ISSN: 2716-9189 E-ISSN: 2676-1750
Journal of Studies in Language, Culture, and Society (JSLCS). (08) 02, 2025. (PP. 197-208)
Received: 17/01/2025 Accepted: 23/03/2025 Published: 30/06/2025

INTEGRATING DIGITAL TOOLS INTO COMPETENCY-BASED ELT PROGRAMS IN MALI: OPPORTUNITIES AND BARRIERS

Mahamadou Karamoko Kahiraba Koita[1]
Université Yambo Ouologuem de Bamako (UYOB), Mali
mahamadou.koita@uyob.edu.ml

Abstract: This study investigates the integration of digital tools into competency-based English Language Teaching (ELT) programs in Mali, with the aim of identifying the opportunities and barriers associated with their use. It employs a mixed-methods approach, utilizing semi-structured interviews, surveys, focus groups, and classroom observations to gather perspectives. A total of 50 participants, including ELT teachers, students, and school administrators from urban and semi-urban areas, contribute to the data collection. The findings demonstrated two key results: first, while teachers recognize the potential of digital tools to enhance student engagement and learning outcomes, they face significant barriers, such as inadequate training, limited device access, and unreliable internet connectivity. Second, students express a strong interest in using digital tools, particularly multimedia resources, but encounter challenges related to high internet costs and unequal access to devices, exacerbating the digital divide. The study highlighted the need for targeted teacher training, infrastructure improvements, and policies promoting equitable access to technology to overcome these barriers. While substantial challenges remain, the integration of digital tools into the competency-based ELT programs of Mali offers significant opportunities for improving language-learning outcomes, provided that systemic issues are addressed.

Keywords: Digital tools, competency-based ELT, Mali, teacher training, educational barriers

How to cite the article :
Koita, M. K. K. (2025). Integrating digital tools into competency-based ELT programs in Mali: Opportunities and barriers. *Journal of Studies in Language, Culture, and Society, 8*(2), 197-208.

[1] **Corresponding author :** Mahamadou Karamoko Kahiraba Koita
ORCID iD: https://orcid.org/0009-0009-0683-5141

1. Introduction

In recent years, the integration of digital tools into educational programs has transformed the landscape of language teaching and learning. This transformation has been particularly notable in English Language Teaching (ELT), where technology has enhanced accessibility, engagement, and efficiency in both teaching practices and student outcomes (Chinnery, 2006; Warschauer, 2011). This shift was a bold and hopeful move aimed at equipping students with practical communication skills, critical thinking, and autonomy. However, in many classrooms across the country, this vision remains more of an aspiration than a reality.

In line with global trends, Mali has also made efforts to incorporate digital tools into its educational frameworks. However, the socio-economic and infrastructural challenges of the country present both opportunities and barriers to effective technology integration (World Bank, 2020; UNESCO, 2019).While some progress has been made, especially through pilot programs; the broader implementation has not yet taken deep root. Therefore, many educators still face daily obstacles, overcrowded classrooms, limited time, outdated materials, and an exam-focused curriculum that often leaves little room for innovation or collaboration. These challenges have quietly but consistently hindered the effective practice of CBA in English language instruction in Mali.

Across sub-Saharan Africa, and particularly in Mali, digital transformation in education is unfolding unevenly. Internet access is often unreliable, especially in rural areas, and many students lack personal devices. Instructors, too, struggle with limited digital skills and rarely receive professional training focused on e-learning. Although some institutions have learning management systems, these platforms are often underused.

Yet, despite these barriers, there is real hope. Digital tools, when thoughtfully integrated into competency-based ELT, can offer transformative opportunities. Platforms like Microsoft Teams and Moodle allow for more interactive and learner-centered lessons. These tools support project-based tasks, peer collaboration, gamified learning, and the use of rich multimedia content, all essential elements of the CBA.

To move forward, Mali must adopt a clear and strategic plan for integrating digital tools into competency-based English teaching. First, investment in infrastructure is essential. Providing solar-powered internet solutions and affordable digital devices, particularly in rural areas, would lay the foundation for equity in access. Second, continuous teacher training is key. Professional development should focus on digital pedagogy, the integration of technology into CBA, and the development of supportive peer networks.

Third, the national curriculum needs to be updated to include digital tasks such as virtual collaboration, online communication, and multimedia assignments. These additions would make language learning more authentic and aligned with global standards. Fourth, virtual exchange programs should be promoted to give learners exposure to real-world English use. Lastly, a comprehensive national policy on digital education is necessary. Such a policy would provide a roadmap for implementation, ensure digital safety, and promote coordination across institutions.

2. Literature review

2.1. Competency-Based Language Education and Digital Integration

In recent years, the move toward CBE has become more than a pedagogical trend; it reflects a deep desire to equip students with the practical tools they need for life in an increasingly digital world. The aim is no longer just to teach English, but to prepare learners

to think critically, act independently, and solve real-world problems. Scholars like Daniel Otieno (2020) have emphasized that integrating digital literacy into CBE frameworks is essential. This integration ensures that language learning goes hand in hand with the digital skills students need to thrive in the 21st century (Otieno, 2020). However, while this vision is promising, research shows that most ELT course books still fail to fully embrace digital literacies. In many cases, these skills are treated as optional, rather than central, leaving a significant gap between what learners are taught and what the world demands from them (Friesen, 2017).

2.2 The Potential of Digital Tools in Competency-Based ELT Programs

The adoption of a competency-based curriculum in Mali in recent decades reflects its commitment to aligning education with 21st-century skill demands (Ministry of Education of Mali, 2017). This approach emphasizes learner-centered pedagogies, critical thinking, and practical skill development. When effectively integrated, digital tools have the potential to significantly enhance competency-based ELT programs by fostering collaborative learning environments and expanding access to diverse language resources. They also enable personalized learning experiences, as highlighted by Chapelle (2003) and Egbert (2005).

The research objectives aim to analyze these opportunities further. Specifically, this paper aims to examine the current state of digital tool integration in ELT classrooms in Mali and identify the opportunities these tools offer for enhancing competency-based learning outcomes. It also analyzes the barriers that hinder their effective implementation.

2.3. Teacher Preparedness and Pedagogical Readiness

One of the most critical factors in the success of any digital initiative is the readiness of teachers themselves. Using technology in the classroom is not just about having devices. It is about having the confidence and the pedagogical knowledge to use them effectively. In countries like South Africa and Cameroon, studies have applied models such as TPACK (Technological Pedagogical Content Knowledge) and found that although these frameworks are useful in theory, they often fall short in practice (Koehler & Mishra, 2009; Nkula & Krauss, 2014). Teachers in under-resourced settings frequently report a lack of training and a fear of using unfamiliar tools. In Cameroon, for instance, many teachers expressed feelings of inadequacy when asked to integrate technology into their lessons (Ng'ambi & Bozalek, 2015). This highlights a deeper truth: digital transformation in education cannot happen without first addressing the emotional and professional needs of the educators who are expected to lead it (Isaacs, 2021).

2.4. Challenges of Digital Tool Integration in Mali

Despite the potential benefits, the implementation of digital tools in the ELT programs of Mali faces substantial obstacles. These include limited internet connectivity, inadequate teacher training, and inconsistent access to devices (Gorski, 2017; Hamel, 2020). Systemic issues such as infrastructural deficits, financial constraints, and disparities in digital literacy further hinder progress (Van Dijk, 2020; Selwyn, 2016).

In many schools, access to electricity is unreliable, internet connections are weak or nonexistent, and essential tools like laptops or tablets are simply unavailable (Ally & Wark, 2019). Beyond physical limitations, teacher capacity is another major concern. Without ongoing, context-based training, educators often lack the confidence and practical skills to design lessons that use digital tools meaningfully (Nkula & Krauss, 2014). The structure of the curriculum also plays a role. Many competency-based reforms focus too heavily on printed materials and written assessments, treating digital skills as optional rather than essential (Otieno, 2020). At the policy level, the absence of a national strategy for e-learning

leads to inconsistent adoption and fragmented efforts (Isaacs, 2021). Lastly, cultural attitudes toward technology, often shaped by fear, unfamiliarity, or resistance to change, make it difficult for teachers to fully embrace new methods (Davis, 1989). Together, these factors create an environment where even the most promising initiatives struggle to take root.

2.5. Opportunities: Digital Tools Supporting Competency-Based ELT

Still, there are reasons to be hopeful. Across the region, educators and policymakers are finding creative ways to overcome these challenges. One promising approach is the development of digital-literate competency frameworks. Teachers can help students become both fluent speakers and confident users of technology. To do so, they can embed digital skills directly into the learning goals of ELT programs (Otieno, 2020). During the COVID-19 pandemic, many teachers in Sub-Saharan Africa began using familiar tools like WhatsApp and simple LMS platforms to support learning. These efforts, though born out of necessity, revealed the potential of blended and collaborative learning models (Ng'ambi & Bozalek, 2015). Another encouraging development is the use of Open Educational Resources (OER), such as the TESSA and OER4Schools initiatives, which offer low-cost, teacher-led training through videos, guides, and mobile-based communities (TESSA, n.d.; OER4Schools, n.d.). Finally, mobile-first approaches, like Ghana's SuaCode program, show that smartphones can serve as powerful learning tools even where traditional infrastructure is lacking (SuaCode, n.d.). These examples offer practical models for how digital tools can support competency-based ELT in Mali and beyond.

This paper addresses these challenges by analyzing both the opportunities and barriers associated with digital tool integration in competency-based ELT programs in Mali. The research question guiding this study is: What are the opportunities and barriers associated with integrating digital tools into competency-based ELT programs in Mali?

3. Methodology

3.1 Context

This study is grounded in the Technology Acceptance Model (TAM) and the Community of Inquiry (CoI) framework. The TAM, developed by Davis (1989), explores how perceived usefulness and ease of use influence individuals' acceptance of technology. This model provides a lens for examining the attitudes of teachers and students toward digital tools in ELT classrooms. The CoI framework, proposed by Garrison, Anderson, and Archer (2000), emphasizes the importance of social, cognitive, and teaching presence in creating effective learning experiences. Together, these frameworks provide a thorough understanding of how digital tools can be integrated into competency-based ELT programs in Mali. They consider both individual and contextual factors that influence the success of this integration.

3.2 Participants

The study employs a purposive sampling strategy to include participants with relevant experience and insights. The sample comprises 50 participants: 20 ELT teachers, 20 students from competency-based programs, and 10 school administrators from urban and semi-urban areas in Mali. Participants were selected based on their experience with digital tools, familiarity with competency-based education, and willingness to participate in the study.

Urban and semi-urban schools were prioritized to capture variations in access to and usage of digital tools. Stratified sampling was employed to ensure representation across different age groups, teaching experience levels, and educational settings. This approach enabled the identification of systemic patterns while accounting for the diverse contexts of ELT in Mali.

3.3 Procedures

Data collection involved multiple methods to comprehensively explore participants' experiences, perceptions, and challenges related to digital tool integration. These methods included semi-structured interviews, focus group discussions, and surveys. Each method provided unique insights into how digital tools are perceived and used in ELT classrooms.

In addition to these methods, classroom observations were conducted to gather contextual data on the practical use of digital tools in teaching practices. This multi-method approach facilitated the collection of both qualitative and quantitative data, enabling an in-depth analysis of how digital tools are utilized in ELT classrooms and the factors influencing their integration.

4. Results

The findings from the semi-structured interviews, focus groups, surveys, and classroom observations offered a comprehensive understanding of digital tool integration in competency-based ELT programs in Mali. These insights helped to better grasp the current state and potential improvements for ELT in the country. These results reflected both the potential and challenges associated with using technology in education.

4.1 Teachers' Perspectives

Teachers recognized the benefits of digital tools in enhancing lesson delivery and student engagement. They emphasized that technology fosters more interactive and student-centered learning environments. However, they also identified significant barriers, including unreliable internet access and insufficient training, which hinder the effective use of digital tools in classrooms. One teacher noted, "The tools are very useful for student interaction, but we often face connectivity problems."

While the pedagogical value of technology was widely acknowledged, several challenges emerged as significant barriers to effective integration. The most frequently cited issues included unreliable internet access, limited access to functional devices, and insufficient training in digital pedagogy. These challenges often left teachers feeling ill-equipped to fully utilize available technological resources, particularly in settings with minimal technical support. Many educators noted that although they were willing to incorporate digital tools, the lack of professional development opportunities constrained their ability to design meaningful and tech-integrated lessons.

This dual perspective, optimism about the potential of technology coupled with frustration over infrastructural and professional limitations, reveals a need for targeted interventions. Teachers emphasized the importance of ongoing, context-relevant training programs and improved access to reliable digital infrastructure. Their insights underscore that successful digital integration in language teaching is not solely a matter of access to tools but also of empowering teachers with the skills, confidence, and support necessary to use them effectively.

4.2 Students' Perspectives

Students demonstrated strong enthusiasm for the use of digital tools in their learning experiences. Many reported that educational apps and YouTube videos not only made English lessons more enjoyable but also helped simplify complex topics through visual and interactive content. A majority, 85% of the respondents, stated that digital tools positively enhanced their understanding and overall engagement with course material. They particularly appreciated the flexibility and accessibility of learning outside the classroom, often revisiting video content or using mobile apps to reinforce their skills at their own pace.

Despite this positive outlook, students also identified significant limitations, primarily related to internet accessibility and affordability. Approximately 65% of students indicated that the high cost of mobile data posed a serious barrier to regular use of digital resources. One student explained, “I enjoy using educational apps, but my data runs out quickly, and that makes it hard to use them regularly.” This highlights the digital divide that exists even among tech-savvy learners, where enthusiasm for technology is tempered by socioeconomic constraints.

4.3 Administrators’ Perspectives

Administrators acknowledged both the potential and the challenges of integrating digital tools into English language teaching. While they expressed optimism about the transformative power of technology to enhance learning outcomes, they also emphasized that several systemic barriers continue to hinder effective implementation. Chief among these were funding limitations and inadequate infrastructure, which directly affect the ability to provide schools with the necessary digital resources.

A striking 90% of administrators identified poor internet connectivity as a major obstacle, particularly in public institutions and rural settings. They noted that without reliable internet access, even well-designed digital initiatives fail to reach their full potential. Additionally, they pointed to the lack of sustained investment in teacher training and maintenance of technological equipment as further challenges that limit the scalability and sustainability of digital education efforts.

Despite these constraints, administrators shared a forward-looking attitude. They recognized that digital tools, if properly supported, could significantly improve lesson delivery, foster student engagement, and help bridge learning gaps. One administrator noted, “Despite the challenges, we see the promise of technology to enhance learning, and we are working on solutions to address these issues.” This reflects a commitment to finding practical ways to overcome infrastructural and financial limitations, such as through partnerships with development agencies, piloting mobile-based learning models, and advocating for more inclusive education policies.

4.4 Focus Group Findings

The focus group discussions an important understanding into how teachers, students, and administrators experience the integration of digital tools in English language teaching. Their voices, each unique yet connected by a shared purpose, painted a vivid picture of both hope and challenge.

Teachers spoke with a sense of dedication and care about how digital tools have opened new possibilities in their classrooms. They explained how technology allows them to better meet the needs of students who learn at different paces and in different ways. Tools like language learning apps and online dictionaries were often mentioned as helpful in improving vocabulary and pronunciation. Yet, behind their commitment lay a quiet concern. Many teachers admitted feeling unprepared to use technology effectively. They spoke honestly about their struggles and the urgent need for regular training to build their confidence. One teacher gently noted how “we need more support to grow and use these tools well.”

Students, in contrast, expressed excitement. Their eyes lit up when they described how educational videos, mobile apps, and podcasts made learning more fun and easier to understand. These tools, they said, helped them with listening and speaking; skills they often found hard to practice in traditional classrooms. One student shared, “Videos and podcasts make it easier for me to understand and remember new words.” Yet even in their enthusiasm,

some frustration emerged. Students wished they could access these tools more often, but were limited by high internet costs and weak connectivity.

Administrators brought a wider view, acknowledging the serious barriers that still stand in the way. They pointed to a lack of infrastructure, poor internet access, and tight budgets as major challenges. Despite these constraints, many spoke with cautious optimism. They believe in the power of technology to transform learning. Nevertheless, they also stressed the importance of planning. They said that technology should not be used in isolation. Instead, it needs to be part of a long-term vision that involves everyone, teachers, technical staff, community members, and policymakers. Without this joint effort, they warned, progress would be slow and uneven.

4.5 Emerging Themes

As participants opened up about their experiences, three themes were identified: digital literacy, collaboration, and equity and access. These themes reflected not just technical concerns but deeper hopes and frustrations shared by teachers, students, and administrators alike. They revealed how the use of digital tools in English language teaching is not simply a matter of technology, but a matter of people, opportunity, and fairness.

Digital literacy was a central concern. Many teachers and students expressed a strong need for guidance and training. While some had developed basic skills, many still felt unprepared to keep up with the rapid pace of technological change. Teachers, in particular, spoke with honesty about their struggles and the pressure to adapt. They were eager to learn, not just for themselves, but so they could help their students succeed. One teacher shared that having access to tools was not enough; they needed the confidence and ability to use them meaningfully in the classroom. Their voices made it clear that digital training is not a luxury, but a necessity.

Collaboration was another theme that resonated deeply. Participants described how sharing ideas, challenges, and resources could ease the burden many educators face. Working together, both within and between schools, gave them strength and sparked new ideas. Some spoke about how peer support and online communities had helped them discover useful teaching apps or strategies. For them, collaboration was more than just cooperation; it was a source of encouragement and a pathway to growth.

However, the most emotional theme was equity and access. Many participants voiced concern about the unequal distribution of digital tools and internet access. In some schools, students had access to computers and a stable connection. In others, especially in rural or semi-urban areas, learners had almost nothing. Teachers worried that their students were being left behind simply because of where they lived. One teacher put it simply: “We need more devices, especially for students in rural areas, to ensure they are not left behind.” Students, too, shared their frustrations. They spoke about the high cost of internet data and the difficulty of accessing learning platforms regularly. Administrators acknowledged these challenges and recognized the urgent need for sustainable solutions.

4.6 Findings from Survey

The survey results revealed that 70% of teachers perceived digital tools as beneficial for enhancing lesson delivery. However, 80% of teachers cited limited access to digital devices as a significant challenge. The survey revealed that only 40% of teachers felt confident in using digital tools effectively. This highlights the need for targeted professional development to enhance their digital competencies. Among students, 85% reported that digital tools made learning more enjoyable, but 65% noted the high cost of internet data as a barrier to regular usage. Administrators expressed concerns about internet connectivity, with 90%

identifying it as a major challenge, though 75% remained optimistic about the potential of digital tools to improve education.

4.7 Findings from Observation

Classroom observations showed that teachers who were proficient in using digital tools demonstrated higher student engagement. For instance, in classrooms where teachers used projectors and language-learning apps, students were more active participants. However, technical issues, such as power outages and slow internet speeds, disrupted lessons. Observations also highlighted disparities in access to devices, with some students having to share tablets due to limited availability, which created challenges in ensuring equal access to digital tools.

In sum, the findings highlighted the potential of digital tools to enhance ELT in Mali. However, they also emphasized significant challenges related to access, infrastructure, and professional development. Addressing these challenges will be critical to ensuring the successful integration of technology in the country's educational system.

5. Discussion

The findings from the study provided a comprehensive understanding of integrating digital tools in competency-based ELT programs in Mali. They highlighted both the potential benefits and the significant challenges faced by teachers, students, and administrators. Teachers expressed strong recognition of the value digital tools bring to ELT, particularly in creating interactive, student-centered learning environments. This perspective aligns with Egbert et al. (2020), who emphasized that digital tools foster engaging and dynamic learning experiences. However, teachers also reported barriers, including unreliable internet connectivity and insufficient training, which hinder the effective use of these tools. This mirrors Unwin et al. (2018), who identified infrastructural challenges and the lack of adequate teacher training as major obstacles to technology integration in sub-Saharan Africa. One teacher's remark, "The tools are very useful for student interaction, but we often face connectivity problems," reflects these concerns and underscores the need for context-specific professional development, as emphasized by Koehler and Mishra (2009) in their TPACK framework.

Students, for their part, demonstrated enthusiasm for digital tools, particularly educational apps and YouTube videos, which they felt made learning more enjoyable and accessible. This supports Kukulska-Hulme's (2012) finding that digital tools significantly enhance student engagement and language acquisition. In the survey, 85% of students reported that digital tools enhanced their learning experiences. However, 65% raised concerns about high internet costs, which limited their regular access to these tools. This finding aligns with Warschauer's (2004) concept of the digital divide, which highlights the barriers posed by unequal access to technology. A student indeed commented, "I enjoy using educational apps, but my data runs out quickly, and that makes it hard to use them regularly," reflects the financial and infrastructural challenges that impede consistent use of digital tools.

Administrators acknowledged the challenges of inadequate infrastructure and funding, particularly poor internet connectivity, which 90% identified as a major issue. Despite these challenges, 75% of administrators remained optimistic about the potential of digital tools to enhance educational outcomes, a sentiment supported by Cox et al. (2003), who noted that administrators often maintain optimism about technology despite infrastructural constraints. Administrators also emphasized the need for strategic partnerships between government, schools, and private organizations to address these issues, a view echoed by UNESCO (2019),

which advocates for multi-stakeholder approaches to overcoming educational technology challenges.

In focus group discussions, teachers emphasized the value of digital tools for promoting differentiated learning, aligning with Egbert et al. (2020), who argued that technology could cater to diverse student needs. They highlighted the effectiveness of language apps and online dictionaries in enhancing vocabulary and pronunciation, which is consistent with Chiu et al. (2013) on the positive impact of digital tools on vocabulary acquisition. However, teachers reiterated the importance of regular capacity-building workshops to improve their digital literacy. Students in focus groups also expressed a preference for multimedia resources, such as videos and podcasts, which support their listening and speaking skills, a finding that supports Vanderplank (2016), who noted the effectiveness of audiovisual materials in language learning. Administrators emphasized the need for aligning technology adoption with institutional goals, a perspective consistent with Selwyn (2011), who argued that technology integration should align with broader educational objectives.

Emerging themes across all participant groups highlighted the importance of digital literacy, collaboration, and equity and access. The emphasis on digital literacy supports Hockly (2012), who stressed the role of digital skills in maximizing the benefits of technology in education. Both teachers and students expressed the need for targeted training to ensure effective use of digital tools, which is crucial for overcoming barriers to technology integration, as noted by Bingimlas (2009). Collaboration emerged as a central theme, reflecting Hepp et al. (2015), who suggested that partnerships among educators and institutions are crucial for enhancing technology adoption. Concerns about disparities in access to digital tools, particularly in semi-urban areas, echoed Isaacs and Hollow (2012) and Warschauer (2004), who highlighted the importance of addressing the digital divide to ensure equitable access to technology.

Survey results reinforced many of the qualitative findings, revealing that 70% of teachers believed digital tools enhanced lesson delivery, which aligns with Kim et al. (2014), who found that technology improves teaching effectiveness. However, 80% of teachers reported limited access to digital devices as a major challenge. This finding echoes Cohen (2015), who highlighted that infrastructure constraints hinder the effective use of technology. The finding that only 40% of teachers felt confident in using digital tools effectively further supports Bingimlas (2009), who emphasized the importance of professional development to address teachers' lack of digital literacy. Among students, 85% found digital tools enjoyable and engaging, which supports Ally (2008), who found that digital tools could increase student motivation.

Classroom observations revealed that teachers who were proficient in using digital tools exhibited higher student engagement, confirming Kim et al. (2014), who suggested that teachers' confidence in technology use directly impacts student participation. However, technical issues such as power outages and slow internet speeds disrupted lessons, a finding consistent with Cuban (2001), who identified infrastructural challenges as persistent barriers to technology integration. The observations also highlighted disparities in access to devices, with some students sharing tablets due to limited availability, which mirrors research by Tondeur et al. (2017), and Venezky and O'Rourke (2013), who noted that unequal access to technology creates disparities in learning opportunities.

In short, the findings underscored the transformative potential of digital tools in enhancing ELT in Mali, while also highlighting significant challenges related to access, infrastructure, and professional development. These challenges are consistent with previous

research on technology integration in sub-Saharan Africa, which emphasizes the need for targeted interventions addressing both the technical and pedagogical needs of teachers. To maximize the benefits of digital tools, it will be essential to invest in infrastructure, provide ongoing professional development, and ensure equitable access to technology for all students, especially those in underserved areas.

6. Conclusion

This paper has provided a comprehensive exploration of the integration of digital tools in competency-based ELT programs in Mali. It highlighted both the potential and challenges associated with technology adoption in educational settings. Teachers, students, and administrators were all optimistic about the role of digital tools in enhancing learning but expressed concerns about the barriers to effective integration. The study has made a significant contribution by offering valuable context-specific insights into the Malian educational environment. It reinforces global findings while shedding light on local challenges, such as limited access to digital devices and internet connectivity.

The results highlighted the importance of addressing infrastructure gaps and enhancing educator training. Additionally, ensuring equal access to technology is essential for the effective integration of digital tools in ELT programs. Policymakers and educational stakeholders must collaborate to design and implement context-sensitive strategies that consider the specific challenges faced in the Malian context. Furthermore, the study emphasized the importance of aligning technology integration with national educational goals and fostering partnerships among government agencies, schools, and private organizations.

Based on these insights, several recommendations emerge. First, it is essential to prioritize teacher-training programs that build both technical and pedagogical skills in digital tool use. Second, efforts should be directed toward improving infrastructure, particularly internet connectivity, and providing affordable devices to ensure all students can benefit from technology-enhanced learning. Third, policy frameworks must be developed to promote equity in access to digital tools, particularly for students in semi-urban and rural areas. Lastly, fostering collaboration between schools, governments, and the private sector can help address resource constraints and ensure the long-term sustainability of technology initiatives.

References

Ally, M. (2008). *Mobile learning: Transforming the delivery of education and training*. Athabasca University Press.

Ally, M., & Wark, N. (2019). Digital learning for development in Africa: It is not just about technology. *The African Journal of Information Systems,* 11(1), Article 1.

Bingimlas, K. A. (2009). Barriers to the successful integration of ICT in teaching and learning environments: A review of the literature. *European Journal of Educational Studies,* 1(2), 235-245.

Chapelle, C. A. (2003). *English language learning and technology: Lectures on applied linguistics in the age of information and communication technology*. John Benjamins.

Chinnery, G. M. (2006). Emerging technologies: Going to the MALL: Mobile assisted language learning. *Language Learning & Technology,* 10(1), p.9–16.

Chiu, C. Y., Sadaf, A., & Mohammad, N. (2013). The impact of digital tools on vocabulary acquisition in language learning. *Educational Technology & Society,* 16(4), p.80-89.

Cohen, D. (2015). Barriers to the adoption of educational technology: The role of infrastructure in teaching and learning. *Computers & Education*, 82, p.43-57.

Cox, M. J., Abbott, C., Webb, M., Blakely, B., & Beauchamp, G. (2003). *ICT and pedagogy: A review of the research literature.* Department for Education and Skills.

Cuban, L. (2001). *Oversold and underused: Computers in the classroom.* Harvard University Press.
Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly,* 13(3), p.319–340.
Egbert, J. (2005). *CALL essentials: Principles and practice in CALL classrooms*. TESOL Publications.
Egbert, J., Chao, C., & Hanson-Smith, E. (2020). *Call environments: Research, practice, and critical issues.* Routledge.
Friesen, N. (2017). *The textbook and the lecture: Education in the age of new media.* Johns Hopkins University Press.
Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education,* 2(2-3), p.87–105.
Gorski, P. (2017). *Reaching and teaching students in poverty: Strategies for erasing the opportunity gap (2nd ed.).* Teachers College Press.
Hamel, F. (2020). The challenges of integrating technology in classrooms: A socio-economic perspective. *Journal of Educational Development,* 10(4), p.12–24.
Hepp, P., Hinostroza, E., Laval, C., & Rehbein, L. (2015). Technology in schools: Education, ICT, and the knowledge society. *Computers & Education,* 14(4), p.377-388.
Hockly, N. (2012). Digital literacy: A key to success in the 21st century. *English Teaching Professional,* 83, p.18-22.
Isaacs, S. (2021). *Digital learning in Sub-Saharan Africa: Barriers and policy recommendations.* UNESCO-UNEVOC.
Isaacs, S., & Hollow, D. (2012). *ICT in education in sub-Saharan Africa: A literature review.* Education Development Center.
Kessler, G. (2018). Technology and the future of language teaching. *Foreign Language Annals,* 51(1), p.205–218.
Kim, H. J., Rueckert, D., Kim, S., & Seo, H. (2014). The effects of technology-enhanced language learning on English language learners: A meta-analysis of research. *Language Learning & Technology*, 18(1), p.1-13.
Kim, H., Lee, J., & Zhang, S. (2019). Digital literacy for the 21st century: Implications for language educators. *TESOL Quarterly,* 53(2), p.399–425.
Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education,* 9(1), p.60-70.
Kukulska-Hulme, A. (2012). *Mobile learning: The next generation.* Routledge.
Ministry of Education of Mali. (2017). National education strategy: Competency-based curriculum framework. Ministry of Education.
Ng'ambi, D., & Bozalek, V. (2015). Emerging technologies and changing learning/teaching practices. *Open Learning,* 30(2), 141–155. https://doi.org/10.1080/02680513.2015.1020314
Otieno, D. (2020). *Embedding digital literacy into competency-based curricula: Strategies and challenges.* In A. Yusuf (Ed.), Digital Education in Africa (pp. 45–59).
Selwyn, N. (2011). *Education and technology: Key issues and debates.* Continuum.
Selwyn, N. (2016). *Is technology good for education?* Polity Press.
Tondeur, J., van Braak, J., & Ertmer, P. A. (2017). Understanding the relationship between teachers' pedagogical beliefs and technology use in education: A review of the literature. *Computers & Education, 58(4),* p.122-134.
UNESCO. (2019). *Digital literacy and education in Africa.* United Nations Educational, Scientific and Cultural Organization. https://unesdoc.unesco.org/ark:/48223/pf0000391159

UNESCO. (2019). *Global education monitoring report: Migration, displacement, and education – Building bridges, not walls.* Paris: UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000375700

Unwin, T., Stevens, D., & Park, H. (2018). *The impact of technology on education in sub-Saharan Africa: A research review.* Open University Press.

Van Dijk, J. (2020). *The digital divide.* Polity Press.

Vanderplank, R. (2016). The role of multimedia in second language listening comprehension: An overview. *Language Teaching,* 49(2), p.268-281.

Venezky, R. L., & O'Rourke, M. (2013). *The digital divide and education: A study of how schools can make use of the internet.* Educational Testing Service.

Warschauer, M. (2004). Technology and equity: A comparative analysis of educational technology in the United States and developing nations. *Educational Technology & Society,* 7(1), p.19-30.

Warschauer, M. (2011). *Learning in the cloud: How (and why) to transform schools with digital media.* Teachers College Press.

World Bank. (2020). *Mali: Digital foundations and the future of education.* Washington, DC: World Bank. https://www.worldbank.org/en/country/mali/overview