriented

communication strategies can play a role in strengthening the digital literacy capacity of society in an equitable manner, while offering policy recommendations and directions for future research.

MATERIAL AND METHODS

Multiple methods were used to find relevant literature for this narrative review. In August 2025, targeted and goal-oriented searches were conducted on the Scopus scientific database. The following search terms were used in combination: Inclusive Communication, Digital Literacy, Impact and Risk, Disinformation, and Access Gap. This was done to find original research of any design published in the last five years since the publication of the latest review in 2020. The research was related to digital literacy and findings on the risks and barriers of disinformation and access gaps. Scopus was chosen as a scientific database that is comprehensive enough to identify relevant studies reporting original research.

RESULTS

Characteristics of the Digital Literacy and Risk of Disinformation

The Characteristics of the 10 studies included in the review of digital literacy and risk of disinformation are outlined in table 1.

Dates and Countries of Publication

Date if publication were relatively evenly spaced over the years since 2020 - 2025. Studies from America Serikat (n=5), Swiss (n=2), Inggris (n=2), and Belanda (n=1).

METHODS

Of the 10 studies discussed, most used literature review-based studies. The percentages are as follows: literature review-based studies (40%), followed by quantitative studies (30%), qualitative studies (20%), and mixed-methods studies (10%). Various methods were used, including Case Study with Mixed Methods, Survey-Based Experiment, Narrative Review of technical and social studies, Meta-Analysis combining quantitative results from various studies, Policy Case Study, Qualitative Interviews in-depth interviews with various users, Scoping Review (referring to the PRISMA-ScR framework) to identify and categorize interventions, Conceptual Analysis (theoretical approach to analyzing concepts), Cross-Sectional Surveys (large-scale surveys using standardized questionnaires), and Critical Literature Review (using critical literature review based on academic sources and public policy). This study maps the theoretical and empirical framework of the relationship between related studies.

The Main Aims of The Studies

Overall, the main focus of these 10 studies is to understand the relationship between digital literacy and efforts to build resilience to disinformation, while addressing information access gaps through an inclusive approach. The studies collectively highlight the importance of mastering digital skills and knowledge, implementing multiliteracy, and applying evidence-based interventions that can be applied across various contexts, from primary education to adult learning. Additionally, the research underscores the role of public policy, pedagogical innovation, and the integration of technologies such as artificial intelligence in strengthening a safe, fair, and participatory information ecosystem. These findings indicate that inclusive communication and equitable digital literacy are essential foundations for building a society that is resilient to disinformation and ready to participate actively in the digital space on an equal footing.

Table 1

No	First Author (year)	Article Title	Journals & Publishers	Main Aims	Methods	Analysis	Future Contextual Details	JournalCountry
1.	Surjatmodjo, Dwi et al. (2024)	Information Pandemic: A Critical Review of Disinformation Spread on Social Media and Its	Social Sciences–MDPI	Reviewing the relationship between digital literacy, disinformation,	Critical literature review	Thematic synthesis	Promoting public communication policies that strengthen digital literacy and	Swiss

		Implications for State Resilience		and national resilience			combat disinformation	
2.	Vissenberg, Joyce et al. (2023)	Digital Skills and Digital Knowledge as Buffers Against Online Mis/Disinformation	Social Media Society – SAGE	Assessing the impact of digital skills and knowledge on vulnerability to disinformation among young people.	Cross-sectional survey	Regression & moderation analysis	Recommendations for integrating digital skills into the education curriculum.	United States (California)
3.	Damasceno, Cristiane S. (2021)	Multiliteracies for Combating Information Disorder and Fostering Civic Dialogue	New Media & Society – SAGE	Explaining the role of multiliteracy in combating disinformation and building civil dialogue.	Conceptual analysis	Theoretical framework mapping	Empirical research on multiliteracy in vulnerable communities	United States
4.	Boler, Megan et al. (2025)	Promoting Mis/Disinformation Literacy Among Adults	Journal of Communication– SAGE	Reviewing disinformation literacy interventions for adults	Scoping review	Qualitative synthesis	Development of evidence-based literacy training modules	United States
5.	Diepeveen, S. & Pinet, M. (2022	User Perspectives on Digital Literacy as a Response to Misinformation	Development Policy Review– Wiley	Exploring users views on digital literacy as a response to disinformation	Qualitative interviews	Thematic analysis	Adapting digital literacy to cultural and economic contexts	United Kingdom
6.	Andersen, L. B. et al. (2024)	Infrastructuring Digital Literacy in K 12 Education	International Journal of Child Computer Interaction – Elsevier	Evaluating digital literacy policies in primary and	Policy case study	Policy document analysis	Inclusive policy models for developing countries	Netherlands

				secondary education				
7.	Huang, G., Jia, W., & Yu, W. (2024)	Media Literacy Interventions Improve Resilience to Misinformation	Communication Research – SAGE	media literacy intervention on resilience to disinformation	Meta-analysis	Effect size computation & moderator analysis	Testing interventions in cross-national populations	United States (California)
8.	Aïmeur, E., Amri, S., & Brassard, G. (2023)	Fake News, Disinformation and Misinformation in Social Media: A Review	Social Network Analysis and Mining – Springer	Reviewing the technical and social aspects of disinformation on social media	Narrative review	Thematic categorization	Integrating AI and media literacy to mitigate disinformation	Swiss
9.	Jones-Jang, S. M., Mortensen, T., & Liu, J. (2021)	Does Media Literacy Help Identification of Fake News?	American Behavioral Scientist – SAGE	Assessing the role of information literacy vs. other literacies in detecting fake news	Survey-based experiment	Statistical comparison (t-test, ANOVA)	Expansion of studies on non-traditional platforms	United States
10.	Méndez-Domínguez, P., Carbonero Muñoz, D., Raya Díez, E., & Castillo De Mesa, J. (2023)	Digital inclusion for social inclusion. Case study on digital literacy	Frontiers in Communication– Frontiers	Demonstrating the relationship between digital inclusion and social inclusion through innovative learning.	Case study	Mixed methods (survey + observation)	Replication of the micro-video method on an international scale	Swiss

From a methodological perspective, various approaches were used, ranging from critical literature reviews, meta-analyses, experimental studies, to policy studies and case studies. These approaches provide a rich picture of the complexity of the issue, including factors that influence vulnerability to disinformation, such as education level, socio-cultural context, and availability of digital infrastructure. The studies also indicate that strengthening digital literacy must be integrated into public policy and educational curricula.

The findings from these ten studies underscore that access gaps and the lack of inclusive approaches in digital literacy programs can exacerbate vulnerability to disinformation, especially for vulnerable groups. Therefore, inclusive communication strategies tailored to local contexts, the use of supporting technologies such as artificial intelligence for information verification, and the development of adaptive learning materials are key to success. This review underscores that inclusive communication and equitable digital literacy are essential foundations for building a society resilient to disinformation, while minimizing the digital divide that hinders equal participation in the digital public sphere. Going forward, research development should be directed toward interdisciplinary approaches that combine aspects of education, technology, policy, and community behavior to create a safe, fair, and participatory information ecosystem globally.

Content Thematic Analysis

The Upside: Purposes, Building Factors, and Benefit of Equitable Digital Literacy

Inclusion and Resilience-Oriented Goals Fair digital literacy has a dual orientation providing equal access for all community groups and strengthening citizens' critical capacity to deal with the flow of disinformation. Expanding equitable access to information for all language groups, people with disabilities, literacy levels, and remote areas, so that no group is left behind in the digital information ecosystem, and ensuring that public policies promote digital inclusion, access, accommodation, data protection, or privacy as prerequisites for information equity. (Darren Chadwick, 2023) Enhancing digital or media literacy across segments of youth, adults, and the elderly to reduce vulnerability to disinformation and improve the accuracy of news assessment, and establishing metrics for information resilience, increased discernment, reduced intent to share hoaxes, and medium-term effects, as well as ongoing evaluation. Findings indicate significant effects and important moderators, as well as encouraging citizen participation and multi-stakeholder collaboration among schools, media, platforms, government, and communities in the design, implementation, and evaluation of literacy or information resilience programs supported by cross-context findings on literacy and inoculation interventions (G. Huang et al., 2024). Implementing prebunking/psychological inoculation interventions before exposure to misinformation on platforms and curricula, as they have been proven to enhance resilience against manipulative tactics (Roozenbeek et al., 2022) Integrating resilience training into community planning and development can also enhance the sustainability and effectiveness of programs aimed at improving public health and social well-being (Carta et al., 2021) and strengthening inclusive communication infrastructure during natural disasters and health crises to ensure information reaches vulnerable groups and service continuity is maintained (Banerjee et al., 2022) Supporting verification ecosystems and accuracy prompts practices to reduce the spread and trust in misinformation. (Berger et al., 2025) Inclusion and resilience-oriented goals are crucial for creating an environment that fosters engagement, adaptability, and collective success. This framework not only supports individuals in reaching their potential but also aligns with broader societal goals of creating fair and sustainable communities.

Infrastructure and Access as Foundations The availability of devices, internet connections, and digital learning spaces are irreplaceable prerequisites for equitable digital literacy. Digital infrastructure and equitable access are the cornerstones of building inclusive communication and information resilience. The availability of high-speed internet networks, adequate devices, and stable electricity supply are essential to ensure that all segments of society can participate in the digital information ecosystem. The digital divide is not only caused by infrastructure but also by digital literacy, affordability, and content sensitivity to the needs of vulnerable groups. Without mitigation of these four factors, groups such as the elderly, people with disabilities, migrants, indigenous peoples, and low-income residents will continue to be marginalized (Hussain et al., 2024). Adequate infrastructure and access are the main foundations for creating fair and comprehensive digital literacy. Stable disparities in digital literacy levels between countries show that the availability of ICT infrastructure significantly increases digital literacy, while social inequality reduces it. Interestingly, digital inclusion and digital literacy policies have proven to overcome affordability and infrastructure availability challenges, even reinforcing each other in promoting social equality in the digital realm (Sun et al., 2023). The integration of infrastructure in education confirms that access to robust digital infrastructure, combined with government investment, teacher training, and integrated curriculum reform, is strongly correlated with increased student engagement and mastery of

digital skills. Digital literacy will be effective if supported by adequate devices and networks (Andersen et al., 2024).

Cognitive, critical, and social competencies as factors shaping digital literacy do not stop at technical skills they must include information analysis skills, communication ethics, and social collaboration. The cognitive dimension enables individuals to understand, interpret, and process digital information in depth, supporting evidence-based decision-making. The critical dimension strengthens individuals' ability to evaluate the quality and credibility of information, recognize bias and misinformation, and take ethical action in the digital context. Meanwhile, the social dimension, which includes communication ethics, collaboration, and interaction in digital communities, encourages the use of these competencies to create inclusive and equitable digital spaces. The integration of these three dimensions is crucial in the design of educational curricula, digital literacy policies, and community empowerment programs to ensure that digital literacy can strengthen socio-economic participation and digital justice, in line with systematic findings that digital literacy encompasses categories such as information, communication, collaboration, critical thinking, as well as technological and social aspects simultaneously (Tinmaz et al., 2022). Recent empirical studies also support the role of critical and social digital literacy in higher education contexts, where participants demonstrate strong collaborative and critical thinking skills that intertwine within digital literacy (Vodă et al., 2022). Fair digital literacy is not merely about access or technology use but also about intellectual development and social ethics in addressing and utilizing digital spaces fairly and inclusively.

Inclusive Communication Design and Participatory Learning Inclusive communication strategies adapt language, format, and media to reach audiences from diverse backgrounds, while participatory methods ensure relevance and sustainability. Inclusive communication design requires adapting language, format, and channels/media so that messages can be accessed by diverse audiences, including differences in language, literacy levels, disability needs, and cultural contexts, ensuring that information is not only conveyed but also understood and utilized (Rusconi & Squillaci, 2023). Furthermore, participatory learning methods such as co-design, collaborative annotation, participatory workshops, and community-based approaches ensure the relevance of materials for the target audience because participants are involved from the design stage to evaluation; this enhances local ownership, the sustainability of interventions, and the effectiveness of message delivery (Buchan & Smith, 2024; Howard, 2021). In the context of risk communication and public health, equity-informed approaches that combine message adaptation and community engagement have proven effective in reaching marginalized groups during the pandemic, underscoring the need for strategies that combine language or format adaptation with user participation to achieve meaningful inclusivity (Peter et al., 2024). Additionally, meta-analytic evidence, systematic reviews, and participatory strategies indicate that training program managers and using collaborative tools such as collaborative videos and co-design workshops strengthen affirmative communication competencies and facilitate the adaptation of materials to local contexts, making interventions more responsive and sustainable. In summary, combining adaptive communication design (language, format, media) with participatory methods (co-design, collaborative learning, community engagement) is an evidence-based strategy for achieving inclusive communication that is relevant, effective, and sustainable.

Social, Economic, and Political Benefits of Fair Digital Literacy Equitable digital literacy has cross-dimensional impacts ranging from resilience against hoaxes and democratic participation to economic empowerment. Equitable and inclusive digital literacy brings significant cross-dimensional benefits to society. Socially, the ability to navigate and critically evaluate information enhances individual resilience against misinformation and disinformation, reinforces healthy behaviors and social solidarity in the context of health crises, and improves the ability to assess the accuracy of information and encourages critical participation (Austin et al., 2021). In the economic realm, digital literacy can increase financial inclusion, improve financial decision-making, and support the economic well-being of the broader community, especially in developing countries. Digital literacy improves financial inclusion and economic well-being. Additionally, digital literacy empowers women, for example, through digital skills and internet access that enable them to start businesses and increase their income, thereby promoting inclusive growth (Arif et al., 2024). In the political and democratic participation sphere, digital media literacy has also been shown to strengthen motivation to participate in public discourse and critically evaluate political information, directly supporting a healthier democracy. In short, equitable digital literacy not only protects society from misinformation but also opens up economic opportunities and expands political

space, making it an important tool in inclusive and sustainable social, economic, and political development. This demonstrates that literacy interventions significantly enhance resilience against disinformation. Investment in inclusive digital literacy is not merely an educational matter but also a national development strategy (L. Huang et al., 2024)

Future Context and Strengthening the Ecosystem To ensure sustainability, digital literacy must be integrated with public policy, technological innovation, and multisectoral collaboration. To ensure the sustainability of digital literacy as the foundation for the future of society, it is essential to integrate it into public policy, technological innovation, and cross sectoral collaboration. This integration includes adapting digital policies that are responsive to technological changes and community needs. Additionally, digital literacy can serve as a catalyst for social innovation and economic transformation when incorporated into policy design, where the integration of digital literacy promotes inclusion, social innovation, and economic mobility across communities (Sharma et al., 2023). Digital literacy strengthens the ability of governments and citizens to collaborate effectively through participatory digital governance, accelerating digital transformation with a foundation of skills, such as the concept of collaborative governance in the digital age. In the realm of industrial innovation, access to digital platforms enhances worker productivity, efficiency, and creativity while driving business innovation, demonstrating that strengthening the technology ecosystem and digital skills go hand in hand in supporting economic growth (Ushakov et al., 2023). In summary, strong sustainable digital literacy in the future requires proactive policy strategies, inclusive technological innovation, and multi-stakeholder collaboration. Inclusive digital literacy in the future must be supported and move toward an ecosystem-based approach involving the government, private sector, civil society, and digital platforms to create a fair, resilient digital system that drives social and economic progress.

The Downside : Risk and Harms in inequality of access, misinformation, lack of inclusive approaches in literacy programs

Access Gaps as a Trigger for Digital Inequality Inequality in the availability of devices, internet connection quality, and digital learning facilities creates a digital divide that widens the participation gap. Inequality in access to digital devices, internet connectivity quality, and online learning facilities is the main trigger for digital inequality. Access gaps encompass several layers: (1) infrastructure availability (coverage/speed), (2) affordability, including service and device costs, (3) device and connection quality (QoS), and (4) usage capabilities in terms of literacy or the ability to utilize, which ultimately impacts outcomes in education, health, and the economy. Recent literature emphasizes the “three-level” model access, usage, and outcomes and shows that gaps persist even in urban areas. Inequality at one level exacerbates inequality at the next level. Rural or remote areas face challenges in infrastructure access and inaccurate data maps, leading to misdirected investments. Prices and willingness to pay also vary across regions, triggering digital economic exclusion (Hambly & Rajabiun, 2021). All these findings underscore that disparities in acces whether in terms of device availability, connection quality, or technology distribution form the foundation of digital participation and educational inequality in the modern era. Without fair access interventions, digital literacy will reinforce social inequality.

Risks of Disinformation and Socio-Political Effects Exposure to disinformation exacerbates social polarization, undermines public trust, and threatens democratic stability. Misleading information deliberately created to cause harm threatens social and political stability by reinforcing polarization, undermining trust in institutions, and undermining the foundations of democracy. Disinformation undermines the legitimacy of public discourse and erodes trust in democratic institutions, the media, and science, while emotional polarization further impairs society's ability to engage in deliberation (Hoogensen Gjørv & Bilgiç, 2022). Digital media, while facilitating political participation, actually increases polarization, fuels populist movements, and heightens suspicion toward democratic institutions (Lorenz-Spreen, 2025). Exposure to fake news has led to a decline in trust in mainstream media even among moderates and conservatives, while trust in government institutions has increased sign of how disinformation can selectively erode trust and reinforce partisan narratives (Ognyanova, 2023). Disinformation not only widens social and political divides but also weakens the core of modern democratic legitimacy. Uneven digital literacy increases the risk of hoaxes and manipulation in the digital space. The risks of disinformation have far-reaching implications that go beyond the mere spread of misinformation impacts include increasingly sharp social polarization, erosion of public trust in the media and democratic institutions, and a direct threat to political stability.

The Lack of an Inclusive Approach in Literacy Programs Digital literacy programs are designed in a top-down manner, without considering the local context and the participation of the target group. Many digital literacy programs are still designed in a top-down manner, without considering the local context or involving the target group in the planning and implementation process. This is evident in various studies showing that such programs often fail to reflect the realities and needs of local communities. For example, an evaluation of a program in a senior community found that while the digital literacy intervention was deemed effective, its design lacked participatory elements and did not encourage active user engagement, thereby limiting the relevance and sustainability of the outcomes. (Ahmad et al., 2025). Community digital literacy training was more successful when the training structure was tailored to local needs and directly involved community organizations, demonstrating that an inclusive, community-based approach enhances program effectiveness (Khan et al., 2020). Conversely, programs that do not consider the local context are often hindered by simple technical issues such as infrastructure, logistics, or cultural gaps problems that should be identified and addressed through participatory design. Non-inclusive approaches make programs difficult to accept and ineffective for vulnerable groups. The lack of an inclusive approach in digital literacy programs results in interventions that do not fully address the real needs of the community. Top-down designs tend to overlook local contexts, potentially reducing the relevance, effectiveness, and sustainability of programs. Conversely, active involvement of target groups and adapting materials to community characteristics can increase participation, build a sense of ownership, and strengthen long-term impact. Without integrating inclusive and participatory principles, the digital divide risks widening despite ongoing digital literacy programs.

Social and Psychological Negative Impacts Digital literacy inequality can lead to social isolation, low digital self-confidence, and a sense of being left behind by developments. Digital literacy inequality not only creates technical gaps but also causes serious psychological and social impacts. Communities lacking adequate digital skills or access face exacerbated social isolation during the pandemic era, particularly for vulnerable groups such as those with mental health conditions. This leads to mental health symptoms like stress, anxiety, and intensified psychological symptoms (Li & Glecia, 2023). Individuals with poor mental health are at high risk of digital exclusion, many of whom lack basic digital skills, thereby disrupting their access to healthcare services and social support, which are now largely delivered online (Smith & Brown, 2022). Low literacy levels result in feelings of anxiety and reluctance to participate in digital activities. (Méndez-Domínguez et al., 2023). Additionally, while some internet users improved their digital skills during the pandemic, the most vulnerable groups such as the elderly, women, and those with lower education levels were more likely to experience feelings of loneliness or digital isolation. This body of evidence confirms that the digital divide not only creates access limitations but also impacts digital self-confidence, social alienation, and feelings of being left behind, particularly among the most vulnerable groups. Public policy interventions and inclusive approaches are needed to ensure equitable participation across all segments of society. Digital literacy inequality is not merely a technical issue but also concerns mental well-being and social cohesion.

Dependence on Digital Platforms without Adequate Regulation Dependence on social media as a source of information without oversight increases the risk of misleading content spreading. The absence of adequate regulation poses a serious risk to the spread of misleading content that has the potential to undermine democracy and public trust. Without clear regulations, platforms' self-monitoring practices are often inconsistent and lack transparency, rendering mechanisms such as content moderation and labeling of misleading information ineffective. The ad-based business model also creates economic incentives to maintain user engagement, even if it means allowing divisive or potentially harmful content. Digital literacy remains important, but without the support of a strong legal framework, efforts to combat the tide of disinformation will always lag behind. Many users are aware of the high levels of misinformation on social media, and the difficulty of distinguishing between true and false information is particularly prevalent among vulnerable users or those with low information literacy. More than a third of users report seeing a significant amount of misleading content, and two-thirds find it difficult to distinguish between true and false information they encounter. (Gaysynsky, 2024). In short, society's reliance on social media without adequate regulatory frameworks increases the likelihood of disinformation, erodes public trust, and undermines democratic norms. Without clear platform regulations, digital literacy alone is insufficient to counter the tide of disinformation.

Limitations and Directions for Future Research

Although awareness of the importance of inclusive communication in promoting equitable digital literacy is growing, this research has several limitations that need to be acknowledged. First, most of the current literature relies on case studies or cross-sectoral surveys conducted in specific geographical or socio-economic contexts, which may limit the generalizability of the findings. For example, interventions that are effective in urban areas with high connectivity may not yield similar results in rural areas or underserved communities. Second, the rapid development of digital platforms and disinformation techniques means that studies that collected data even a few years ago may not fully reflect current risks and trends. Third, existing research often emphasizes access and technical skills but provides little insight into the complex social, cultural, and psychological dimensions that influence digital literacy adoption, engagement, and resilience to disinformation.

Future research should address these limitations by adopting longitudinal and comparative study designs across diverse contexts, including underrepresented regions and vulnerable populations. Investigating the intersection of inclusive communication strategies, digital literacy, and disinformation through experimental or mixed-method approaches can provide deeper insights into causal mechanisms and the effectiveness of interventions. Additionally, exploring the role of policy frameworks, regulatory measures, and multi-stakeholder collaborative initiatives in shaping a fair digital literacy ecosystem remains a critical avenue. Finally, the integration of emerging technologies such as interactive learning platforms and adaptive educational tools offers a promising research area for understanding how technological innovations can enhance both inclusion and resilience to disinformation.

CONCLUSION

Fair digital literacy can be achieved through an inclusive communication approach designed to encompass audience diversity based on culture, language, technical capabilities, and literacy levels. This approach increases access and engagement, while reducing the digital divide. However, without a foundation of inclusive communication, access inequality exacerbates the digital literacy gap. For example, people in remote areas or vulnerable groups have limited access to devices and connectivity, making it difficult for them to participate in online learning, and at the same time more vulnerable to misinformation that spreads rapidly through social media.

Misinformation targets groups with low digital access and skills. Without inclusive communication, confusing or misleading messages are difficult to identify, especially if they are delivered through formats or channels that are not well understood by marginalized audiences. This exacerbates social polarization, undermines public trust, and erodes democratic participation. Thus, inclusive communication is not only about access but also about understanding. Strengthening digital literacy in an equitable manner must include content that is local, easy to understand, and culturally relevant, so that communities not only have devices but also the critical ability to recognize and reject disinformation.

To address the issue of digital access gap, intervention strategies must be multi-dimensional, encompassing infrastructure, economic, social, and educational aspects. First, increasing the availability of devices and internet connectivity in remote areas and vulnerable groups is a fundamental step. Governments, the private sector, and non-profit organizations need to collaborate to provide broadband access, affordable devices, and digital public service centers. Digital literacy education and training must be designed inclusively, taking into account local contexts, languages, cultures, and the specific needs of the audience. Public policies must also support sustainable access, including internet subsidies for low-income families, regulations that promote platform openness, and content quality oversight. Strengthening the digital literacy ecosystem must also involve multi-stakeholders from the government, private sector, academia, and civil society organizations to ensure that programs not only provide access but also critical analysis and media literacy skills. With a combination of improved infrastructure, context-based training, and supportive public policies, the access gap can be minimized, ensuring that all segments of society have equal opportunities to participate in the digital ecosystem and avoid the risks of misinformation.

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