

HELPDESK RESPONSE 36

Blended and Hybrid Learning Initiatives

A curated list for El Salvador

Date September 2022

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DOI 10.53832/edtechhub.0105



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Recommended citation

Villavicencio, X., & Coflan, C. M. (2022). *Blended and Hybrid Learning Initiatives: A curated list for El Salvador* (Helpdesk Response 36). EdTech Hub. <https://doi.org/10.53832/edtechhub.0105>. Available at <https://docs.edtechhub.org/lib/BDT76583>. Available under Creative Commons Attribution 4.0 International, <https://creativecommons.org/licenses/by/4.0/>.

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EdTech Hub is supported by UK aid (Foreign, Commonwealth and Development Office), Bill & Melinda Gates Foundation, World Bank, and UNICEF. The views expressed in this document do not necessarily reflect the views of UK aid (Foreign, Commonwealth and Development Office), Bill & Melinda Gates Foundation, World Bank, and UNICEF.

Acknowledgements

This report was commissioned by UNICEF and produced under UNICEF and EdTech Hub's global partnership. Many thanks to UNICEF LACRO and UNICEF El Salvador colleagues, including MiRi Seo, Maria Jose Velasquez Flores, Marta Navarro, Marta Isabel Gomez and Jaime Ayala for their support and input to develop this report.

About the EdTech Hub Helpdesk

The Helpdesk is the Hub's rapid response service, available to FCDO advisers and World Bank staff in 70 low- and lower-middle-income countries (LMICs) and UNICEF regional and country offices. It delivers just-in-time services to support education technology planning and decision-making. We respond to most requests in 1–15 business days. Given the rapid nature of requests, we aim to produce comprehensive and evidence-based quality outputs, while acknowledging that our work is by no means exhaustive. For more information, please visit <https://edtechhub.org/edtech-hub-helpdesk/>

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Abbreviations and acronyms

DE	Department of Education
ICT	Information and communications technology
LMIC	Low- and middle-income countries
MoE	Ministry of Education
SMS	Short Message Service

1. Purpose of the document

This document was produced in response to a request from the UNICEF country office and Ministry of Education team of El Salvador that was submitted to the EdTech Hub Helpdesk in November 2021. The UNICEF team requested a curated list of global blended and hybrid initiatives with a focus on initiatives that have used a multimodal strategy, highlighting effective and ineffective practices.

[Section 2](#) provides definitions of key terms used in this document, including ‘blended’ and ‘hybrid’ learning. [Section 3](#) gives background on the education and ICT situation in El Salvador, as well as why a multimodal approach is relevant to this context. [Section 4](#) of this document covers a list of relevant initiatives, and lastly, [Section 5](#) summarises cross-cutting key takeaways based on the many initiatives analysed.

This report does not aim to cover every leading and innovative blended / hybrid initiative with relevance to the Salvadoran context. Rather, it presents a list of curated resources with examples of challenges, lessons learned, and teacher training approaches that can be used as a guide when designing a multimodal strategy for the education sector.

2. Definitions and key features of blended and hybrid learning

There are various definitions of blended and hybrid learning. Below we examine these variations and set out the definitions that we use in this document.

Historically, the term **blended learning** has been used to refer to “a combination of in-person and digital learning experiences that are generally delivered as a part of a *physical experience in a classroom*” ([↑IADB, 2020](#)). However, during the Covid-19 pandemic, the term ‘blended learning’ has been used interchangeably with ‘hybrid learning’ to refer to any combination of in-person and remote learning ([↑Munoz-Najar et al., 2021](#)). For the purposes of this report, we adopt the former definition of blended learning as a combination of in-person and digital learning that typically takes place in a classroom setting.

There is more consistency in the use of the term **hybrid learning**, which typically refers to a combination of in-person and remote learning experiences, with the latter often being facilitated through the use of technology ([↑Munoz-Najar et al., 2021](#), [↑IADB, 2020](#)). We adopt this definition of hybrid learning for the purposes of this report.

[↑Barron et al. \(2021\)](#) identify distinctive features of hybrid learning, including time, physical space, direction of communication, and level of participation.

In terms of time, hybrid learning can occur **synchronously**, meaning ‘in real time’ or ‘at the same time’, or **asynchronously**, which refers to activities that occur at different times and sometimes sequentially.

Space or location is also a defining characteristic of hybrid learning, which, in the definition we have adopted, involves a combination of face-to-face and remote learning. **Face-to-face** or **in-person** refers to teaching and learning activities that take place with students and teachers in the same space, whereas **remote activities** are those that take place with two or more people physically apart in different locations.

The **direction of communication** is also important. The communication that takes place in hybrid learning can be one-way, bi-directional, or multi-directional. **One-way communication** usually describes communication in which the teacher is delivering lesson content to the student, but there is no opportunity for the student to communicate back to the teacher. This often

describes traditional broadcast media, such as television or radio, if it is not supplemented with other means of communication or interaction.

Bi-directional communication typically takes place when the teacher communicates to the student (as the first direction) and the student communicates back to the teacher (second direction).

Multi-directional communication occurs when teachers communicate with students and when students are able to communicate with the teacher as well as their peers.

Finally, **levels of participation** in hybrid learning can be divided into three subcategories. '**No participation**' describes a situation in which an individual is learning alone without interaction with others. '**Limited participation**' describes a situation where interaction with others is limited, structured or controlled. '**High participation**' describes a situation in which active and dynamic exchange with others is regular and essential.

3. Education and ICT infrastructure in El Salvador

In this section, we provide some background on the education and ICT situation in El Salvador, as well as why a multimodal approach is relevant to this context.

3.1 Education

The Covid-19 pandemic that began in 2020 led to the closure of educational institutions around the world, forcing countries to opt for innovative teaching and learning alternatives that many students, teachers, and parents were unfamiliar with, especially in low-income countries.

As of October 2021, according to [UNICEF \(2021\)](#), El Salvador was part of a group of countries whose schools remained ‘partially closed’, even after the Government decided to reopen schools in April 2021. As many as 126 schools were ‘fully closed’ for a period due to health and safety concerns related to the pandemic, while 5,026 schools remained open.

As part of the education strategy to address the quarantine and closure of schools, El Salvador’s Ministry of Education, with support from UNICEF, started acquiring computers, improving connectivity in schools, implementing a multimodal education system, and generating digital content. The ministry’s aims for teacher training included developing digital skills and the prevention of online bullying, also taking into account socio-emotional education ([UNICEF, 2021](#)).

The set of actions mentioned above is part of the programme called ‘Enlaces con la Educación’ or ‘Education Links’, which aims to “universalise access to technological resources as a support mechanism for teachers and students in order to achieve quality and meaningful learning from pre-primary school to secondary education, with relevant and inclusive pedagogy and curriculum” ([MINEDUCYT, 2020](#)).

This programme consists of four components ([MINEDUCYT, 2020](#)):

1. Strengthening and development of competencies at all levels for students in the public sector education system.
2. In-service teacher training in digital skills and technological tools.
3. Provision of technological resources and access to internet connectivity.
4. Technical support.

As indicated in [MINEDUCYT \(2020\)](#) Enlaces con la Educación aims to provide multimodal education, which consists of articulating and integrating various modes of teaching such as face-to-face, virtual, offline or online, as well as the use of e-learning and m-learning platforms. In addition, with the purpose of providing education to students whose access to computers or smartphones is limited, alternatives such as the delivery of printed educational materials, and broadcasting content via radio and television (low-tech) are also considered.

3.2 Importance of multimodal, blended, and hybrid approaches

The El Salvador Ministry of Education is aware that while distance education was a response to the Covid-19 health emergency, the use of technology in education is here to stay. In addition, reaching as many students and teachers as possible in the country is also a priority. In this context, a strategy for the implementation of multimodal education is necessary.

One component of the multimodal strategy aims to improve the pedagogical and digital skills of teachers, who have had to adapt to new ways of working. Now that schools are reopening progressively, teachers need to strengthen their teaching methods to become comfortable with the use of a variety of tools and technological platforms.

In addition to supporting teachers to develop digital skills, teachers also need to be equipped to support their own socio-emotional development as well as that of their students, as everyone was affected by the pandemic and related school closures.

Working and collaborating with the teaching staff is the technical staff, who become more relevant in this multimodal strategy, as they are responsible for adapting content so that it is suitable for different modalities such as radio, TV, or smartphone technology.

Going forward, virtual education will play a central role, thanks to the government, significant investment in the acquisition of computers, tablets, and supportive devices for students and teachers with SEND. Nonetheless, many teachers and students continue to experience difficulties accessing the internet, either due to a lack of connectivity, equipment, or digital skills. For these reasons, a multimodal education strategy that includes media such as television and radio is essential to promote inclusion.

3.3 ICT infrastructure

Given that the educational programme ‘Enlaces con la educación’ seeks to implement a multimodal strategy, it is important to understand the national context including ICT infrastructure and connectivity challenges. Given the programme’s focus on using low-tech modalities to reach users as needed, the consumption habits of broadcast technologies such as radio and television are also included. This information helps contextualise the range of available technology options that could be used for educational purposes.

With a population of 6.5 million people, the following table shows the number of fixed, mobile and broadband subscriptions in El Salvador.

Table 1: *Fixed and mobile subscriptions in El Salvador. Source:* ([↑World Bank, 2019](#); [↑Figueroa, 2021](#))

Technology	Total subscriptions	% of the total population
Fixed Telephone subscriptions	893,630	13.84%
Fixed broadband subscriptions	525,088	8.07%
Mobile broadband subscriptions	2,700,000	43%
Mobile cellular subscriptions	10,396,786	161%

As seen in [Table 1](#), the highest figure is in mobile subscriptions, reaching 161%, which suggests that some individuals have more than one mobile subscription. According to the Global Systems for Mobile Communications Association ([↑GSMA, 2018](#)), 95% of El Salvador’s population is covered by 3G. In contrast, however, mobile internet usage is around 43%, which means that despite high connectivity, more than 50% of Salvadorans do not have access to it, suggesting a wide demand gap.

The devices most commonly used to access the internet are mobile phones and the least used are tablets, as shown in [Table 2](#).

Table 2: Percentage of use of devices to access the internet in El Salvador during the Covid-19 pandemic. Source: (†Carballo & Marroquín, 2020)

Mobile	Laptop	Smart TV	PC	Tablet	Others
95.7%	45.3%	25.4%	23.6%	14.9%	1.2%

During the Covid-19 pandemic, use of the internet and digital social networks grew rapidly. This may have been due to the rise of home offices and the substitution of face-to-face classes by online methodological strategies, as indicated by †Carballo & Marroquín (2021).

During the pandemic, WhatsApp was the most widely used social media platform, followed by Facebook and YouTube.

Table 3: Percentage of use of social media platforms during the Covid-19 pandemic in El Salvador. Source: (†Carballo & Marroquín, 2021)

Whatsapp	Facebook	YouTube	Instagram	Twitter	TikTok
90.5%	85.2%	69.9%	60.8%	41%	23.7%

Given that mobile and fixed internet coverage in El Salvador is concentrated in particular populated areas, it is important to understand the usage patterns of other technologies such as radio and television.

According to †Carballo & Marroquín (2021), in terms of low-end technologies, Salvadorans consumed more open TV content than radio in 2020.

Table 4: Consumption of radio and television content during the Covid-19 pandemic in El Salvador (%). Source: (†Carballo & Marroquín, 2021)

Device	2020
Radio	43%
Television	63%

4. Examples of effective hybrid learning initiatives

In this section, we present a summary of the inclusion criteria used to compile the list of hybrid learning programmes agreed on with the Ministry of Education and UNICEF. Also, we present a short list of five hybrid learning programmes, indicating their main features as well as a brief description of their work.

4.1 Inclusion criteria

We undertook desk research to identify examples of hybrid learning initiatives to inform related plans and programming in El Salvador. We used the following criteria to gather our list of initiatives:

- Programmes targeting mainly pre-primary and primary education (although major programmes focusing on all levels were also considered).
- Programmes highlighting effective practices¹ in blended and hybrid learning.
- Programmes focusing on blended and hybrid learning with special attention given to how teachers and key staff should adapt to multimodal learning and the support they need to implement it—.
- Initiatives considering a multimodal approach, particularly those focusing on low-tech interventions (TV and radio).
- Initiatives from countries with differing levels of access to ICT devices.
- Initiatives that use Google Classroom.

We identified ten hybrid learning initiatives with key features relevant to these criteria. To access the full mapping of initiatives, please click [here](#).

4.2 Hybrid learning examples

[Table 5](#) below includes five of the initiatives that meet most of the criteria specified in [Section 4.1](#) and that had lessons relevant to the El Salvador context.

The initiatives presented below are categorised in the leftmost column of the table according to the categories outlined by [Barron et al. \(2021\)](#) and

¹ The [detailed mapping of initiatives](#) covers negative and mixed results from programmes.

introduced in [Section 2](#). The categories are designed to help facilitate an easy understanding of the scope of each initiative.

Table 5. *List of initiatives*

Initiative	Analysis
<p>Bridge/SPARKS</p> <p><i>Time: Synchronous and Asynchronous</i></p> <p><i>Space: Hybrid</i></p> <p><i>Direction: Bi-directional</i></p> <p><i>Participation: High</i></p>	<p>Location: South African cities</p> <p>Grades: Pre-primary and primary</p> <p>Devices: Chromebooks</p> <p>Description: Bridge/SPARKS is a network of schools. Its education model uses a combination of direct classroom instruction and technology-based learning where data from each child is fed back to the teacher.</p> <p>Teacher training:</p> <p>The programme has ‘blended learning facilitators’. They are staff members who facilitate online learning, working with specialised subject teachers to adapt their lesson plans.</p> <p>‘Specialised subject teachers’ are consulted to ensure a focus on depth rather than breadth.</p> <p>Key features:</p> <ul style="list-style-type: none"> ■ Every step of implementation is in-house. ■ Technology unburdens teachers of a range of administrative tasks. ■ Solid connectivity and good infrastructure are essential. ■ Students have control over part of their learning. ■ Technology supports efficiency and transparency.
<p>Digital Educational Learning Initiatives</p> <p>DELIMa</p>	<p>Location: Malaysia</p> <p>Grades: Secondary</p> <p>Devices: Laptops/Computers</p>

Initiative	Analysis
<p>Time: Synchronous and Asynchronous</p> <p>Space: Hybrid</p> <p>Direction: Bi-directional</p> <p>Participation: High</p>	<p>Description: DELIMa is an online platform that offers all the applications and services required by teachers and secondary school students within the Malaysian school system. It includes digital learning technologies and resources such as Google Classroom, Microsoft O365 and Apple Teacher Learning Center.</p> <p>Teacher training: Nested within DELIMa is the platform Komuniti Guru Digital Learning, which translates as ‘Teacher Digital Learning Community’. This platform aims to equip teachers with the skills and knowledge required to deliver distance classes effectively and efficiently.</p> <p>The platform includes steps that teachers can follow to build online learning resources using Google’s educational products.</p> <p>The programme consists of a five-module online teacher training course that guides teachers to build and manage online classes using Google Education products such as Google Classroom, Google Docs, Google Slides, and Jamboard. It includes notes, video tutorials, and quizzes on how to plan, build and launch digital content for remote teaching and learning.</p> <p>Key features of the teacher learning community</p> <ul style="list-style-type: none"> ■ Prioritises consultation with teachers. ■ Leverages social media to promote quick uptake. ■ Ensures accessibility and inclusion, providing accessibility features allowing teachers and children with hearing or visual impairments to participate fully in the programmes ■ Provides a menu of technologies. ■ Supports national leadership. ■ Builds in flexible and interactive learning.

Initiative**Analysis**

- Leverages partnerships and investments.
- Invests in people as well as technology to keep a focus on learning.

Plan Ceibal*Time: Synchronous**Space: Hybrid**Direction: Multi-directional**Participation: High***Sources:**

†UNESCO, 2018

Location: Uruguay**Grades:** Primary and Secondary**Devices:** Laptops, radio and TV

Description: Plan Ceibal provides programmes, educational resources, and teacher training courses that transform ways of teaching and learning. It helped provide education continuity during the Covid-19 pandemic by combining teaching methods through media such as television, radio, videoconferencing, and online resources within the plan called 'Ceibal en casa' (Ceibal at home).

Teacher training:

The Open Educational Resources (OER) repository, or RedREA in Spanish, is part of Plan Ceibal and a programme which brings together multimedia educational materials for use in different contexts. RedREA offers short online courses promoting the sharing and modification of these resources according to the needs of each teacher.

Plan Ceibal is planning to have a 'Platform Training team' that advises teachers on the use of many resources through support plans and courses on educational trends favouring the incorporation of platforms into the education system.

Initiative**Analysis**

Plan Ceibal offered over 4,000 training sessions to aspiring teachers (pre-service) between 2012–2018. It consisted of blended programmes, which involved a face-to-face course at the beginning of the year, with teachers receiving guidance while working as practitioners in schools for the rest of the year. The training included topics such as how to integrate technology in the classrooms, project-based learning, school planning, and how to integrate families into the digital education experiences.

Key features:

- The inclusion of technology in schools is accompanied by an educational proposal aligned to the new requirements for teachers, students and their families. Technological tools can help enrich learning but they need to be integrated with the idea of ‘learning by doing’, where the engagement of the community is also considered critical.
- Involves parents, teachers, students, and educational authorities in their proper and responsible use of tools. An important part of the cultural transformation within the educational system is grounded on having different contexts and spaces (physical and virtual) for sharing and transferring good practices and positive experiences
- Use of a multimodal approach to achieve greater accessibility and reach.
- Diversified means of evaluation and monitoring. The generation and promotion of independent research are considered an opportunity for analysis, discussion, and knowledge transfer that can support decision-making and help understand the use of digital technologies in training.

Initiative	Analysis
Education Media Center <i>Time: Asynchronous</i> <i>Space: Remote</i> <i>Direction: Bi-directional</i> <i>Participation: Limited</i>	<p>Location: Brazil (São Paulo)</p> <p>Grades: Pre-primary, Primary and Secondary</p> <p>Devices: Smartphones, TV, printed textbooks</p> <p>Description: This institution produces educational content that can be accessed through an app. It also broadcasts educational content on open TV, offering video classes exclusively on four channels, and provides printed textbooks for students who are hard to reach. The Education Media Center was set up quickly because of a previous experience that broadcast live classes on TV to small villages.</p> <p>Teacher training:</p> <p>Each teacher is trained to create a virtual classroom using Google Classrooms and is asked to report challenges if they cannot communicate with a particular student via email.</p> <p>Pedagogical advisors are hired to review teachers' virtual classroom plans and give feedback to teachers before broadcasting a class. This helps improve the quality of the content.</p> <p>Key features:</p> <ul style="list-style-type: none">■ Strong political will and leadership are key to enabling the mobilisation of resources and rapid implementation.■ In order to reach the maximum number of students and their families and school districts, multimodal learning activities are offered.■ Established honest and frequent communication with all stakeholders, which is vital to support the technical and emotional demands of the rapid changes imposed by the Covid-19 pandemic.

Initiative**Analysis**

- Creation of a Google email account for every student and teacher proved to be key in reaching members of such a large school system.
- Developed partnerships with companies and non-profit organisations, which is strategic to avoid delays due to bureaucratic procedures.

The Department of Education relies on pre-existing partnerships like the Pact 'Compromiso por Sao Paulo' established in 2011. This pact brings together different civil society sectors around a common agenda for improving public education in the state.

- Foundations have already been funding projects, such as the design of a proposal for a new teacher's career and professional evaluation, the use of technology for learning, etc.
- Non-profit partners continue to help fund the production of online educational content, free access to paid learning platforms, and hiring education experts in learning assessments.
- The government has re-negotiated pre-existing contracts with commercial suppliers, such as for school meals and transportation

Rising on Air

Time: Asynchronous

Space: Remote

Direction: Bi-directional

Participation: Limited

Location: West Africa

Grades: Primary and Secondary

Devices: Radio, mobile phones (SMS)

Description: The Rising Academy Network (RAN) is a network of schools that uses a blended learning approach, combining simple, low-cost technology with modern, effective teaching practices. RAN adapted its curriculum in response to school closures and created a radio programme called Rising on Air.

Initiative**Analysis**

Rising on Air is a programme that uses radio scripts and SMS content for parents. The project was implemented swiftly due to pre-existing relationships with the education ministries in the West African countries where RAN operates.

Teacher training:

Teachers use the Rising on Air teacher professional development scripts as the basis for their own virtual teacher professional development content.

Teachers also use Chalkboard Education, an online learning management system, to share content they have developed across five African countries.

Older students in the community take on a 'co-teacher' role. This approach has led to a rise in informal coaching touchpoints among students, where co-teachers support younger students even outside their formal co-teacher role.

Key features:

- Recognise that trying to cover too many subjects or individual grade levels quickly drives up the cost and complexity of developing and recording content.
- Focus on foundational literacy and numeracy skills that promote access and equity.
- Radio broadcasts, which can be an opportunity to address other challenges that families are facing.
- Use of existing content and supplement from other organisations.
- Use of other scalable, low-tech strategies to make radio more effective, as radio alone is unlikely to be effective.
- Development and testing of content to determine what works for their audience.
- Monitoring progress weekly to allow for course correction as needed.

Initiative

Analysis

- A range of distribution channels is considered once the content is developed and recorded, like audio on WhatsApp or printed textbooks.
-

5. Recommendations

In this section, we propose a shortlist of recommendations, based on our analysis of the initiatives mapped and considering those that are potentially more relevant to the Salvadoran context. We also include examples of programmes that already apply some of our recommendations.

1. **Prioritise consultation with teachers**

Develop a specific proposal for how teachers can meet new requirements to integrate technology into their practice.

For Plan Ceibal, having physical and virtual spaces where teachers can share and transfer good practices, positive experiences, and concerns has helped teachers understand what approaches have worked best or not worked as planned.

2. **Build long-term partnerships**

The initiatives profiled here, including DELIMa and Education Media Center, highlight the relevance of creating partnerships with the government and private and third sectors (NGOs). The strengths of each partner can be used to facilitate the successful implementation of hybrid learning.

3. **Ensure accessibility and inclusion**

Students who speak native languages and the ones who present any kind of disabilities, such as visual or hearing impairments, should be included in any blended or hybrid educational strategy. Initiatives like DELIMa, Plan Ceibal and Aprendo en casa have adapted most of their resources and tools to be used by these students.

4. **Use a multimodal approach**

In contexts where not all students and teachers have access to the internet to engage in virtual education, it is highly recommended to consider alternative modalities to bring education as close as possible to those students who are hardest to reach.

All five of the programmes shared above have broadcast educational content through TV and radio. Given that mobile internet subscriptions tend to be higher than fixed internet, as is the case in El Salvador, some initiatives opt to use SMS, WhatsApp or social media platforms to reach more students.

5. **Monitor and evaluate**

To understand whether and how hybrid learning is working, it is important to gather, analyse, and use data. The initiatives above highlight the importance of using data to track changes to implementation in order to make quick corrections along the way.

Examples: Bridge/SPARKS, Plan Ceibal, Aprendo en casa, and Rising on Air,

In the case of Aprendo en casa the 'Monitoring and Evaluation Unit' from the Ministry of Education (MINEDU) partnered with the research organisation Innovations for Poverty Action (IPA) to begin monitoring levels of adoption and satisfaction of the principals, teachers, and families through regular phone calls ([↑Munoz-Najar, 2020](#)).

Rising on Air monitors progress daily. This programme develops and tests content to determine what works for its audience and makes corrections as needed.

Edo-BEST has been monitoring the effectiveness of the programme prior to Covid-19. A dedicated quality assurance team collects and analyses data to make evidence-based decisions, and provides feedback for continuous improvement of the teaching-learning processes ([↑Munoz-Najar & Osa Oviawe, 2020](#)).

Note to the reader

The findings from this report were used to develop a webinar series on blended and hybrid learning for UNICEF El Salvador and the El Salvador Ministry of Education. The slides for these webinars are available for access in both [English](#) and [Spanish](#).

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