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Realising the potential of technology in education

EdTech in Sierra Leone: A Rapid Scan

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Country Scan

2020-06-30

DOI: 10.5281/zenodo.3903213

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About this document

Recommended citation.	Mullan, J., and Taddese, A. (2020). <i>EdTech in Sierra Leone: A Rapid Scan</i> . (EdTech Hub Country Scan). DOI: 10.5281/zenodo.3903213. Available from https://docs.edtechhub.org/lib/C5MWWQI2 Available under Creative Commons Attribution 4.0 International, https://creativecommons.org/licenses/by/4.0/ .
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Identifiers.	2405685:C5MWWQI ; 10.5281/zenodo.3903213
Internal use.	g/d/15Hxp3WILXFfL7TlxQPJTlp37qjBUwxmBPIXHwIDkeYM/edit?ts=5eecfbcf&pli=1#
Reviewed by	James Bradley, Academics Manager, Rising Academies; Preeti Dhillon, Senior Researcher, Jigsaw Consult; Joel Mitchell, EdTech Hub
Notes.	The EdTech Hub is supported by UK aid from the UK government. The views expressed are the views of the authors and do not necessarily reflect views of our donors.

1. About this scan

EdTech Hub country scans explore factors that enable and hinder the use of technology in education. This includes policies, government leadership, private-sector partnerships and digital infrastructure for education. The scans are intended to be comprehensive but are by no means exhaustive; nonetheless, we hope they will serve as a useful starting point for more in-depth discussions about opportunities and barriers in EdTech in specific countries and in this case, in Sierra Leone.

This report was originally written in June 2020. It is based primarily on desk research, with quality assurance provided by a country expert. Given how rapidly the educational technology landscape is evolving, the Hub plans to provide periodic updates. Table 1 provides a summary of the situation regarding EdTech in Sierra Leone.

Table 1. EdTech in Sierra Leone

Policies	<ul style="list-style-type: none"> • National Innovation and Digital Strategy, 2019–2029¹ • No ICT for Education Policy currently exists
Infrastructure	<ul style="list-style-type: none"> • Upper secondary schools are better equipped with technologies than primary schools, though overall absolute levels are low • 5.6% of primary schools have electricity, compared to 33.7% of senior secondary schools • 0.6% of primary schools have access to the internet compared to 7.8% of upper secondary schools • At the household level, radios and mobile phones are the most prevalent technologies. In urban areas, 93.5% of households have a mobile phone compared to 53.4% in rural areas
Partners and initiatives	<ul style="list-style-type: none"> • Government- and development-partner-supported EdTech initiatives have focused on improving education data, technology-enabled teacher education and radio education as a response to school closures during the Ebola epidemic and Covid-19 pandemic. Key international partners have included the World Bank, DFID and UNICEF. • The Directorate of Science, Technology and Innovation collaborates closely with the Education Ministry to support data-driven decision making and to help catalyse innovation. • The government has invested US\$1.5m in an outcome-based Educational Innovation Challenge Fund, which is expected to focus on EdTech interventions.

¹ Directorate of Science, Technology & Innovation (2019a), available at <https://www.dsti.gov.sl/wp-content/uploads/2019/11/Sierra-Leone-National-Innovation-and-Digital-Strategy.pdf>

COVID-19

- All schools closed on March 31, 2020, with an emergency radio education programme launched the following week
- In May 2020, the Government of Sierra Leone launched the COVID-19 Education Emergency Response Plan²

2. Country overview

Sierra Leone is a small country in West Africa. In 2018, it had a population of 7.65 million, which is increasing at a rate of 2.1% per year (UNESCO, 2020). Forty-one per cent of the population is below the age of 15 (Ibid.). The country is organised into four regional provinces. There are 13 district councils overseen by provincial authorities and six municipal councils overseen directly by the central government. At a local level, the country is organised into 149 chiefdoms. English is the official language, Krio is the lingua franca and significant minorities of the population speak Temne (37%) and Mende (31%).

Over the last 30 years, human and economic development in Sierra Leone has been constrained by conflict, disease and exposure to shifts in the price of export commodities. Between 1991 and 2002, the country was embroiled in a civil war, which left over 50,000 dead. Between 2014 and 2016, Sierra Leone was seriously affected by the West Africa Ebola epidemic, which killed more than 3,880 people. The outbreak saw all schools closed during the 2014 / 15 academic year and the country's economy contracted by more than 20%.

In 2018, Sierra Leone had a Human Development Index (HDI) of 0.438, placing it in the low human development category and positioning it at 182 out of 189 countries and territories. Average life expectancy is 58 years, and 52% of the population live below the poverty line (Ibid.). Fifty-eight per cent of the population live in rural areas, which have less access to technological infrastructure, fewer schools and lower school enrolment than urban areas.

3. Education system overview

The 2004 Education Act and the 2010 National Education Policy (which is currently under review) are the organising documents for the education sector.³ The current Education Sector Plan sets out four levels of formal education provision:

- Pre-primary education, consisting of three years of pre-school education.
- Primary education, lasting six years.
- Secondary education, which is divided into three years of compulsory junior secondary education, and for those who pass the Basic Education Certificate Examination, three years of upper secondary education. Upper secondary education

² Ministry of Basic and Senior Secondary Education (2020), available at <https://planipolis.iiep.unesco.org/en/2020/covid-19-education-emergency-response-plan-6954>

³ Ministry of Education, Youth and Sports (2010), available at <https://mbsse.gov.sl/wp-content/uploads/2020/03/2010-National-Education-Policy.pdf>

is either general education or TVET (technical and vocational education and training).

- Tertiary education, including teacher education and courses offered by universities, polytechnics and professional colleges, generally taking two to four years.

Participation in early childhood education and basic education is compulsory. The Constitution of Sierra Leone provides for “free compulsory basic education at primary and junior secondary school levels” and “free senior secondary education as and when practicable” (Government of Sierra Leone, 1991: 9). In August 2018, the government launched ‘Free Quality School Education’, a five-year initiative that sets out to make pre-primary, primary and secondary education free of charge for all pupils studying at government-approved schools (Maada Bio, 2018).

More than half of schools are operated outside of government control, with operators including religious organisations, local communities or private companies. Government schools constitute only 18% of primary schools and 10% of secondary schools (World Bank, 2019). Many non-government schools are nevertheless designated as ‘approved schools’, with a corresponding entitlement to financial support from the government. In recent years, the government has looked to regularise unapproved schools, approving those able to meet minimum standards, while aiming to close the remainder once nearby alternative provision is available (Ministry of Education, Science and Technology, 2018). As of 2019, according to the Annual School Census, 79% of primary schools, 77% of junior secondary schools and 80% of senior secondary schools are now approved.

Overall responsibility for the education system is shared between the Ministry of Basic and Senior Secondary Education (MBSSE) and the Ministry of Technical and Higher Education. Significant agencies reporting to the MBSSE, include the Teaching Services Commission, which is tasked with improving teacher management and performance.

Sierra Leone also has a separate Ministry of Social Welfare, Gender and Children’s Affairs, which works closely with the education ministries. This is a cross-cutting ministry, focused on marginalised groups such as women, people with disabilities and the elderly.

The government has substantially increased expenditure as a proportion of GDP, from 2.59% of GDP (and 12.8% of total government expenditure) in 2011 to 7.14% of GDP (and 32.47% of government expenditure) in 2018 (UNESCO, 2020). Going forward, the government has pledged to spend 21% of its recurrent budget on education.

3.1. Education sector progress and challenges

Despite high enrolment rates, the education system in Sierra Leone suffers from high levels of learner drop-out (particularly for girls) and grade repetition. Learning outcomes also require improvement.

Sierra Leone has seen a consistent increase in overall school enrolment rates, with primary net enrolment of 98% in 2016 and gross enrolment consistently in excess of 110%, reflecting high levels of grade repetition. At secondary level, enrolment rates are

substantially lower however, with gross enrolment at 41.8% in 2017 (38.3% net) (UNESCO, 2020). Girls are under-represented in senior secondary schools, with a Gender Parity Index (GPI) of 0.9, though steady progress is being made towards closing this gap. Overall enrolment rates for children with disabilities are thought to be less than 50% (Ministry of Education, Science and Technology, 2018: 14–20).

Barriers to increasing enrolment include the affordability of schooling for learners, lack of schools within a reasonable distance, overcrowding of existing school buildings and lack of adequate WASH facilities in schools. At secondary level, female retention is also affected by sexual harassment and early pregnancy and marriage. (Ibid.).

Learning outcomes are low, both in absolute terms and in comparison to other countries in the region, with the average student completing the equivalent of just 4.5 learning-adjusted school years (World Bank, 2019). At secondary level, less than 20% of pupils entered for the West African Senior School Certificate Examination receive a passing mark (Ministry of Economic Development and Planning, 2019: 42). Barriers to improving learning outcomes include insufficient textbooks and learning materials, low levels of qualifications and motivation among the teaching workforce, and a large number of unapproved schools operating outside of the purview of the Ministry. Additional challenges identified in the most recent World Bank (2019) analysis include limitations in the primary and junior secondary curriculum and limitations in management and governance capacity.

3.2. Education Sector Plan 2018–2020

Sierra Leone's third Education Sector Plan 2018–2020 (ESP) provides a transitional framework for the improvement of the country's education system (Ministry of Education, Science and Technology, 2018). The ESP identifies three intended outcomes:

1. Improved levels of service delivery
2. Improved learning outcomes
3. Improved system integrity, (i.e., a reduction in the incidence of corrupt practices by administrators, teachers and other key actors).

The objectives set out in the ESP are:

1. Improved access, equity and completion rates in the education system
2. Improved quality and relevance of the education system and its constituent programmes to attain the highest possible level of integrity and performance
3. Strengthened education system
4. Increased emergency preparedness to enable a better response to external shocks.

3.3 Medium-Term Development Plan 2019–2023

Since the production of the 2018–2020 ESP, there has been a change of government in Sierra Leone. The new government's vision for basic and secondary education is set out in

the Medium-Term Development Plan (Ministry of Economic Development and Planning, 2019: 36–45), which sets out four key targets for the sector to achieve by 2023:

1. Implement free, quality basic and secondary-school education.
2. Increase access, equity and completion rates at all levels of schooling (formal and non-formal) above the 2018 rates.
3. Improve the basic and senior secondary learning environment at all levels above the 2018 rates.
4. Review and strengthen educational systems and governance architecture for improved quality education.

In August 2018, the government launched its flagship policy, ‘Free Quality School Education’, a five-year initiative with a headline commitment to make pre-primary, primary and secondary education free of charge for all pupils (Maada Bio, 2018). The policy will also see the provision of stationery, equipment and core subject textbooks to government-supported schools, though parents and guardians are expected to cover the costs of school uniforms and the cost of repeating more than one year in each stage of schooling.

4. EdTech policy and strategy

In this section, we describe Sierra Leone’s national ICT policy and include a brief look at the ICT in education policy.

4.1. National policy

An ambitious National Innovation and Digital Strategy (2019–29) was published in 2019 (Directorate of Science, Technology & Innovation, 2019a). The strategy identifies ‘mobile-first’ as a key principle for the development of digital services, recognising that levels of mobile phone penetration are far higher than other communication technologies. It identifies that action is required to increase mobile phone penetration rates and reduce the cost of access.

Six short-term strategic areas are identified, many of which have some relevance to EdTech:

1. ‘National Digital Identities’ — an aspiration to issue and maintain digital identities for 90% of citizens. This strand will likely have implications for how data on learner and system outcomes is collected and used.
2. ‘Applied AI for Governance’ — which would see Sierra Leone providing a platform for AI / data science research to improve public services. One of the use cases listed in this strand is education: “use of AI to understand the effect of school, student and teacher attributes on learning outcomes to inform prioritisation of education interventions at all levels”.
3. ‘Infrastructure’ — including activity to improve access to connectivity.

4. 'Security' — including cybersecurity, quantum computing and development of regionally appropriate IT standards.
5. 'Entrepreneurship and Society'— including support for incubators and accelerators, R&D, and efforts to create a culture shift. For schools, it is anticipated that this may involve changes to the curriculum to include more focus on “hands-on learning, computation and coding, comprehension and communication, and critical thinking”. This area will also see the Education Ministries collaborate to develop a policy on Fourth Industrial Revolution technologies.
6. 'Organisational Architecture' — including the establishment of an Information System Authority to guide and regulate the government's digital transformation and establishment of a data protection body.

4.2. ICT in education policy

Sierra Leone currently does not have an ICT in Education policy, however, there are plans to introduce one. ICT in Education, is however, explicitly, albeit briefly, mentioned in the latest Education Sector Plan, with an emphasis on the use of technology to augment, rather than replace, current teaching and bridging the gap between well-provisioned and less-well-provisioned schools (Ministry of Education, Science and Technology, 2018: 56).

5. ICT infrastructure

At the national level, household ownership of mobile phones is moderately high (71%), though this varies significantly by location, with a forty percentage point gap in mobile phone ownership in urban and rural areas. 'Feature' phones are more prevalent than smartphones. Ninety per cent of the population live in areas with high-performance 2G mobile connectivity, though 3G (43%) and 4G (46%) coverage is more limited (GSMA, 2018). Sierra Leone was an early adopter of mobile money services, with the government actively encouraging their ongoing development.

Across all contexts, few households have access to computers, just 5.7% overall, with less than 1% ownership in rural areas. Households also have limited access to the internet (14%), though this again varies significantly between urban and rural areas (Table 1).

At the school level, upper secondary schools are much better equipped with ICT infrastructure than primary schools, though overall levels of coverage are low. Upper secondary schools are nearly 14 times more likely to have access to the internet for teaching and learning, compared to primary schools, and 6 times more likely to have access to electricity (Table 3). The 2019 Annual Schools Census indicates that 86% of schools are in areas with mobile phone network coverage.

The Medium-Term Development Plan sets out targets for the further development of digital infrastructure, including for 30% of the population to have access to broadband services by 2023 and for 80% to have access to mobile services.

Table 2. Percentage of households who own a radio, television, fixed telephone line, mobile phone, and computer, and that have access to the internet at home.⁴

Information and Communication Technology	Percentage
Radio	54.7
Television	18.2
Telephone — fixed line	0.7
Telephone — mobile	71.4
Computer	5.7
Access to the internet at home	13.8

Table 3. Percentage of urban and rural households with radio, mobile phone, computer or internet at home.⁵

	Urban	Rural
Radio	66.9	44.8
Mobile	93.5	53.4
Computer	11.6	0.8
Internet	26.3	3.7

Table 4. EdTech infrastructure in schools.⁶

Infrastructure	Percentage with access
Electricity	
Primary school	5.6
Junior high school	17.5
Senior high school	33.7
Internet for teaching and learning	

⁴ UNICEF (2017), available at

https://www.statistics.sl/images/StatisticsSL/Documents/sierra_leone_mics6_2017_report.pdf

⁵ Ibid.

⁶ UNESCO (2018), available at <http://data.uis.unesco.org/index.aspx?queryid=3483>

Primary school	0.6
Junior high school	3.0
Senior high school	7.8
Computers for teaching and learning	
Primary school	2.6
Junior high school	12.9
Senior high school	21.9

6. Key partners and initiatives in EdTech

This section looks at the work and roles and responsibilities of key partners with regard to EdTech in Sierra Leone, including government and non-governmental agencies, as well as EdTech initiatives.

6.1. Government agencies

The Directorate of Science, Technology and Innovation (DSTI) has been established as an innovation function within the Office of the President. Several of its projects are education focussed. Dr David Sengah, who as Chief Innovation Officer heads DSTI, was promoted to serve concurrently as Minister for Basic and Senior Secondary in 2019.

Many of the projects which have been pursued by DSTI and MBSSE are designed to improve the data available to decision-makers and move the Ministry towards having a “fully integrated education analytics platform” (O'Connor & Zurutuza, 2019). DSTI projects to date have included:

- development of an Education Data Hub, bringing together previously disparate datasets to inform decision-making and problem solving (Directorate of Science, Technology & Innovation, 2019);
- development of a School Optimisation Tool, which maps data on school locations and bus stops (Directorate of Science, Technology & Innovation, 2020);
- development of a new portal to streamline and digitise teacher recruitment and allocation (Directorate of Science, Technology & Innovation, 2019);
- development of the Sierra Leone Education Innovation Challenge (featured in Table 6 below).

Previous collaboration between UNICEF and the Education Ministry supported the piloting and development of the government’s Education Management Information Systems (EMIS) (Ministry of Basic and Senior Secondary Education, 2020). More recent funding from the Global Partnership for Education has supported the integration of EMIS with ‘The Situation Room’, a unit within the Ministry that tracks performance in a representative sample of

schools (Ministry of Education, Science and Technology, 2018). The World Bank has also previously supported the development of data capability through a US\$1m strand of the Revitalizing Education Development in Sierra Leone (REDiSL) programme (World Bank, 2014). In 2018, the Ministry of Finance, World Bank and DFID also collaborated on transitioning the school census to digital data collection using tablets (Namit & Mai, 2019). Table 5 describes the roles of additional government partners in EdTech.

Table 5. Key government partners in EdTech

Ministry / Agency	Roles and responsibilities in EdTech
Directorate of Science, Technology and Innovation⁷	<ul style="list-style-type: none"> Using science, technology and innovation to support the Government of Sierra Leone to deliver on the national development plan. Supporting decision-making through analysis and visualisation.
Ministry of Information and Communications⁸	<ul style="list-style-type: none"> Facilitating universal, ubiquitous and cost-effective access to information and communications infrastructure and services throughout the country. Promoting the utilisation of ICT in all spheres of life. Formulating and implementing information and communications technology policy.
Teacher Services Commission	<ul style="list-style-type: none"> Licensing, recruitment, posting, induction and development of teachers in government and government-supported schools. A key partner in the development of a digital teacher recruitment platform (see above) and future World Bank-funded technology-enabled teacher CPD programme (see Table 6 below).
Universal Access Development Fund (UADF)⁹	<ul style="list-style-type: none"> Promoting universal access to IT and broadband services, including through developing the fibre, mobile phone and broadband networks. Running Schools ICT Centres programme, which installs computer labs in secondary schools and an e-libraries programme, providing infrastructure and capacity building (Universal Access Development Fund, 2020).
Sierra Leone Cable Ltd (SALCAB)¹⁰	<ul style="list-style-type: none"> Government-owned infrastructure company, with a mandate to improve digital connectivity, starting with schools and health facilities.

⁷ DSTI | Home (2020), available at <https://www.dsti.gov.sl/>

⁸ Ministry of Information and Communications | Home (2020), available at <https://mic.gov.sl/>

⁹ Universal Access Development Fund | Home (2020), available at <https://uadf.gov.sl/>

¹⁰ SALCAB | Home (2020), available at <https://www.salcab.sl/>

6.2. Non-governmental agencies

The Education Ministry has implemented several initiatives with digital components with the support of development partners, particularly the World Bank, DFID and UNICEF. Smaller-scale and pilot projects have also been implemented by NGOs including World Reader, Commonwealth of Learning and CAUSE Canada. Table 6 lists key funding and implementing partners alongside the initiatives they are supporting.

6.3. EdTech initiatives

EdTech initiatives have been in three main areas. Firstly, as noted in 6.1 above, there has been sustained investment in activities to improve the data available to the Ministry to inform educational interventions. Secondly, a number of initiatives have been focused on the use of technology to deliver teacher education.

Table 6. Recent EdTech initiatives in Sierra Leone.

Initiative	Details
Sierra Leone Education Innovation Challenge¹¹	<p>Overview: Programme will set target literacy and numeracy learning outcomes in schools needing additional support. Innovative interventions will be implemented by non-state providers using an outcomes-based payment model (with up to US\$20m available from government and donors).</p> <p>Target group: Learners in primary schools, particularly in rural areas.</p> <p>Technology: Not yet finalised, but Phase II of the programme likely to include radio, TV, SMS, low-data mobile delivery and potentially tablet access. Phase II has been focused on distance learning and EdTech in light of the Covid-19 pandemic.</p> <p>Reach / scale: 500 schools, 250,000 pupils in Phase II, country-wide in Phase III.</p> <p>Implementing organisations: Education Outcomes Fund, Tony Blair Institute for Global Change. Phase I partners are Save the Children, Rising Academy Network, EducAid, National Youth Awareness Forum, Sierra Leone and World Vision.</p> <p>Government partners: Ministry of Basic and Senior Secondary Education; Directorate of Science, Technology and Innovation.</p> <p>Status of implementation: Phase I Pilot running in 2019 / 20. Phase II scale-up from September 2020. Phase III National</p>

¹¹ Sierra Leone Education Innovation Challenge (2019), available at <https://www.dsti.gov.sl/sierra-leone-invests-1-5-million-to-bring-education-innovation-to-schools-for-better-learning-outcomes/>

	scale-up from 2023.
Sierra Leone Free Education Project¹²	<p>Overview: A major strand of this US\$86m World Bank-led programme is a US\$19m investment in developing and delivering a scalable technology-enabled, continuous, in-service teacher training programme.</p> <p>Also includes data capacity-building support for the Ministry and support for the use of tablets to conduct an Annual School Census.</p> <p>Target group: Primary school teachers.</p> <p>Technology: Solar-powered tablets.</p> <p>Reach / scale: Country-wide.</p> <p>Implementing organisations: World Bank. Co-financing from DFID, Irish Aid and EU.</p> <p>Government partners: Teacher Services Commission, Ministry of Basic and Secondary Education.</p> <p>Status of implementation: Pipeline. 2019–24.</p>
Rising On Air¹³	<p>Overview: Radio programme that provides lessons scripts and re-recorded audio content designed specifically for radio. Radio content is supplemented by complementary SMS content aimed at parents, and phone calls aimed at parents and students (Lamba and Reimers, 2020).</p> <p>Target group: Parents and students (5 levels from early childhood education through to senior secondary school)</p> <p>Technology: Radio, SMS, audio files, phone calls</p> <p>Reach / scale: International — with an aspiration to reach 10 million learners. Materials are uploaded online and free to re-use and adapt.</p> <p>Implementing partners: Rising Academies, local radio stations.</p> <p>Government partners: Ministry of Basic and Secondary Education.</p> <p>Status: 2020 –</p>

¹² World Bank (2019), available at <http://documents1.worldbank.org/curated/en/711051560267527870/pdf/Project-Information-Documents-Sierra-Leone-Free-Education-Project-P167897.pdf>

¹³ Rising Academies (2020), available at <https://www.risingacademies.com/onair>

<p>World Reader¹⁴</p>	<p>Overview: Three small-scale projects making e-Readers loaded with content available to primary school pupils, community members.</p> <p>Target group: Primary school pupils.</p> <p>Technology: eReaders.</p> <p>Reach / scale: c. 700 pupils across 3 projects. A further 3,500 Sierra Leoneans access World Reader content via mobile phones.</p> <p>Implementing organisations: World Reader, Street Child.</p> <p>Government partners: n/a</p> <p>Status of implementation: 2015–Present.</p>
<p>Integrated In-Service Teacher Training Project for Junior Secondary School Teachers¹⁵</p>	<p>Overview: Aims to improve teacher quality through “scalable technology-enabled, school-based teacher development”. Activity in Sierra Leone has principally involved capacity-building and resource development. This has included training workshops, creation of a community of practice for participants and development / contextualisation of a toolkit and implementation guide.</p> <p>Target group: Teachers in junior secondary schools.</p> <p>Technology: Open Educational Resources (OERs).</p> <p>Reach / scale: 12 schools.</p> <p>Implementing organisations: Commonwealth of Learning, Freetown Teachers College.</p> <p>Government partners: Former Ministry of Education, Science and Technology.</p> <p>Status of implementation: 2018–Present.</p>

¹⁴ Worldreader | Sierra Leone (2020), available at <https://www.worldreader.org/where-we-are/sierra-leone/>

¹⁵ Commonwealth of Learning (2020), available at [http://oasis.col.org/bitstream/handle/11599/3546/2018-2020 Africa Sierra Leone Country Highlights.pdf?sequence=1&isAllowed=y](http://oasis.col.org/bitstream/handle/11599/3546/2018-2020%20Africa%20Sierra%20Leone%20Country%20Highlights.pdf?sequence=1&isAllowed=y)

<p>Mobile Learning Lab¹⁶</p>	<p>Overview: Makes learning resources / content available to off-grid communities without electricity and internet.</p> <p>Target group: Grade 4, 5 and 6 students in rural northern Sierra Leone (Koinadugu district).</p> <p>Technology: Tablets, solar charging system, RACHEL-Plus rechargeable server, OERs.</p> <p>Reach / scale: Five communities, 750+ pupils (pilot project).</p> <p>Implementing organisations: 60 million girls Foundation, CAUSE Canada.</p> <p>Government partners: None.</p> <p>Status of implementation: 2013–2018</p>
<p>Leh Wi Learn - Sierra Leone Secondary Education Improvement Programme¹⁷</p>	<p>Overview: £62.5m DFID-funded programme focused on improving attendance and learning outcomes for girls and children with disabilities in government secondary schools. The programme has seen new lesson plans and textbooks designed and widely disseminated (Ministry of Basic and Senior Secondary Education, 2020).</p> <p>Target group: Girls and children with disabilities in secondary schools.</p> <p>Technology: Tablets (as a management tool), Radio.</p> <p>The open-source Tangerine platform has been used to collect data on school performance, as an input into planning and policy development.</p> <p>Another component of the programme has seen the distribution of 2,640 wind-up radios pre-loaded with lessons on gender, adolescence, sexual and reproductive health and reporting violence in schools.</p> <p>Reach / scale: Country-wide.</p> <p>Implementing organisations: UK Department for International Development, UNICEF, Cambridge Education, PwC, International Rescue Committee, World Vision.</p> <p>Government partners: Ministry of Basic and Senior Secondary Education.</p> <p>Status of implementation: 2016–2021.</p>

¹⁶ 60 Million Girls (2018), available at <https://60millionsdefilles.org/en/rd/evaluation-report/>

¹⁷ Ministry of Basic and Senior Secondary Education (2020), available at http://www.education.gov.sl/LeWeLearn_Page/LeWeLearn_index.aspx

In response to the Ebola epidemic in 2014–2016, Sierra Leone developed and deployed a system of radio education to keep pupils learning while schools were closed. Similar efforts have been deployed in response to Covid-19-related school closures.

Box 1. Radio Education during the Ebola Crisis

The West Africa Ebola epidemic of 2014–16 saw the closure of all of Sierra Leone's schools for a full academic year. The government commissioned an Emergency Radio Education Programme — broadcasting half-hour programmes each weekday in maths, English and civics. To improve the reach of the programme, UNICEF distributed 25,000 radios to poorer communities, though in some rural areas access was limited due to lack of radio signal.

Radio education was adopted by other organisations delivering education programmes in Sierra Leone. The 'Getting Ready for School Project', funded by Comic Relief, developed trilingual radio programmes, aimed at three age groups and covering self-esteem, literacy, numeracy, health education and PSHE. Uptake was encouraged through the distribution of wind-up radios and training facilitators to host listening groups (Barnett et al., 2018).

Similar efforts have been deployed in response to Covid-19-related school closures.

Box 2. The Government of Sierra Leone education sector response to Covid-19

On March 19, before the first case of Covid-19 in Sierra Leone, the Government announced that all schools should close by March 31.

A Covid-19 education response plan setting out the actions to be taken by Government and Education Development Partners was published in May 2020 (Ministry of Basic and Senior Secondary Education, 2020). The plan has four pillars:

1. Communications and Social Mobilisation (including awareness-raising)
2. Continuous Distance Learning
3. School Reopening Readiness
4. Operations, Planning and Policy

Drawing on experience from the Ebola pandemic, the week after schools closed, an emergency radio education programme was launched, broadcasting five 30-minute episodes per week covering core academic subjects. The government is planning to increase the reach of these broadcasts to the substantial minority of households without a radio by installing radio transmitters in rural areas without coverage and distributing solar-powered radios. There are plans to supplement the radio broadcasts with mobile apps, printed packets of materials for pupils with no access to technology, and TV, SMS, USSD and web-based activities.

Alongside this, teacher training covering digital literacy, digital lesson delivery and accelerated learning will take place through WhatsApp, SMS, TV, radio and online platforms to help the workforce to adapt (ibid).

The Ministry of Basic and Senior Secondary Education has developed an e-learning platform on the Ministry website — containing downloadable maths and English lesson plans and pupil handbooks for primary and secondary education, lesson plans for pre-primary education, and links to other online learning resources.

The mobile network operator Orange has partnered with MBSSE to allow citizens to access a range of educational sites on their network without charge (Orange, 2020).

7. Looking Ahead

There is a high level of political commitment, from the President down, to improving the education system and harnessing the potential of digital technology. Within the National Development Plan, the Government has recognised the value that digital can add to efforts to stimulate economic growth, while the launch of the flagship Free Quality School Education Initiative was one of the first acts of the current government.

Existing large-scale EdTech initiatives appear to be well-integrated within wider, system-reform programmes. There are, however, significant constraints to successful use of EdTech in Sierra Leone — principally, poor infrastructure (with low levels of technological penetration), and the limited experience of the teaching workforce in using technology in teaching and learning.

Current, ongoing work to develop a new Education Sector Plan for 2021–2025 and refresh the 2010 Education Policy (as well as the mooted development of an ICT in Education Policy) provide important opportunities to set a framework for the effective use of EdTech to improve learning outcomes and system capacity in Sierra Leone.

8. Further reading

- Kaye, T., Groeneveld, C., Moss, C., & Haßler, B. (2020). *Nepal “Ask me anything” Session: Responses to audience questions* (EdTech Hub Helpdesk Response No. 13). EdTech Hub.
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