

Policy Recommendations to Improve Quality and Equity Education in Addis Ababa Secondary Schools

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Executive Summary

Digital technology is increasingly recognized as an important tool for improving the quality of education related to the success of students and effective achievement of the learning outcomes and addressing the equity of education through involving all groups of students in the common platform in secondary schools. This policy brief draws from the study entitled “Exploring Digital Technology Access in Secondary Schools for Advancing Education Equity and Quality: Case Study of Addis Ababa, Ethiopia”. The study examines the availability, use, and impact of digital technologies in secondary schools in Addis Ababa. The study reveals that although many schools have begun adopting digital tools, significant challenges remain in ensuring their effective integration into teaching and learning. Limited internet connectivity, inadequate teacher training, and unequal access to digital resources continue to hinder the full potential of digital education. Despite these barriers, both teachers and students demonstrate positive attitudes toward digital technologies and recognize their benefits for enhancing motivation, engagement, and learning outcomes. This policy brief recommends strengthening digital infrastructure, develop the technological skill of teachers and fill the gap of digital literacy to ensure that all students benefit from digital learning opportunities and improve quality education.

1. Introduction

The incorporation of digital technologies into educational settings has altered teaching and learning around the world, opening up new options for improving educational quality and accessibility. In Ethiopia, a country with severe educational issues, the adoption of digital technology brings both unique prospects and formidable challenges (Timotheou, Miliou, & Dimitriadis, 2023).

Ethiopia has made significant success in improving access to education, with higher rates of enrolment at all levels. However, significant disparities proceed with especially between urban and rural locations and across socioeconomic categories. Many schools experience problems particularly overcrowded classrooms, constrained resources for teaching, and insufficient facilities (Anteneh, 2024).

Many efforts have been made to introduce digital devices and learning platforms into teaching learning process in secondary schools in Addis Ababa. However, the integration of these technologies remains uneven across schools and subjects. While some institutions have access to digital tools and infrastructure, others continue to face challenges such as limited internet connectivity and insufficient technological resources. Understanding how digital technologies are currently used and the challenges surrounding their integration is crucial for designing policies that promote both educational quality and equitable access to learning opportunities.

2. Policy Problem

Secondary schools in Addis Ababa face significant challenges in effectively integrating digital technologies into teaching and learning, which limits the potential of technology to improve education quality and equity. These challenges are further compounded by equity concerns. Students from low-income families often have limited access to digital devices and internet connectivity outside of school, while learners with disabilities may face additional barriers due to the lack of accessible technologies and assistive tools. As a result, the benefits of digital learning are not distributed equally among students, reinforcing existing educational inequalities. Furthermore, current curriculum frameworks and instructional approaches do not effectively support the integration of digital technologies or promote student-centered learning practices.

Without targeted policy interventions and implementations, these structural, capacity-related, and equity gaps will continue to hinder the effective use of digital technologies in secondary education, limiting opportunities to improve learning outcomes and ensure equitable access to quality education. Therefore, there is a need for comprehensive policy actions and implementation that strengthen digital infrastructure, enhance teacher capacity, promote inclusive access to digital resources, and align curriculum frameworks with the demands of digital integrating learning.

3. Challenges and Opportunities in Digital Education

The integration of digital technologies into education has opened significant opportunities for enhancing learning, yet it also presents persistent challenges. A recurring challenge concerns the lack of adequate infrastructure, particularly devices, internet connectivity, and reliable power supply (Ravishankar & Wase, 2024). These limitations create unequal access to digital resources, often leaving marginalized groups at a disadvantage. Teacher-related issues, including insufficient training and resistance to adopting new technologies, further hinder effective digital learning integration (Atabek, 2019). UNESCO GEM (2023) stresses that teacher preparedness and adoption of digital tools remains uneven, reflecting broader systemic inequalities. This aligns with the findings of Zou et al. (2025), who argue that without inclusive policies, the gap between theoretical benefits and practical implementation will persist. The evidence suggests that digital education risks reinforcing existing disparities if not accompanied by targeted interventions aimed at equity and inclusion.

Despite these barriers, opportunities emerge where technology is successfully adopted. For example, Da Costa et al. (2023) emphasize that digital tools can expand access to diverse resources and enable personalized learning, while Vidak et al. (2023) highlight benefits such as enhanced visualization and collaborative learning opportunities. These findings suggest that when adequately supported, digital technologies can transform learning environments, making them more engaging, interactive, and adaptable to individual learner needs. Similarly, Sgrancio Olinda et al. (2024) note that digital tools contribute to greater engagement and personalization, though challenges such as infrastructure and equity gaps remain pressing concerns.

In conclusion, digital education is characterized by a dual reality: it offers significant opportunities for improving engagement, personalization, and employability skills, yet it also faces enduring challenges related to access, infrastructure, teacher preparedness, and equity. Addressing these challenges requires systemic approaches that integrate policy reform, teacher training, and equitable resource distribution. Only then can the transformative potential of digital education be fully realized and made accessible to all learners.

4. Policy Recommendations

To address the challenges identified in the study, several policy actions are recommended. The brief of policy recommendation is outlined in the following table.

Policy recommendations to integrate digital technology in secondary schools

| Policy Option | Key Actions | Pros | Cons | Stakeholders |
|--|--|---|---|--|
| Strengthen Digital Infrastructure in Secondary Schools | Improve school internet connectivity, Provide sufficient digital devices (computers, tablets, projectors) and Establish school ICT maintenance and technical support systems. | Enhances access to digital learning resources, Improves quality of teaching and learning and Reduces technological barriers in schools. | Requires high initial investment, Maintenance and sustainability challenges, | Ministry of Education, Addis Ababa Education Bureau, school administrators. |
| Continuous Professional Development for Teachers on Digital Pedagogy | Organize regular ICT training and workshops, Integrate digital pedagogy in teacher professional development programs and Provide mentoring and peer-learning opportunities for teachers. | Improves teachers' confidence and competence in using technology, Encourages innovative teaching methods and Supports effective integration of digital tools in classrooms. | Training programs require time and financial resources and resisting of adopting new technologies | Teachers, teacher training institutions, Ministry of Education, education bureaus, school leaders, educational technology experts. |

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|---|---|--|---|---|
| Equity-Focused Digital Access Programs | Provide subsidized digital devices and internet access for low-income students, Develop inclusive digital tools for students with disabilities. | Promotes educational equity and inclusion and Supports marginalized and vulnerable students. | -Requires sustained funding and policy commitment, Risk of resource misallocation. Monitoring process is challenging. | Government agencies, NGOs, disability support organizations, community groups, development partners, students and families. |
| Curriculum Reform for Digital Integration | Revise curriculum to include digital literacy and technology integration and Develop digital learning materials aligned with curriculum goals. | Encourages modern teaching and learning practices, Develops students' digital competencies and Aligns education with the demands of the digital economy. | Curriculum revision process and its implementation may vary across schools. | Curriculum developers, Ministry of Education, teachers, educational researchers, school leaders, policymakers. |

Conclusion

Digital technologies offer significant opportunities to improve the quality and equity of secondary education in Addis Ababa. The findings of this study indicate that while both teachers and students recognize the value of digital tools for enhancing learning engagement and outcomes, several challenges remain in terms of infrastructure, teacher capacity, and equitable access. Addressing these challenges requires coordinated policy efforts that prioritize investment in digital infrastructure, professional development for teachers, and inclusive education strategies. By implementing these measures, education systems can ensure that digital technologies contribute to more equitable and high-quality learning experiences for all students.

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