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Digital Policy in Mali: A Systematic Review on Integration of ICT for the Basic Education System

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ABSTRACT

This systematic review focuses on the adoption of e-learning policies in Mali's basic education and discusses both successes and challenges. Although national plans such as the National Digital Strategy have been introduced, progress has been patchy due to infrastructure deficiencies, inadequately trained teachers and socio-economic inequalities. The most important results are that urban regions profit more from digitization activities while rural have to fight with obstacles -in this context poor internet connections and low numbers of digital devices. It highlights the significance of joint efforts by diverse stakeholders, including public-private collaboration and international support, to improve infrastructure, digital skills and policy consistency. It also illustrates the promise of mobile learning and radio-based education for closing access gaps. Some recommendations are retention of rural infrastructure, pre-service teacher education with focus on indigenous content development and digitally relevant material. Research in the future should concentrate on grass-root level roll out, and long-term sustainability of digital education interventions in Mali.

INTRODUCTION

The world of digital education has changed dramatically in the last 10 years, largely because technological innovations have made the Internet more accessible. The world over, digital technologies and platforms have increasingly been adopted in educational systems with aim of improving learning outcomes, increasing access to education, education equity while preparing learners for the digital economy (Ydo, 2020). The purpose of this transition is to further educational inequities, promote lifelong learning and respond to the dynamic needs of 21st-century learners in several countries like Niger, Ghana, and Senegal. In response to this, several countries (Niger and so on) are in the process of enhancing or setting up frameworks for educational digitalization that stress equitable access, teachers' professional development and sustainable insertion of technology into education (World Bank, 2021).

In Mali, developing effective digital education policies requires addressing several key priorities. These include improving infrastructure, such as internet connectivity and access to hardware, reducing social inequalities that hinder equal access to digital tools, and promoting political stability. Although the Government of Mali recognizes the potential of digital technologies to enhance education and training, progress is hindered by limited internet access, a lack of necessary hardware, and insufficient training for teachers in digital pedagogies (Ministère de l'Éducation Nationale, 2022).

Addressing these issues is essential for creating inclusive and effective digital education policies. Projects like the Digital Mali Plan seek to support the use of ICT in education, but advances are still slow and uneven between regions, especially those in rural areas. As a result, in order

to see the actualization of digital education policies in Mali, there is need for an all-round intervention; addressing the gap within infrastructural capacity, promoting digital literacy and mobilizing stakeholder support towards making access more equitable and integration substantial with the basic education system (Sidibé *et al.*, 2022).

The use of digital technology to facilitate the delivery of education policies in basic education in Mali has great potential for minimising inequities and improving learning achievements at all levels throughout the country. Through the use of digital platforms and infrastructure, such policies are intended to widen access for quality education provision, particularly in remote and underserved contexts with a view to tackling issues of equity and inclusion (Okolo *et al.*, 2023). In addition, digital policies encourage innovative instruction techniques that allow teachers to provide more interactive and individualized ways of teaching which contribute to better understanding and memorization by learners (World Bank, 2021). They also promote digital literacy skills essential for the 21st century economy so that Malians are better prepared to work in the emerging global digital economy. Yet the impact of these policies will not come into full force unless they are implemented, given proper infrastructure support and teacher training, and sustained investment; all important components necessary to enable strategies to surface in Mali's basic education settings (Van der Vlies, 2020). In sum, well-formed education digital policies are a precondition to revolutionize the educational system in Mali, so it becomes more inclusive, resilient and matches with the current demands.

The implementation of digital education policies in Mali basic educational system is confronted with enormous challenges that have strong motives; Weak infrastructure,

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limited access to technology, and social-economic imbalances. Inability to access continuous electricity and internet, especially in rural and remote areas has hampered the implementation and sustainability of digital education platforms (UNICEF, 2021). Moreover, there is also a lack of trained teachers able to meaningfully integrate digital technologies in their pedagogical approach and the inadequate training of teachers with low levels of digital skills (World Bank, 2021). Economic disparities also contribute to these problems if poor communities are unable to pay for the required devices or connections, creating a digital divide that does not allow access to quality education (UNESCO, 2021). Further, political instability and low financial outlays restrict governments' ability to develop and implement holistic digital education policies that undergird progress towards inclusive and sustainable educational development (Dembele, 2023). These concurrent obstacles make it imperative that focused investments, infrastructure upgrades, and capacity-building projects are implemented for Mali to take advantage of digital education.

Significance of the study

This study has importance in providing insights into how effective, and the obstacles digital education policies work in Mali basic education system. In a world where digitalization is essential for crafting inclusive and equitable quality education, understanding how policy works on the ground — and why it doesn't—is fundamental for policymakers, educators and advocates. The results can be used to recognize deficiencies, good practices and improvement points of students and allow to develop more focused interventions that improve learning performances by reducing educational disparities. At the end, this research contribution should

help to maintain its line with a leading world country of modernizing education and that digital initiatives are more than bringing technology to all students.

Research questions

- How do digital education policies come into play in the field of basic education in Mali?
- How are these initiatives being put into practice, and what are the obstacles?
- What strategies have been employed, and what results have been observed?

LITERATURE REVIEW

Theoretical frameworks

The theory and technology acceptance readiness in policy implementation of digital education.

This theory emphasizes the effectiveness of implementation of digital education policies in Mali's basic education sector depends on 'perceived usefulness', 'perceived ease of use' and 'readiness to use' new digital tools by educators and learners. The model is based on Davis's (1989) positing that positive perceptions and institution support are necessary for policy implementation. In addition, Educators and learners tend to use electronic tools when they feel the technology is useful and easy to use (Davis, 1989). The resources, skills and supported provided by infrastructure also strongly influence acceptance (Venkatesh & Davis, 2000). Further, socio-cultural perceptions about technology and contextual challenges in Mali may also influence attitudes to readiness (Koehler *et al.*, 2014).

The Policy-Implementation Gap Model In Digital Education

It highlights the divergence in policy development and

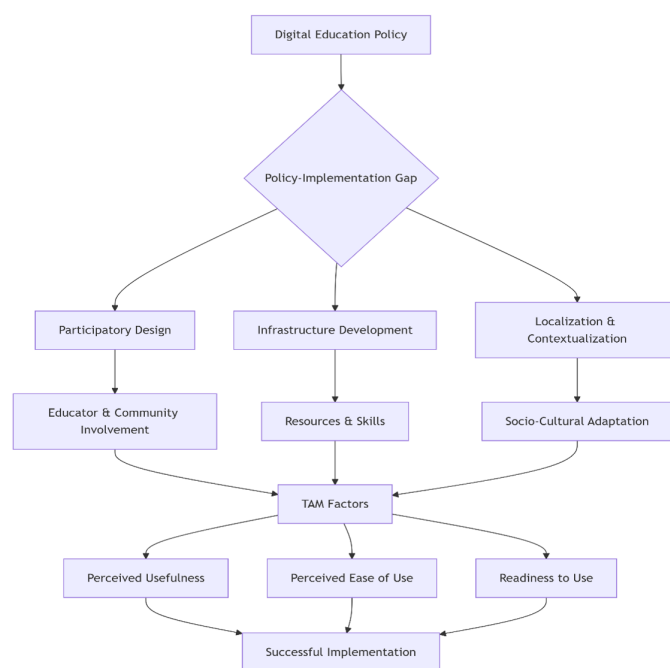


Figure 1: The relationship between the Technology Acceptance Model (TAM) and the Policy-Implementation Gap Model



on-the-ground reality for digital education in Mali is largely attributed to systematic, infrastructural and capacity-based deficits. It echoes the traditional policy-implementation gap perspective that notes how good policies can only be realized when they have been properly designed, as many well-conceived policies remain weak in implementation and adaptation. A majority of policies cluster around noble ideas but with no feasible framework of implementation within Mali's social and economic context (Pressman & Wildavsky, 1973).

There are insufficient technological infrastructure and lack of resources and skilled personnel to support an effective roll-out (Kozma, 2003). Further, when educators and local communities are not adequately involved, there is disconnection between the higher order levels of educational governance and ground real. The success or failure is also defined by the capacity of policy makers and implementers to localise policies (Ohemeng & Grant, 2009).

Closing the gap will call for participatory design of policy, developed infrastructure capacity and ongoing consultation to keep policies as relevant and practical as possible to context.

The diagram visually connects the need to bridge the policy-implementation gap with the factors influencing technology acceptance, highlighting the cyclical and interdependent nature of successful digital education policy roll-out in Mali.

Literature Review

Digital education policies are the plans and actions that governments and organizations take to promote and integrate digital technologies in the teaching learning process. The focus of digital education policies in Mali's basic education system is on provision of digital infrastructure including broadband networks and devices, development of digital content and e-learning platforms, and the facilitation of teachers' as well as students' digital literacy and skills. Digital education policies in Mali are aligned with initiatives such as the Digital Education Strategy and Implementation Plan of the African Union.

National and Regional Digital Education Policy Deployment Around the World

National and regional views Analysis of on the implementation of digital education policy demonstrates a need for contextually embedded strategies. International contexts, including Salmi *et al.*, (2025) Global Education Monitoring Report focus on inclusive digital policies that focus on bringing digital resources to where they are most needed and ensuring equitable access to technology is available within a country and between countries. In West Africa, countries such as Ghana and Senegal have in recent years expanded the presence of digital resources in their primary school systems through legislative reforms and infrastructure investments but continue to find challenges related to available resources and capacity building (Wordu & Chinda, 2019).

This trend is evident in the case of Mali, where there are infrastructure gaps, lack of digital skills and social economic barriers impacting the effective application of digital education policy (UNICEF, 2023). Comparison of these two views emphasizes the importance for context sensitive approaches, mixing international best practices and ground-breaking local innovations for healthier digital transformation in Mali's basic education.

Particular challenges and opportunities in Mali

Challenges and Opportunities in Implementing Digital Education Policies in Mali's Basic Education Context Infrastructure deficits, including poor internet access, a lack of digital devices and limited access to electricity have made it increasingly hard for learners to keep up-to-date with digital learning tools (Salmi *et al.*, 2025). Furthermore, the supply of qualified teachers able to meaningfully embed digital technologies in their teaching is limited by low digital literacy on the part of students and teachers (World Bank, 2022). Social inequities also contribute to disparities as poor communities are often unable to be beneficiaries of digital projects.

Nevertheless, Mali's growing mobile phone penetration and gradual government adoption of digital transformation provide considerable growth prospects. Examples are mobile learning platforms and radio-based digital (content) that can contribute to diminishing access gaps especially in remote areas (Ouattara *et al.*, 2026). Furthermore, collaborations with international nongovernmental organizations and other private sector actors can support innovation, capacity building, and enhanced inclusiveness of the Malian basic education system (UNICEF 2020). Tackling these challenges and utilizing the pre-existing opportunities are key to integrating digital education policies, which have the potential to elevate learning outcomes extensively as well as foster equal access all over Mali's various localities.

The digital education in Mali and regions alike studies

Research on digital education in Mali and similar West African settings provides some general understanding of the challenges and opportunities of implementing policies for digital education at the level of basic education systems. Research by Krönke (2020) notes that the implementation of digital educational strategies meets infrastructural inequalities such as limited internet connections and access to technology devices making it difficult for urban and rural areas in Mali. Moreover, the research highlights that policy coherence and teachers' capacity building are critical elements in enabling the successful incorporation of digital tools into pedagogies (Luque *et al.*, 2025).

Fellow studies in other surrounding countries, especially Burkina Faso and Niger, show the importance to contextualise digital strategies so that government's will, owner and users involved can come up together as a solution of reducing social economic inequality

(Akpan *et al.*, 2024). Mali, overall has made progress in developing digital education policies but infrastructural and institutional challenges continue to obstruct scale up, therefore the critical importance of sustainable investment and locally relevant approach if one is to achieve digital transformation in basic education (UNESCO, 2019).

Gaps identified in existing literature

However, from the existing literature, there are a number of discernible holes with regard to the digital inclusion policies in Mali. Despite the growing body of literature on digital education efforts in West Africa, few existing studies specifically explore Mali – including what challenges and assets make it a unique context. For example, research like Oganetse & Phiri (2025) and

Koita (2025) looks broadly at infrastructure issues and technology on large scale.

Furthermore, there is limited empirical evidence on the social and cultural, linguistic and economic obstacles in Mali's diverse regions to digital education adoption. Moreover, many of the studies in the literature disregard these teacher training, digital literacy and stakeholder involvement in implementing policies (Yattara, 2021). This gap highlights the necessity for overarching, context-specific research that details the complexity of digital policy in implementation-guided Mali's basic education with qualitative understanding from educators, students and policymakers to enable more effective strategies (Oganetse & Phiri, 2025; Koita, 2025; Yattara, 2021).

This diagram visually maps the goals of Mali's digital



Figure 2: Digital Education Policy Implementation on literature vision.

education policy, the real-world challenges and opportunities, and the recommended pathways for successful implementation based on the literature review.

MATERIALS AND METHODS

Research Design

The research uses Systematic Literature Review (SLR) as a method, which is a focused and structured means of identifying, extracting and summarizing available research. Within the SLR framework researchers are able to investigate and learn more about how digital education policies are being introduced and enacted within Mali's basic education system more detail, it also brings to

light commonalities, differences or possible trajectories. This routine minimizes subjectivity and maximizes transparency, replicability, and objectivity in the selection of literature as well as its verification by adhering to clearly defined guidelines.

Inclusion and exclusion criteria

Inclusion criteria

- Studies on the Implementation, Challenges, or Results of Digital Education Policies in Basic-Education in Mali.
- Publications from 2019 to 2025 except theories for the most recent and relevant data.



- Articles, reports or policy documents in English or French.
- Another option for meaningful contributions would be to include empirical research studies, policy analysis, and agency or NGO reports of significance relevant to digital education in Mali.
- Papers regarding issues on policy making, deployment, infrastructure, teacher educator, and student access to digital education.

Exclusion criteria

- Studies exclusively for primary education, vocational training or adult education in addition to basic education.
- Opinion papers, editorials, conference abstracts or non-empirical articles.
- Publication in a language other than English or French.
- Pre-2019 studies unless from theoretical literature if on recent policy implementation.

Search strategy

The search methodology was systematic and layered to account for inclusion of eligible and high-quality studies. First, a set of keywords and Boolean searches (“digital education policies,” “implementation,” “Mali”, “basic education”) were used to search on various academic databases (Scopus, Web of Science, PubMed and Google Scholar). The search was broadened to include grey literature, government reports and policy documents published by the Mali Ministry of Education. This is an intensive search action that was designed to collect comprehensive data on how the implementation process as well as challenges and outcomes from digital education policies in Mali basic education context.

Data extraction and synthesis methods

Data extraction

Data extraction involves a systematic approach to identifying eligible studies and policy documents based on predefined inclusion criteria from various sources, including academic databases, reports from the government and grey literature. The essential data Information—aims, measures, barriers and outcomes included in the documents were systematically recorded via standardised extraction templates to guarantee comparability.

Data synthesis

Qualitative data were thematically analysed to extract patterns or themes that associated with infrastructural requirements, teacher training, stakeholder participation and policy effectiveness. Quantitative results, when reported, were synthesized through meta-analytical approaches to summarize digital access and usage metrics. By taking the two perspectives, a detailed picture of overall trends, achievements and obstacles in digital education policy implementation in Mali became possible.

Ethical Statement

Ethical considerations concerning studying the digital education policy implementation in Mali's basic education system are related to guaranteeing confidentiality and privacy of information on students and teachers, requiring consent for data collection, and addressing potential digital divides that could aggravate social disparities. Finally, the language used and cultural relativism must be considered, so that there are no preset bias or misunderstandings of the local context. Transparency, participant's rights, and equitable access to digital resources are fundamental to responsibly conducting research in this field.

RESULTS AND DISCUSSION

Digital Education policies and its practice in Mali

The process for establishing digital education policies in Mali's basic education reflects a phased approach. Plan formulation as one of the key factors that influence formulation of (and ultimately, support for) technology integration plans is teachers' ability level of using those technologies, it follows that ideally, policymakers can first conduct needs and gap analyses in order to ascertain what needs to be taught and learned relative digital literacy planning and build their website strategic frameworks around strategies addressing these specific teacher PD capabilities gaps (Mali Ministry of Education 2018). Secondly, the government listens to stakeholders including relevant government departments, schools and development partners in establishing clear goals and action plans. Operational stages concentrate on resource mobilization, infrastructure establishment, teacher-training and curriculum integration, with continuous monitoring and evaluation to evaluate progress and respond accordingly (UNESCO, 2020). This methodological process would allow digital education policies to be locally-grounded and gradually taken up by the larger Mali educational reform stream.

The SND, along with the Education Sector Policy Framework, serves as a basis for integrating ICT in teaching and learning in Mali's basic education system (Ministère de l'Éducation Nationale, 2020). Important players in this process include the Ministry of Education, development partners like UNESCO and UNICEF, and local educational institutions working together to boost digital literacy as well as infrastructure. Nevertheless, constrained technological infrastructure, lack of trained teachers and urban-rural gaps are an obstacle to the effective implementation (Van Der Merwe *et al.*, 2023). Overcoming these obstacles will entail concerted efforts and investment for providing equitable access to quality digital education across Mali.

The deployment of digital education policies in the basic schools in Mali rely on combined efforts from government, NGOs and international organisations as well as infrastructures. Access to the Internet and devices, led by the government of Mali, who has worked in collaboration with NGOs and international donors, have been central towards addressing educational gaps (UNICEF, 2020).



International organizations such as UNESCO and the World Bank encourage policy-making and infrastructure projects, in line with sustainable digital integration. NGOs are also important in grassroots training and community involvement to enable equal access and for effective use of the digital tools. Notwithstanding these initiatives, limitations in infrastructure, digital literacy and resource meridian stand in the way of large promulgation, accentuating the necessity for holistic multi-stakeholder plans to achieve Mali's digital education objectives (Mitchell *et al.*, 2022).

The introduction of digital education policies in Mali's primary and secondary schools is beginning to demonstrate positive outcomes, with concentrated teacher training and capacity development programmes aimed at building teachers' digital skills as well as their pedagogical capacity. The incorporation of digital into current curricula has made for more hands-on experiential learning, though not without difficulties in achieving equitable access in various areas. Urban-rural disparities are also evident, with urban areas enjoying superior infrastructure and resources to those in rural areas which have major deficiencies in connectivity and equipment. These differences inhibit the fair implementation of policies and interventions, and there is a need for area specific strategies which breaks the digital divide so that everyone has access to good quality digital education throughout Mali (Sidibé *et al.*, 2022).

Challenges and Impeding Factors

One of the major obstacles to the development of digital technology-based education policies for primary schools in Mali continues to be the absence of equipment and infrastructure. Poor access to reliable electricity, low internet connectivity and limited availability of digital tools such as computers and tablets is a limitation to the incorporation of digital tools in classroom instruction. These infrastructure weaknesses present significant challenges to ensuring equitable access to digital learning opportunities, especially in rural and other underserved areas. In the absence of such technological backbones, effective digital education initiatives are grossly limited, thus curbing the prospects to modernize and democratise education in the country (Goita & Kone, 2023).

Financial limitations also pose obstacles to the implementation of digital education policies in Mali's formative years of basic education. Funding challenges limit the ability to source required technology infrastructure, including computers and internet connectivity, and train teachers to deliver content digitally. These economic challenges deepen the urban-rural divide and render it impossible to ensure equal access for schoolchildren to digital education. Ultimately, resource constraints continue to pose a significant challenge for successfully mainstreaming digital tools into Mali's basic education system in spite of policy efforts, and this continues to inhibit advancement towards modernization of education (Adegoke *et al.*, 2025).

There is a challenge in terms of the implementation of

digital education policies in Mali's basic education system, stemming from weak human resource capacity and challenges related to policy coherence and coordination. Shortage of well-schooled staff also impedes the efficient implementation and management of digital programs, while fragmented policy arrangements and no organisation between those who can help progress. These barriers undercut attempts to modernize education and even the playing field when it comes to digital learning tools across the nation. Tackling such systemic issues would be critical for digital technologies to successfully penetrate Mali's formal basic education system (Ling *et al.*, 2022).

Socio-cultural and digital divide challenges to the adoption of policy on digital education in Mali's basic education system. Lots of communities, especially in the rural side are skeptical about digital technologies because of less knowledge, cultural beliefs and not having trust on new methods of teaching. Moreover, infrastructural issues like poor internet connectivity, lack of technology and low digital literacy contribute to inequalities which are preventing all children from having equal access to the quality education offered digitally. This digital divide also slows down the success of policies, and is prone to further increase inequalities that currently exist in education, emphasizing the importance of culturally appropriate strategies for and focused investments towards inclusive digital transformation (Coulibaly *et al.*, 2025).

Implementation Strategies and Outcomes

Public-private partnership, donor assistance and pilot projects have supported the adoption of digital education policies in Mali. Public-private partnerships have facilitated the creation of digital infrastructure and new learning solutions by utilizing expertise and resources in the private sector. Donor support has been crucial in providing financial and technical support for scaling up digital initiatives in basic education. Pilot projects, meanwhile, have assessed new digital teaching methods and tools and made it possible to evaluate and adapt them ahead of wider use. Cumulatively, these approaches have been instrumental in supporting Mali's objective of a more equitable and contemporary basic education system.

Innovative strategies such as m-learning and radio-based education have also immensely added value the implementation of digital education policies in Mali basic education. These approaches have increased education access for remote and underprivileged communities, as they bypass infrastructural constraints to expand outreach to people at risk of exclusion. Mobile learning (by smartphones and tablets) can provide an interactive and flexible learning strategy, and radio-based education allows broad delivery of educational resources in a community with limited internet availability. These innovative measures are indicative of Mali's efforts to utilize technology as a means of providing equitable and inclusive education, in line with national policies geared



toward the integration of digital technologies at basic education level.

The mechanisms for monitoring and evaluating the implementation of policies in the area of digital education at lower level have also been reinforced step by step to ensure that technology is integrated efficiently into other teaching environments. These include: Monitoring infrastructure development, training of teachers and students' engagement with digital tools—so that policymakers can identify gaps and adjust strategies. Through collaboration between the Ministry of Education and development partners, Mali has undertaken important steps in monitoring progress and accountability of digital education interventions. The countryside is still to a degree not easy to reach and sustainable. In general, these systems are essential to steer the successful scaling of digital education throughout the country.

Mali's basic education system has benefited from the implementation of digital policies that lead to improvements in access and equity through among others, increased availability of infrastructure for digitalisation services (such as equipment rooms) at schools located in deprived areas. Such programs have also resulted in improving learning including interactive and technology-mediated pedagogies leading to raised engagement both of teachers and students. However, issues with scalability and sustainability remain, such as limited technology infrastructure, poor training, and financial constraints which create barriers to long-term continued implementation. Notwithstanding these challenges, the quest to improve approaches of promoting inclusive and resilient digital education systems in Mali is still being pursued (Haïdara, 2025).

Discussion

Digital education policy diffusion within Mali's primary school system is however uneven due to constrained infrastructure and material resources, with urban again taking precedence over rural areas. Strategies are inconclusive, and limitations include poor infrastructure and trained staff. But government dedication and world support allows for progression. Unlike nations such as Niger, Mali has been further down the path of incorporating digital tools. To improve learning, policy makers need to place a priority on infrastructure improvements, teacher training and digital content, while implementing stringent monitoring systems.

The influence of digital education policy on practice is high in Mali, but its effectiveness is constrained by the infrastructure and resource limitations. Despite government policies that have outlined strategic frameworks to enhance e-learning and digital literacy, inadequate access to stable internet, in addition to lack of technology and personnel skilled enough for implementation has hampered a large-scale development at the grassroots. Unsurprisingly, policy

is inconsistent with practice; urban areas seem to have better prospects than the countryside. This suggests there is a crucial short fall in complementary support systems, such as infrastructure investment and capacity building, that are needed to see policy objectives translate into positive impacts on digital education practice in Mali (Ling *et al.*, 2022)

Even in the realm of basic education, we have witnessed that effectiveness of various strategies of implementing digital policy has been a mixed record, with much depending on deployment context, infrastructure, training and stakeholders' involvement. Capacity building and infrastructure development focused strategies have been found to be effective in allowing the availability of service and the quality to improve, but challenges persist in achieving equitable access between urban and rural areas. Joint initiatives between governmental organizations, international partners and the communities have increased the resource implementation and adherence to policy. But lax policy adherence and insufficient digital literacy all impede on the full productivity of a digital education. In general, contextually tailored, multidimensional approaches addressing Mali's particular socioeconomic environment is necessary for successful action (Danmuchikwali & Suleiman, 2020)

There are barriers and facilitators for the effective introduction of digital education policy in Mali basic education. Main challenges are low infrastructure facilities, insufficient technical resources and a lack of in-service teacher training that prevents the use of digital technologies in the classroom. Moreover, social inequality and language differences also hinder access to online learning resources. On the positive side of the balance sheet are facilitators such as government commitment to educational reform, international donor backing, and increasing appreciation of digital literacy needs. Successful policy implementation also relies on teacher capacity building and community involvement to ensure acceptance and sustainability of digital initiatives. In general, consistent with (Cissé *et al.*, 2025), improving infrastructure and capitalizing on present political and international support is likely to make digital education policies in Mali more effective.

The application of digital education policies within the primary school system in Mali is characterized by significant similarities and disparities compared with those in Niger. Both countries are struggling with these factors like poor infrastructure, unqualified teachers and limited ownership of technological devices which hamper the successful implementation process of any policy. But Mali has pursued further digital integration in programmes supported by international organizations, with a focus on mobile learning and community solutions. In contrast, efforts to promote ICT and digital education in Niger are often stifled by wider development challenges, including political instability and limited resources that impede the implementation of policies (Djeki *et al.*, 2023).



There are great opportunities to improve access, quality and equity in learning with the introduction of digital education policies into Mali's basic education sector. In order to reap these benefits, policymakers should focus on infrastructure development such as quality internet connectivity and distribution of digital devices, especially in rural areas. Moreover, in-depth teacher training is needed to provide teachers with digital skills. In addition, it will be important to build culture specific digital content and strong M&E (monitoring and evaluation) plans for effective delivery. Enhancing Public Private Partnerships and Ensuring Sustainable financing will also promote the integration of digital tools into the education system. In general, a strategic and comprehensive integration strategy in line with Malian social and economic reality is one that could relatively democratise digital literacy to the benefit of Mali's education (Nsyengula *et al.*, 2025).

Limitations of the study

The limitations of this study are potential selection bias because it focuses on available published literature that may not represent all aspects of digital education policy implementation in Mali. In addition, language issues and inability to access some local or regional reports may have further contributed to a compromised reflection of the on-the-ground situation. Additionally, the systematic review design limits the capacity to consider practical effectiveness and contextual-level challenges experienced by educators and students, which may over-simplify complex socio-economic and infrastructural issues surrounding the day-to-day applications of policy.

CONCLUSION

There is notable potential in that digital education policy for the basic education system in Mali to drive learning outcomes and equity. But there are serious obstacles by way of infrastructural lack, resource constraints and socio-economic discrepancies that come in the way of its effective enforcement. However, solutions from public-private partnerships to donor assistance, as well as innovative initiatives like mobile learning and radio-based education have seen promise in overcoming these barriers. Balancing the two waves of digital education in order to fully exploit these boons, there need to be investments made in infrastructure, teacher training and attention paid to stakeholders. 19 And yet addressing sociocultural barriers is more challenging. Subsequent research needs to be operational in effect and context challenges to support better-targeted, more sustainable approaches.

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