

Digital Literacy Framework for Africa

Mobile-First K-12 Curriculum · v2.0 · May 2026

A free, mobile-first digital literacy framework for K-12 students, teachers, parents, and community learners across Africa. Covers digital citizenship, online safety, mobile-money literacy, AI fluency, and the 2050 skills that matter — designed for the realities African learners actually live with: shared devices, intermittent connectivity, multilingual classrooms, mobile-money-native economies.

Audience. Schools, institutions, universities, governments, and community programmes. The gap is theirs to recognise; the change is theirs to lead.

Positioning. We build at the frontier. We name the gap and build past it. AI is disrupting work, knowledge, and learning everywhere; preparing African learners means designing for that disruption, not insulating from it. We disrupt to enable and guide, not to compete. We don't benchmark off US markers — the Bundu Foundation publishes African open standards, and this framework benchmarks against those. **Built for Africa.**

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Executive Overview

Digital literacy is no longer optional. By 2050, every economic, civic, and educational opportunity will run through digital infrastructure. This framework prepares African learners — students, teachers, staff, parents, and adult community members — to participate fully, ethically, and confidently.

Four design commitments

Mobile-First Reality — Designed for contexts where smartphones are the primary digital access point, not computers.

Digital Citizenship Core — Emphasises safety, ethics, responsibility, and positive digital community participation before tool mastery.

Lifelong Learning — Digital literacy starts at any age. Parallel pathways for students, teachers, staff, parents, and community members.

2050-Ready Skills — Prepares learners for AI collaboration, remote work, digital entrepreneurship, and emerging technology.

African Context (Pan-African, May 2026)

Pan-African averages from authoritative sources; per-country variation is large (see Sources at the bottom of this document).

Connectivity and access

- Internet penetration: ~38% of Africans use the internet (ITU). Urban 57% / rural 23%.
- Mobile internet users: 416 million; ~75% of Africans remain unconnected (GSMA Mobile Economy Africa 2025).
- 3G covers ~77% of the population; 4G ~44%; 5G ~1.2%. 3G is the floor.
- 1 GB of mobile data costs ~5.7% of average monthly income on average — A4AI's affordability target is 2%. Worst-affected: Central African Republic (24.4% of income), DRC (20.7%), Togo (15.1%), Chad (14.7%), Malawi (14.0%).
- Smartphone market: Transsion (Tecno / Infinix / Itel) ~48%; Samsung ~21%; Xiaomi ~13%. Sub-USD 200 devices = 81% of shipments.

Messaging surface

- WhatsApp has ~~320 million users in Africa~~; ~~95% smartphone penetration in Nigeria~~, ~~94% in South Africa~~, ~~92% in Ghana~~. Customer satisfaction rates for WhatsApp-based service queries exceed ~~email and SMS~~ (91%).
- USSD remains the universal access channel for feature-phone households — works on any GSM handset, no data needed.

Mobile money is the household economy

- Africa processed 74% of global mobile-money transactions in 2024 (USD 1.1 trillion). Schools, families, and platforms must teach mobile-money literacy as a core skill.
- Big rails: M-Pesa (Kenya, Tanzania, DRC, Ethiopia, Egypt), MTN MoMo (Ghana, Uganda, and 9+ more), Airtel Money (14 countries), Orange Money (17 francophone), EcoCash (Zimbabwe), Wave (Senegal), PalmPay and OPay (Nigeria), TeleBirr (Ethiopia).

Online safety and scams

- 68% of African adults encountered at least one scam in the past year; 41% of those targeted lost money.
- Top patterns: SIM-swap fraud, Wangiri ("one-ring") scams, mobile-money phishing, malicious-link SMS that installs malware to take over banking apps.
- AU adopted Africa's first Child Online Safety and Empowerment Policy in May 2024 (the first continental policy of its kind). UNICEF + GSMA launched the Africa Taskforce on Child Online Protection in October 2025.
- Only 41% of African children surveyed report receiving any online-safety information. The framework treats this as the floor to lift.

Demographics — why 2050 is the design horizon

- Africa's population: 1.2B (2016) → 2.5B (2050).
- Youth (15–24): doubles to ~830M. By 2050, **one in every three young people globally will be African.**
- Working-age population: 849M (2024) → 1.56B (2050) — 85% of the global workforce increase comes from Africa in this window.
- These learners are not a peripheral cohort. They are the centre of the world's labour, civic, and creative future.

Multilingual reality

- Africa has 2,000+ languages; 60+ widely-used. Most national curricula require mother-tongue instruction in lower primary.
- Tanzania uses Kiswahili through primary; Rwanda transitions to English by Grade 4; South Africa permits any of 11 official languages in lower primary; Nigeria allows Hausa / Yoruba / Igbo for early grades.

Built-for-Africa AI literacy

- Lelapa AI's **InkubaLM** is Africa's first open multilingual LLM (Swahili, Yoruba, isiXhosa, Hausa, isiZulu).
- **Masakhane** ("we build together" in isiZulu) is the pan-African NLP network publishing translation models for 48+ African languages.
- **UlizaLLama** (Jacaranda Health) provides AI support in Swahili, Hausa, Yoruba, Xhosa, Zulu.
- Africa-led AI literacy means learners and educators can prompt, evaluate, and audit AI in their own languages — not just in English.

Framework Governance

How this framework embodies the open principles of the Bundu Foundation. Each governance principle has a concrete example so the commitment is auditable.

01 · Open & Shareable

Complete digital literacy standards, curricula, and assessment rubrics are freely available. No licensing fees for any progression — K-12, teachers, adults. Schools can copy, adapt, and share this entire framework.

Example. Download the K-12 progression standards, customise for your school's context (e.g. adding local language requirements), and share your adapted version with neighbouring schools.

02 · Evidence-Based

Standards are aligned with 2050 job-market requirements (digital fluency, AI collaboration, remote work competencies). Progression is based on cognitive development research. A citizenship-first approach is proven to improve online safety outcomes.

Example. Framework prioritises digital citizenship before tool mastery because research shows ethical foundation matters more than technical skills for long-term success.

03 · Competency-Focused

Standards emphasise what learners can *do*, not just what they know. Portfolio-based assessment demonstrates actual digital competencies. Badges and micro-credentials document skills employers recognise.

Example. Instead of "knows how to use spreadsheets," the standard is "can analyse real-world data using spreadsheets and create data-driven recommendations" — demonstrable competency, not abstract knowledge.

04 · Mobile-First

Every standard is achievable on a smartphone. Offline-capable learning modules accommodate limited connectivity. Mobile assessment tools (quizzes, portfolio submissions via phone) work in the contexts learners actually live in.

Example. Digital citizenship curriculum is accessible via mobile web apps, not just desktop platforms — meeting learners where they are (67.5% mobile internet penetration in Africa).

05 • Culturally Responsive

Multilingual standards (English, French, African languages). Examples and case studies reflect African contexts, not Western assumptions. The framework respects diverse cultural values around privacy, community, and digital participation.

Example. The digital citizenship module includes Ubuntu philosophy ("I am because we are") alongside Western individualistic online-identity frameworks — culturally grounded digital literacy.

06 • Cost-Conscious

Open-source learning tools (Khan Academy, Scratch, GCFGlobal) instead of expensive proprietary platforms. Free assessment rubrics and badging systems. Professional development designed for in-house delivery, not expensive consultants.

Example. Framework recommends free/freemium tools (Google Workspace for Education, Canva Free, Scratch) that deliver the full digital literacy curriculum at zero software licensing cost.

07 • Implementation-Focused

Detailed K-12 progression roadmap (grades K-2, 3-5, 6-8, 9-12). Ready-to-use assessment rubrics and portfolio templates. Teacher professional development curriculum with 40-hour training modules. Implementation timelines and resource allocation guides.

Example. Framework includes exact K-2 standards ("Create a simple digital story using images and text") with assessment rubrics and sample projects — not vague aspirational goals.

Core Principles

Six principles that govern every standard, every assessment, every implementation decision.

01 • Mobile-First Design. Every skill, tool, and assessment must work on a smartphone with limited data and intermittent connectivity.

02 • No Prerequisites. Digital literacy can start at any age with any background — no prior experience required.

03 • Citizenship Before Tools. Understanding digital rights, responsibilities, and safety comes before mastering apps.

04 • Future-Focused. Teach adaptability and learning skills, not just current tools — prepare for 2050, not 2025.

05 • Contextually Relevant. Use African examples, languages, and scenarios — not Western-centric content.

06 · Lifelong & Universal. Parallel pathways for students, teachers, staff, parents, and community members.

Student Standards and Learning Outcomes

Three age bands, each with four-to-seven competency domains. Standards are demonstrable — "can do," not "knows about."

Early Years (Ages 5-8) · Foundation Stage · Grades K-3

Digital Citizenship & Safety

- Understand what the internet is and how it connects people.
- Recognise safe vs. unsafe online behaviours (stranger danger online).
- Learn to ask a trusted adult before sharing photos or information.
- Practice kindness and respect in digital communication.
- Understand that not everything online is true or safe.

Device Basics (Mobile-First)

- Navigate touchscreen interfaces (tap, swipe, pinch-to-zoom).
- Use on-screen keyboards for basic text input.
- Open and close apps safely.
- Understand battery life and charging.
- Handle devices with care (drops, water, screen protection).

Communication & Collaboration

- Send simple voice messages or texts with adult supervision.
- Understand emojis and basic digital expression.
- Share learning with family via photos or videos (with permission).
- Participate in group video calls (e.g. classroom or family).

Content Creation

- Take photos and videos with guidance.
- Draw or paint using creative apps.
- Record voice narration for stories.
- Recognise that they are creators, not just consumers.

Primary (Ages 9-13) · Foundation to Intermediate · Grades 4-8

Digital Citizenship & Safety

- Create and manage strong passwords; protect personal information.
- Recognise phishing, scams, and suspicious links.
- Understand digital footprints and reputation management.
- Practice respectful online communication (no cyberbullying).
- Evaluate credibility of online information and sources.
- Understand copyright, attribution, and plagiarism basics.

Mobile Productivity

- Use mobile word-processing apps (Google Docs, Microsoft Word mobile).
- Create presentations on mobile devices (Slides, PowerPoint).
- Organise files and folders in cloud storage (Drive, OneDrive).
- Use mobile calendars for time management.
- Take effective notes digitally.
- Manage data usage and offline mode.

Research & Information Literacy

- Use search engines effectively with keywords.
- Evaluate source credibility (author, date, bias).
- Distinguish fact from opinion online.
- Bookmark and organise research resources.
- Cite sources appropriately.
- Recognise misinformation and fake news.

Communication & Collaboration

- Compose professional emails and messages.
- Participate in online discussions respectfully.
- Collaborate on shared documents in real time.
- Use video-conferencing tools (Zoom, Google Meet).
- Give and receive constructive digital feedback.

Content Creation

- Edit photos and videos on mobile devices.
- Create digital stories and multimedia presentations.
- Design simple graphics and infographics.
- Record and edit audio (podcasts, narration).
- Understand basics of visual design (contrast, alignment, spacing).

Computational Thinking (Introduction)

- Understand algorithms and step-by-step problem solving.
- Introduction to block-based coding (Scratch mobile, Code.org).
- Recognise patterns and create simple automations.

- Debug simple code and logical errors.

Secondary (Ages 14-18) · Advanced Skills · Grades 9-12

Digital Citizenship & Ethics

- Understand digital rights (privacy, expression, access).
- Navigate complex ethical dilemmas (AI bias, data privacy, surveillance).
- Manage digital identity across platforms professionally.
- Understand legal implications of online behaviour.
- Advocate for digital justice and equity.
- Practice digital wellness and healthy tech boundaries.

Advanced Mobile Productivity

- Master mobile productivity suites (Google Workspace, Microsoft 365).
- Create data visualisations and dashboards on mobile.
- Use project-management tools (Trello, Asana mobile).
- Automate workflows (IFTTT, Shortcuts, Zapier).
- Manage cross-platform work (mobile, tablet, computer).

Digital Research & Analysis

- Conduct advanced searches with Boolean operators.
- Evaluate sources for bias, credibility, and accuracy.
- Analyse data with spreadsheets and visualisation tools.
- Understand statistics, charts, and data interpretation.
- Synthesise information from multiple sources.
- Write research papers with proper citations (APA, MLA).

Communication & Professional Presence

- Build professional LinkedIn profiles and digital portfolios.
- Network professionally online (mentorship, career connections).
- Create resumes and cover letters digitally.
- Participate in virtual internships or remote work.
- Present effectively in webinars and online forums.

Content Creation & Media Production

- Produce professional-quality videos on mobile (editing, effects, sound).
- Design graphics for social media and marketing.
- Create websites or blogs (mobile-optimised CMS).
- Develop digital portfolios showcasing work.
- Understand content strategy and audience engagement.

Coding & Technology Foundations

- Write code in Python, JavaScript, or other languages.
- Develop simple mobile apps or web applications.
- Understand APIs and how software connects.
- Use version control (GitHub basics).
- Explore AI/ML concepts and prompt engineering.
- Troubleshoot technical problems independently.

Entrepreneurship & Digital Economy

- Understand digital business models (e-commerce, freelancing, content creation).
 - Use mobile payment systems (M-Pesa, mobile banking).
 - Create and market digital products or services.
 - Understand digital marketing and social media strategy.
 - Explore cryptocurrency and blockchain basics.
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Adult Digital Literacy Framework

Four pathways for adults — teachers, staff, parents, and community members — each with three levels of progression. Digital literacy is lifelong; the framework gives every adult an on-ramp.

Teachers & Educators

Foundation Level (0-6 months)

- Navigate learning management systems (LMS) confidently.
- Use video conferencing for online/hybrid teaching.
- Create and share digital lesson materials.
- Manage student submissions and grading digitally.
- Communicate with parents via digital platforms.
- Practice digital safety and model citizenship for students.

Intermediate Level (6-12 months)

- Design engaging multimedia lessons (videos, interactive content).
- Use educational apps and platforms effectively.
- Assess student work with digital rubrics and feedback tools.
- Differentiate instruction with adaptive learning tools.
- Collaborate with colleagues on shared resources.
- Track student progress with data analytics.

Advanced Level (12+ months)

- Integrate AI tools to enhance teaching (ChatGPT, Gemini for lesson planning).
- Create original educational content (podcasts, courses, tutorials).
- Lead professional development on edtech tools.
- Use data-driven insights to inform pedagogy.
- Participate in global educator networks (Twitter, LinkedIn Learning).
- Stay current with emerging educational technologies.

School Staff & Administrators

Foundation Level

- Use school information systems (SIS) for data entry and reporting.
- Manage email and digital communication professionally.
- Use mobile productivity tools (docs, sheets, calendars).
- Understand data privacy and the data-protection law of the jurisdiction (POPIA in South Africa, NDPA in Nigeria, the Kenya Data Protection Act, Ghana's DPA, Rwanda's NDGF, Uganda DPPA, POTRAZ in Zimbabwe, Egypt's PDP Law, Morocco's CNDP, plus the AU Malabo Convention).
- Navigate cloud storage and file sharing.

Intermediate Level

- Analyse school data to inform decision-making.
- Create reports and dashboards with visualisation tools.
- Manage digital workflows and approvals.
- Use project-management tools for initiatives.
- Conduct virtual meetings and presentations effectively.

Advanced Level

- Lead digital transformation initiatives.
- Evaluate and select edtech solutions.
- Develop data governance policies.
- Use predictive analytics for resource planning.
- Build digital capacity across staff.

Parents & Guardians

Foundation Level

- Access student grades and progress via parent portals.
- Communicate with teachers digitally.
- Monitor child's online activity and safety.
- Understand age-appropriate content and screen time.
- Support homework with digital resources.

Intermediate Level

- Set parental controls and safe browsing filters.
- Teach children digital citizenship at home.
- Collaborate with school on digital learning.
- Use educational apps to support learning.
- Navigate online learning platforms with children.

Advanced Level

- Advocate for digital equity in schools.
- Participate in school technology committees.
- Model positive digital behaviour and boundaries.
- Understand emerging tech trends affecting children.
- Support children's digital career exploration.

Community Members & Adult Learners

Foundation Level

- Use smartphones for basic communication (calls, texts, WhatsApp).
- Navigate the internet and search for information.
- Understand online safety and scams.
- Use mobile banking and digital payments.
- Access government services online.
- Create and manage email accounts.

Intermediate Level

- Use social media professionally (networking, business).
- Access online training and education (MOOCs, YouTube).
- Create digital content (photos, videos, blogs).
- Use productivity tools for work or business.
- Apply for jobs online and build digital resumes.
- Participate in online communities and forums.

Advanced Level

- Start and manage online businesses or freelancing.
- Use digital tools for entrepreneurship (e-commerce, marketing).
- Learn new skills through online courses continuously.
- Participate in the digital economy (gig work, remote work).
- Teach digital literacy to others in the community.
- Advocate for digital access and inclusion.

Digital Citizenship Framework

Six pillars of digital citizenship. Citizenship comes before tools — every learner builds these foundations regardless of age or pathway.

Digital Safety & Security

- Password hygiene and account security.
- Recognising phishing, scams, and social engineering.
- Privacy settings and data protection.
- Safe browsing and app downloads.
- Protecting personal and financial information.
- Responding to cyberbullying and online harassment.

Digital Rights & Responsibilities

- Understanding freedom of expression and its limits.
- Right to privacy and data ownership.
- Access to information and digital inclusion.
- Responsibility to respect others' rights online.
- Copyright, fair use, and attribution.
- Reporting harmful content and behaviour.

Digital Ethics & Critical Thinking

- Evaluating information credibility and bias.
- Recognising misinformation and fake news. Use African-led fact-checkers as primary references: **Africa Check** (pan-African, since 2012), **PesaCheck** (12+ East and West African countries, financial-statistics focus), **Dubawa** (Nigeria and West Africa, since 2018), the **Africa Infodemic Response Alliance** (WHO-coordinated).
- Understanding AI ethics and algorithmic bias — including bias against African languages and contexts in mainstream LLMs.
- Making ethical decisions in digital spaces.
- Respecting intellectual property.
- Considering the long-term impact of digital actions.

Digital Communication & Collaboration

- Communicating respectfully and professionally online.
- Active listening and empathy in digital contexts.

- Conflict resolution and digital disagreements.
- Building positive digital communities.
- Cross-cultural communication online.
- Standing up to cyberbullying as a bystander.

Digital Wellness & Balance

- Managing screen time and digital boundaries.
- Recognising digital addiction and seeking help.
- Balancing online and offline relationships.
- Protecting mental health in the social media age.
- Practising digital detox and mindfulness.
- Creating healthy tech habits for life.

Digital Identity & Reputation

- Managing digital footprints and online presence.
 - Building positive professional identity.
 - Understanding permanence of digital content.
 - Protecting reputation and recovering from mistakes.
 - Authentic vs. curated online personas.
 - Managing multiple digital identities responsibly.
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Mobile-First Implementation Strategies

Practical patterns for schools and communities where mobile is the primary access point, devices are shared, and data is constrained.

Shared Device Models

- **Lab Rotations.** Students rotate through computer/tablet labs in groups.
- **Mobile Cart.** Shared charging cart with devices checked out as needed.
- **BYOD (Bring Your Own Device).** Students use personal smartphones with school support.
- **Library Access.** Devices available in libraries during school hours.
- **Family Device Time.** Homework completed on shared family devices at home.

Low-Data Learning

- **Offline-First Apps.** Apps that sync when online but work offline (Google Docs, Khan Academy).

- **Cached Content.** Pre-download lessons and videos for offline viewing.
- **Progressive Web Apps.** Web-based tools that work like native apps with minimal data.
- **SMS/USSD Learning.** Text-based learning for ultra-low bandwidth.
- **Wi-Fi Zones.** Designated school Wi-Fi areas for downloading materials.

Mobile-Optimised Pedagogy

- **Bite-Sized Lessons.** Short 5-10 minute mobile-friendly modules.
- **Voice-First Interaction.** Voice notes, audio lessons, and speech-to-text.
- **Touch-Optimised Activities.** Tap, swipe, and gesture-based interactions.
- **Vertical Video.** Content designed for vertical mobile screens.
- **One-Handed Use.** Tools and interfaces that work with one hand.

Community-Based Learning

- **Peer Teaching.** Students with devices teach those without.
- **Community Labs.** Public digital literacy spaces in libraries and community centres.
- **Mobile Training Buses.** Roving digital literacy programmes.
- **Weekend Workshops.** Intensive sessions for students without weekday access.
- **Intergenerational Learning.** Youth teaching parents/elders; create home support.

Digital Equity Considerations

- Provide multiple pathways to access digital learning (lab time, loaners, community partnerships).
- Never require personal device ownership for grades or progression.
- Offer alternative assessments for students without home internet.
- Provide data bundles or school Wi-Fi for students in need.
- Partner with telecoms for zero-rated educational content.
- Advocate for policy change to increase digital access nationwide.

Preparing for 2050: Future-Ready Skills

The 2050 economy will run on AI collaboration, distributed remote work, platform-based entrepreneurship, and continuous self-directed learning. Digital literacy means more than today's tools — it means the disposition and skills to keep up.

AI Collaboration & Augmentation

By 2050, AI will be ubiquitous. Digital literacy means knowing how to work with AI, not against it.

- **Prompt engineering** — getting AI to do what you need.
- **AI-assisted creativity** — using AI as a creative partner.
- **Critical evaluation** — knowing when AI is wrong or biased.
- **Ethical AI use** — understanding limitations and responsibilities.
- **Human-AI workflows** — combining human judgement with AI speed.

Remote Work & Digital Collaboration

The 2050 workforce is global, distributed, and asynchronous. Success requires mastering digital collaboration.

- **Asynchronous communication** — working across time zones effectively.
- **Virtual presence** — building trust and relationships remotely.
- **Digital project management** — coordinating complex work online.
- **Cross-cultural competence** — navigating global teams and norms.
- **Self-management** — discipline and productivity without physical offices.

Digital Entrepreneurship & Economic Participation

The 2050 economy is creator-driven, platform-based, and globally accessible. Digital literacy equals economic opportunity.

- **Platform economics** — understanding how digital marketplaces work.
- **Personal brand building** — marketing yourself and your skills.
- **Digital product creation** — building and selling online.
- **Monetisation strategies** — turning digital skills into income.
- **Financial literacy** — managing digital currencies and online transactions.

Continuous Learning & Adaptability

The only constant in 2050 is change. Digital literacy means learning to learn — constantly.

- **Self-directed learning** — finding and mastering new tools independently.
- **Online education** — leveraging MOOCs, YouTube, and digital resources.
- **Skill stacking** — combining multiple competencies for unique value.
- **Growth mindset** — embracing failure and iteration.
- **Metacognition** — understanding how you learn and improving it.

Digital Advocacy & Civic Participation

By 2050, democracy, activism, and civic life are digital. Citizens must engage critically and ethically.

- **Online organising** — mobilising communities for change.

- **Fact-checking** — combating mis/disinformation at scale.
- **Digital voting and governance** — participating in online democracy.
- **Algorithmic accountability** — demanding transparency from tech platforms.
- **Digital rights advocacy** — fighting for equity, access, and justice.

2050 Vision Statement

By 2050, every African learner — child or adult — has the digital literacy to participate fully in the global economy, advocate for their rights and community online, collaborate with AI as a creative partner, and contribute to a more equitable digital future. This framework is one step toward that vision.

Assessment and Progression

Assessment is performance-based, portfolio-based, and badge-based — not seat-time or standardised testing. Five progression stages from novice to expert.

Performance-Based Assessment

Students demonstrate skills through authentic tasks.

- Create a digital portfolio showcasing work.
- Complete a real-world project (research, presentation, video).
- Solve a problem using digital tools.
- Collaborate on a group digital project.
- Demonstrate safe, ethical online behaviour in scenarios.

Digital Badges & Micro-Credentials

Recognise specific competencies with stackable credentials.

- Digital Safety Badge (password security, phishing recognition).
- Content Creator Badge (video editing, graphic design).
- Collaboration Badge (shared docs, project management).
- Coding Fundamentals Badge (basic programming).
- AI Literacy Badge (prompt engineering, ethical use).

Portfolio Development

Students build cumulative digital portfolios that:

- Document progression across grade levels or adult pathways.

- Showcase best work and skill mastery.
- Reflect on learning and growth.
- Serve as evidence for college/job applications.
- Are shareable publicly or privately.

Self-Assessment & Peer Review

Learners develop metacognitive skills through:

- Self-rating against competency rubrics.
- Reflective journals on digital learning.
- Peer feedback on projects.
- Goal-setting for next learning milestones.
- A continuous improvement mindset.

Progression Model: From Novice to Expert

1. **Awareness.** Recognises the skill exists and understands its importance.
 2. **Guided Practice.** Uses the skill with support, following instructions.
 3. **Independent Use.** Applies the skill independently in familiar contexts.
 4. **Transfer & Adaptation.** Transfers skill to new contexts, adapts to new tools.
 5. **Mastery & Teaching.** Masters the skill and teaches others; innovates new applications.
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Implementation Guide

A four-phase rollout — Foundation, Skill Building, Advanced Skills, Continuous Improvement — with concrete tasks and outcomes per phase.

Phase 1: Foundation (Months 1-6)

Goal — Build Awareness & Baseline Capacity.

- Assess current digital literacy levels (students, teachers, staff).
- Audit device access and connectivity infrastructure.
- Establish digital citizenship curriculum for all age groups.
- Train teachers on mobile-first pedagogy.
- Launch student onboarding (device use, safety, platforms).
- Set up shared device systems (labs, carts, library).

Outcome. All learners have baseline digital safety knowledge and access pathways.

Phase 2: Skill Building (Months 6-18)

Goal — Develop Core Competencies.

- Integrate digital literacy into all subjects (not a standalone class).
- Launch age-appropriate skill progressions (Primary, Secondary).
- Begin adult digital literacy programmes (teachers, parents, community).
- Implement performance-based assessments and portfolios.
- Expand device access (BYOD policies, more devices, community partnerships).
- Create peer mentorship programmes (students teaching students, youth teaching elders).

Outcome. Majority of learners meet age-appropriate digital literacy standards.

Phase 3: Advanced Skills & Specialisation (Months 18-36)

Goal — Prepare for 2050 & Build Expertise.

- Introduce advanced pathways (coding, AI, digital entrepreneurship).
- Launch electives or clubs (robotics, app development, content creation).
- Connect students with global learning networks and mentors.
- Pilot AI collaboration tools and emerging technologies.
- Build digital portfolios showcasing college/career readiness.
- Expand community digital literacy to all adults.

Outcome. Students and adults are 2050-ready with specialised skills and digital confidence.

Phase 4: Continuous Improvement (Ongoing)

Goal — Sustain & Scale the Digital Literacy Ecosystem.

- Regular assessment of framework effectiveness (surveys, analytics).
- Update curriculum as technology evolves.
- Share successful practices with other schools and communities.
- Advocate for policy changes (digital access, data costs, infrastructure).
- Celebrate student and teacher digital achievements publicly.
- Contribute improvements back to this open framework.

Outcome. Digital literacy is embedded in school/community culture and continuously evolving.

Implementation Support Resources

Resource	What it contains
Curriculum Templates	Lesson plans for each age group (downloadable PDFs)
Assessment Rubrics	Ready-to-use competency checklists
Parent Guides	Helping families support digital learning at home
Teacher Professional Development	Workshop materials and online courses
Community Toolkit	Resources for launching community digital literacy programmes
Device Management Guides	Best practices for shared device models

Take the framework. Make it yours.

Download, adapt, and share. If you want help with the rollout, Nyuchi Learning is the commercial partner.

Updates and the live version: <https://bundu.org/education/digital-literacy>

About this framework

Programme. Bundu Education — a programme of the Bundu Foundation. **Audience.** Schools, institutions, universities, governments, and community programmes. **Mission.** Build at the frontier. Recognise the gap, build past it. Build for and across communities, inclusive of African languages. Disrupt to enable and guide. Prepare youth of all ages for 2050 and beyond. **Foundation research role.** The Bundu Foundation's main activity is research into infrastructure gaps in African and emerging markets. Where existing African standards apply (AU Malabo Convention, AU Child Online Safety and Empowerment Policy, A4AI 1-for-2, country DPAs and curricula), this framework adopts them. Where standards are missing, the Foundation publishes new open standards that frameworks and operators can benchmark against. Built for Africa. **Companion product.** Nyuchi Learning is the cohort-based commercial programme that helps schools and ministries roll out this framework. **Philosophy.** Ubuntu — "I am because we are."

Sources used in v2.0 (May 2026)

Connectivity, mobile economy, and affordability

- GSMA, *Mobile Economy Africa 2025* — penetration, coverage gaps, 4G/5G adoption.
- ITU statistics — internet use, urban / rural divide.
- A4AI (Alliance for Affordable Internet) — *Affordability Report*; 1 GB cost as % of monthly income.
- Statista, IDC, Counterpoint — smartphone market share (Transsion, Samsung, Xiaomi).

Mobile money

- GSMA Africa, *Mitigating common fraud risks: best practices for the mobile money industry*.
- Fintech News UAE, *Africa Mobile Money: The Big 4 and the Next 6 Challengers*.
- TechAfrica News, *Africa's Digital Progress at Risk: Mobile Fraud and the Scam Economy* (Oct 2025).

Online safety and child protection

- African Union, *Child Online Safety and Empowerment Policy* (May 2024) — the world's first continental policy.
- UNICEF + GSMA, *Africa Taskforce on Child Online Protection* (launched Oct 2025).
- Safe Online / UNICEF ESARO, *Online Risk and Harm for Children in Eastern and Southern Africa* (2023).
- WeProtect Global Alliance, *Africa Online Safety Platform*.
- INTERPOL, *2025 Africa Cyberthreat Assessment Report*; Operation Red Card 2.0 (2025–2026).
- ISS Africa, *Wangiri scam targets millions of unsuspecting Kenyans*.

Fact-checking and information integrity (African-led)

- Africa Check — pan-African, since 2012.
- PesaCheck — 12+ countries, East and West Africa and the Sahel.
- Dubawa — Nigeria and West Africa, Premium Times Centre.
- Africa Infodemic Response Alliance (WHO Regional Office for Africa).

African languages and AI

- Lelapa AI — InkubaLM (Swahili, Yoruba, isiXhosa, Hausa, isiZulu).
- Masakhane — pan-African NLP network, 48+ African languages.
- UlizaLLama by Jacaranda Health — five African languages.
- Code for Africa, *African-Language LLMs Present Major Opportunities*.

Data protection (children's data, schools)

- Country statutes: POPIA (South Africa), NDPA + NDP Act-GAID (Nigeria), Kenya DPA, Ghana DPA / DPC, Rwanda Law 058/2021 + NDGF, Uganda DPPA, POTRAZ (Zimbabwe), Egypt PDP Law 151/2020, Morocco CNDP Law 09-08.
- African Union Convention on Cyber Security and Personal Data Protection (Malabo Convention).
- TechHive Advisory Africa, *Bimonthly Updates on Privacy in Africa* (2025).

Curriculum and examinations

- WAEC, NECO, JAMB, KCSE / KNEC, ZIMSEC, NSC / Umalusi, NECTA, UNEB, REB / NESA, NaCCA — national and regional examination councils.
- National curriculum bodies: KICD (Kenya CBC), DBE / CAPS (South Africa), NERDC (Nigeria 9-3-4), TIE (Tanzania CBC), REB (Rwanda CBC), NCDC (Uganda), MoPSE (Zimbabwe Heritage-Based).

Demographics

- UN DESA, *World Population Prospects*; UNECA, *Africa's Demographic Window*; UNICEF, *Generation 2030 Africa 2.0*.
- OECD projections on working-age population growth.
- Hoover Institution, *Africa 2050: Demographic Truth and Consequences*.

Tools and platforms

- Learning Equality, Kolibri documentation and UNESCO *Financing the Digital Transformation of Education* toolkit.
- Eneza Education, Siyavula, Ubongo, eLimu, African Storybook, Bloom Library — publisher pages.
- Africa's Talking — SMS / USSD / Voice / Airtime APIs documentation.

This is not an exhaustive bibliography; it is the operational set used to write v2.0. The framework will cite additional sources as new editions land.