

## **Closing the Digital Divide in Geography Education: Assessing Sri Lankan Preparedness for 21st-Century Curriculum Reforms**

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### **Abstract**

The 21st-century education paradigm necessitates integrating digital literacy into Geography education, where geospatial technologies like GIS and data-driven methodologies are transformative. Sri Lanka's curriculum reforms prioritize digital competencies, yet Geography teachers face systemic barriers, including unequal resource access, inadequate training, and resistance to pedagogical innovation, raising readiness concerns. This study addresses a critical research gap by examining educators' preparedness, emphasizing implications for reducing disparities between urban, rural, and estate schools. Digital literacy underpins essential geographical skills—spatial analysis, critical thinking, and global awareness—making equitable implementation urgent for policymakers, teacher educators, and practitioners. Despite progressive policies, Sri Lankan teachers encounter multifaceted challenges: limited technical proficiency, language barriers with English-dominated resources, insufficient pedagogical training, and infrastructure deficits like unreliable internet and outdated hardware. Employing a mixed-methods approach, the study surveyed 90 Geography teachers (stratified equally across urban, rural, and estate schools), conducted 30 interviews, and observed classrooms to assess digital tool usage. Quantitative analysis revealed stark disparities: 65% of urban teachers demonstrated digital proficiency compared to 22% (rural) and 8% (estate), with 94% lacking formal training and 88% in rural/estate schools facing severe device and connectivity shortages. Qualitatively, themes like technological apprehension and reliance on self-directed learning via YouTube emerged, alongside 80% preferring traditional methods due to unfamiliarity or engagement concerns. Recommendations include tiered professional development (foundational workshops to advanced micro-credentials), public-private partnerships for infrastructure, localized adaptation of international standards (e.g., ISTE), peer mentoring networks, and English-language upskilling programs. By addressing infrastructural and pedagogical gaps, Sri Lanka can mitigate digital inequities, fostering a model for global educational transformation. This research underscores the urgency of systemic interventions to align teacher readiness with curriculum goals, ensuring inclusive, technology-enhanced Geography education.

**Keywords:** digital literacy, geography education, teacher readiness, regional disparities.