

Mapping National Digital Learning Platforms

Key trends and themes across 184 countries

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Abbreviations and acronyms

ADT	Accessible Digital Textbook
DIKSHA	Digital Infrastructure for Knowledge Sharing
FLN	Foundational Literacy and Numeracy
ICT	Information communication technology
LMS	Learning management system(s)
OOSC	Out-of-school children
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund

Executive summary

At the start of the Covid-19 pandemic, many governments and partners quickly moved to provide learning continuity during school closures. For many, 2020 catalysed an opportunity for change, prompting governments and their partners to set up national digital learning platforms. In some countries, these platforms already existed and were adapted to meet the needs of learners, teachers, and parents. In other countries, such platforms were created for the first time, often in partnership with or driven by other stakeholders.

As the world turns to a different moment, when education systems around the world are facing the compounded effects of the global learning crisis and the pandemic's impact on learning, with 70% of children aged 10 in low- and middle-income countries unable to read and understand a simple text (up from 57% in 2019 ([World Bank et al., 2021](#))), it is vital to reflect on the quality and reach of national digital learning platforms and their potential contribution to addressing this crisis.

Indeed, the quality and equity of public digital learning was one of the central topics of the 2022 Transforming Education Summit (TES). Over 90% of National Statements of Commitment made by UN Member States during the summit mentioned digital learning as a strategic area for the effective transformation of education systems.

To translate these commitments into action, UNICEF and UNESCO launched [Gateways to Public Digital Learning](#),¹ the UN's flagship initiative to make digital education a public good. Its goal is to ensure equitable and quality digital education by strengthening the accountability of Member States through more robust global monitoring, increased cooperation between governments, and the emergence of norms and standards. The Gateways Initiative will map, describe, and analyse existing public platforms and content, help countries create and strengthen national platforms, identify and share best practices, and establish international norms and standards to guide the development of platforms. This report presents key findings from a global mapping exercise of national digital platforms conducted by EdTech Hub following a Helpdesk request by UNICEF. The report fills a key gap in the literature by capturing key information, including but not limited to the number of platforms available and how platforms are accessed (web-based or mobile?). It looks at whether platforms have working links and updated content, whether they are available offline, and inclusive and accessible to children with disabilities. This global mapping of national digital platforms is

¹ <https://www.un.org/en/transforming-education-summit/gateways-public-digital-learning>
Retrieved on 20 July 2023

one of UNICEF and the EdTech Hub's contributions to one of the key objectives of the Gateways e Gateways Initiative. Key findings from the mapping exercise were already socialised in UNICEF's "Pulse Check on Digital Learning" ([↑UNICEF, 2022b](#)). In this report, we provide detail about the methodology, additional findings, and lessons learnt from case studies selected from countries in different regions.

A first of its kind, the mapping exercise focused on examining three key areas of **availability, usability, and inclusivity** in digital learning platforms available to students and teachers in 184 countries. The mapping exercise covers a wide variety of regions (East Asia and Pacific, Europe and Central Asia, Latin America and Caribbean, Middle East and North Africa, North America, South Asia, and sub-Saharan Africa) and income levels (high, upper middle, lower middle, and low). The exercise identified 471 digital learning platforms owned, developed and / or maintained by governments across 184 UNICEF programme countries (see [Annex 1](#)).

Key findings

As summarised in UNICEF's **Pulse Check on Digital Learning** report ([↑UNICEF, 2022b](#)), the key findings of the global mapping exercise are:

- **Progress on digital learning made during Covid-19 has stalled and even backtracked in some countries** — 32% of identified national digital learning platforms no longer exist, have not been updated since 2020 or have links that do not work. This was especially prevalent for platforms developed by countries based in sub-Saharan Africa and South Asia.
- **Only 33% of platforms had content a student could interact with.** This is the case despite interactivity being a central component of student-focused learning and a core characteristic of the quality of digital learning solutions. Most platforms offered only static content, such as PDFs of textbooks. Where available, interactive content takes the form of quizzes, comments on videos, forums, messaging apps and chatbots.
- **Just 22% of digital learning platforms contained features for accessibility for children with disabilities.** Further, many of the features observed were rudimentary (e.g., closed captions on videos). Notably, most of the platforms that contain accessibility features were also mobile-accessible.
- **Only 30% of platforms offer offline functionality** (e.g., the option to download videos for offline use or to use a mobile app while not

connected to the internet). In terms of equity, this functionality is critical, with almost half of the world's population still offline. Forty-nine per cent of high-income and 33% of middle-income countries have platforms that offer offline functionality. In contrast, only 18% of low-income countries offer the same — even though this functionality is more critical in low-income countries.

- **Sixty-five per cent of the countries surveyed have more than one platform.** The two most common types of platforms are
 1. Resource hubs that collate existing content from other platforms and sources
 2. Learning management systems (LMS), such as Moodle or the Learning Passport, with digital courses for various grades and subjects.
- **Eighty-five per cent of platforms were accessible on a basic smartphone** — having passed the Google Mobile-Friendly Test and assessed for compatibility on a USD 30–50 Android smartphone.² Mobile accessibility continues to be a critical factor for digital learning platforms, as mobile phones are the most common device available for digital learning in low- and middle-income countries.
- **Most digital learning platforms (84%) offered features across all the respective countries' national languages.**

Findings on the availability, usability, and inclusivity of national digital learning platforms are summarised in Table 1 below.

² Basic Android smartphones (screen sizes 360 × 800 or 720 × 1440) were used to test each platform. The platforms were tested using the smartphones and the Google Mobile-Friendly Test.

Table 1. Key findings from the mapping of 471 national digital learning platforms.

Findings

Availability

- ✓ **Platforms around the world:** 89% of the 184 mapped countries had at least one national digital learning platform
- ✓ **Mobile accessible:** 85% of platforms can be accessed via a basic smartphone
- ✓ **Diversity of languages:** 84% of platforms offered features using all of a country's national languages
- ➔ **Limited offline capacity:** 49% of high-income countries had platforms with offline functionality, while only 18% of low-income countries offered the same

Usability

- ✓ **Easy access:** 68% of platforms could be accessed without an account
- ➔ **Interactivity:** Only 33% of platforms contained content that users could interact with (e.g., chatbots, forums, games). However, levels of interactivity were higher in South Asia and East Asia and Pacific regions, where 63% of countries had at least one platform that contained interactive content.
- ➔ **Out-of-date platforms:** Of the identified platforms, 32% no longer exist, have not been updated since 2020 or have links that do not work. Out-of-date platforms are especially prevalent in sub-Saharan Africa and South Asia: 43% of countries in sub-Saharan Africa and South Asia did not have a platform that had been updated after 2020

Inclusivity

- ➔ **Limited features:** 22% of the identified platforms contained features to support accessibility for children with disabilities (e.g., colour contrast, closed captions). 29% of low-income countries had platforms that were inclusive for children with disabilities, compared to 49% of high-income countries

Lessons learnt

Lessons learnt from case studies (see [Section 4](#)) included:

- Ensuring both online and offline functionality in platforms is an important mechanism to reach students now, while simultaneously engaging in longer-term efforts to strengthen a country's information and communication technology (ICT) infrastructure.
- Chatbots can help create an interactive and personalised user experience for students. Chatbots can directly answer students' questions and refer them to relevant resources and videos to supplement their learning. Students can access a customised learning path by engaging with a chatbot at their preferred pace.
- Platforms designed to be accessible and engaging for all learners should include both
 1. Content that is inclusive (e.g., reading assignments spotlighting girls).
 2. Features such as playing audio files, adjusting text size, and adjusting brightness levels.

The mapping exercise showcased many noteworthy efforts by governments and partners worldwide to reach learners in the wake of the Covid-19 pandemic. Leveraging what has been done and what already exists, sustained initiatives are now required to ensure that national digital learning platforms remain up-to-date and interactive. The design, implementation, and iteration of such platforms should further consider marginalised learners, including those with limited access to the internet.

We recognise that the landscape of digital learning platforms is constantly changing. This report serves as a snapshot in time of national digital learning platforms around the world. Future mapping exercises and reports may be carried out to expand on this work.

1. Introduction

The start of the Covid-19 pandemic catalysed an opportunity for change within many education systems, prompting governments and their partners to set up digital learning platforms. Similarly, an increase in access to the internet and mobile devices was observed during the pandemic as a part of efforts to provide learning continuity during school closures. As education systems move into a new phase of recovery, strengthening, and resilience, key questions remain about the status of those digital learning platforms. How many platforms are still functional? How are they accessed (web-based or mobile-based)? Are they available offline? Do platforms have working links and updated content? Are platforms inclusive and accessible to children with disabilities?

To answer these questions and as part of the Gateways to Public Digital Learning, the UN's flagship initiative to make digital education a public good, UNICEF submitted a Helpdesk Request to EdTech Hub to conduct a global mapping of national digital learning platforms. This report presents key findings from the mapping exercise across 184 UNICEF programme countries. This exercise further serves as an advocacy tool to identify critical gaps across platforms as it examines questions of equity such as: "Who cannot learn using these platforms, and why?"

In [Section 2](#), we describe the methodology of the mapping exercise. Key findings are then presented under the subsections of availability, usability, and inclusivity in [Section 3](#). Case studies from Uruguay, Egypt, and France are presented after the findings in [Section 4](#). The report concludes with recommendations for the way forward in [Section 5](#).

2. Methodology

National digital learning platforms were defined as “digital platforms developed, owned and / or maintained by national governments that are designed and used for educational purposes.” The list of mapped countries in this study consisted of UNICEF programme countries. A total of 184 countries across all regions of the world (see [Annex 1](#)) were included in the mapping.

A total of 471 digital learning platforms were identified through a web and mobile app search on the Google Play App Store. [Annex 2](#) presents details of the search process and search terms used. UNESCO’s list of national learning platforms and tools ([UNESCO, 2020](#)) served as a useful starting point for identifying platforms. National digital learning platforms were included in the initial mapping if they met the following criteria:

- The platform is developed, owned and / or maintained by national governments for educational purposes. Any platform developed in partnership with the government was included in this analysis.
- The platform can be found through an online search of government or other web pages.
- The platform's target audience encompasses students and / or teachers at the primary and secondary education levels.

All relevant platforms for a country were identified and mapped. In some cases, the mapping exercise revealed that a country had more than one national digital learning platform. Burkina Faso, for example, has two digital learning platforms, [Imaginecole](#)³ and [Faso e-education](#).⁴ Alternatively, other countries did not have a national digital learning platform at all; this was also noted during the mapping.

Following the identification of eligible national digital learning platforms, a rubric on Google Sheets with 17 criteria points was filled out. The criteria points and dropdown options are listed in [Annex 3](#).

Data analysis was conducted at both the platform and the country levels. During this process, the research team used Google Sheets pivot tables to analyse data for each of the rubric criteria points. When analysing data across criteria #7–16, we excluded platforms that

1. Were not searchable on the web and no longer had an existing link.

³ <https://tactileo.africa/sso/logon/bangre-baore> Retrieved on 19 July 2023.

⁴ <https://fasoeducation.bf/> Retrieved on 19 July 2023.

2. Could not be accessed without a free account or required a unique school or national identifier for an account.

For country-level analysis, we condensed the data for countries with more than one platform, including data points on the number of national digital learning platforms available in each country. If a national digital learning platform was available in both a web-based and mobile-based format, both instances were counted because the mobile apps' functionality and objectives differed from the web-based format. Counting websites and mobile apps as distinct platforms allowed us to unearth new findings regarding the mobile accessibility of each format (see [Section 3.2](#)). We selected 'yes' for a criteria point if at least one platform in the country met the 'yes' criteria. For example, if a country had three platforms, one that could be accessed without an account and two that could not, we selected 'yes' for that criteria point.

Basic Android smartphones (screen sizes 360 × 800 or 720 × 1440) in the USD 30–50 range were used to test mobile accessibility (see details in [Annex 3](#)). For a web page, this required opening the platform link using a web browser and confirming that the content was viewable and accessible on a mobile screen. The page also needed to pass the [Google Mobile-Friendly Test](#).⁵ For a mobile app, the team checked whether it was available on the Google Play Store (some are only available on the Apple App Store), downloaded the app, and navigated its features on a smartphone.

Countries were examined by regions (East Asia and Pacific, Europe and Central Asia, Latin America and Caribbean, Middle East and North Africa, North America, South Asia, sub-Saharan Africa) and income levels (high, upper-middle, lower-middle, and low. This was done to understand trends and differences across income groups.

While our methodology allowed us to gather valuable data, it also had some limitations. We recognise that the process of identifying national digital learning platforms is limited by what is readily available through a general web search using Google. We did not confirm findings on the number of eligible platforms and available features with governments; as a result, some platforms and / or features may have been missed. In some cases, the search may have been affected by the team's location (United States, United Kingdom, Jordan, Madagascar, Bhutan). For example, some websites did not load, and certain mobile apps could not be found in the Google Play Store based on a user's location. Further, other platforms required unique identifiers, such as National IDs or government-provided accounts, to access platform content. In these cases, we could not capture all the platforms' features. Basic

⁵ <https://search.google.com/test/mobile-friendly> Retrieved on 18 July 2023

smartphones were used to test mobile compatibility since they are the type of phones most commonly purchased and used at the household level in most low- and middle-income countries. Whether or not a platform is accessible on a basic smartphone is a good indicator of its equity and potential to scale. However, many households still use low-cost, basic mobile phones. Additional research is needed to investigate how user-friendly (e.g., Can you navigate web pages on a basic mobile phone? Is the text adapted to mobile screens?) these platforms are on low-cost mobile phones. This mapping analysis also only conducted basic mobile compatibility checks of the platforms and content (see details in [Annex 3](#), point 8). Extensive compatibility checks in the future may reveal a lower percentage as being mobile-friendly.

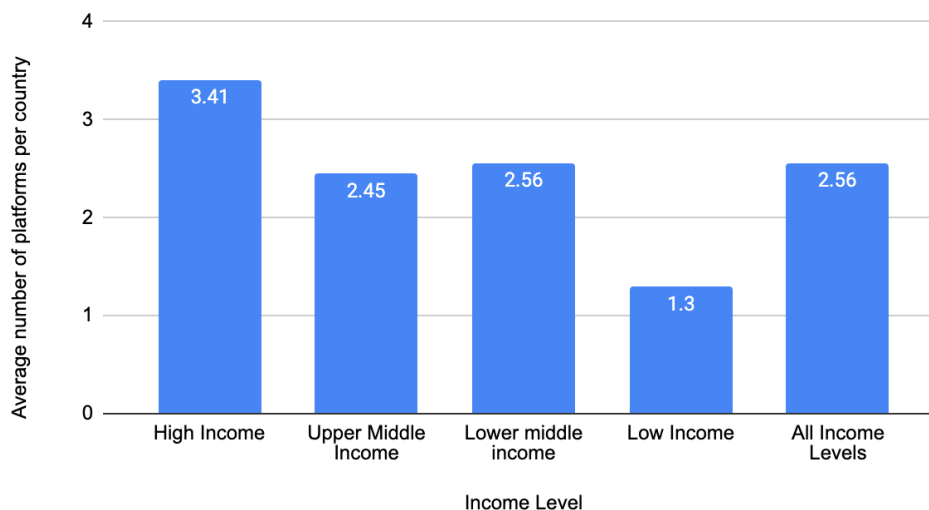
The mapping exercise was conducted between June and July 2022. We also acknowledge that the landscape of digital learning platforms is evolving non-stop. As such, new platforms may have emerged, or existing platforms may have been adapted with new features and functionalities after July 2022. This information would not have been captured in our mapping exercise. Further, some countries with higher populations (e.g., the United States) have several digital learning platforms developed across the national, regional, state, and district levels of government. Given the rapid timeline of this exercise, we mapped no more than ten platforms from each country, prioritising national-level platforms and noting countries with over ten platforms that met the inclusion criteria.

The list of 471 national digital learning platforms can be found in [Annex 4](#), along with a datasheet that includes the authors' organisation of the national platforms under key indicators. Readers can use the datasheet to replicate or conduct their own analysis.

3. Findings

Overall, 471 eligible platforms, including 24 mobile apps, were identified across 184 countries. Of the countries surveyed, 89% had at least one digital learning platform, and 65% had more than one platform. On average, each country had 2.6 platforms available, although this number was higher in high-income countries and dropped in low-income countries (see [Figure 1](#)). For countries with more than one platform, we often observed overlaps in and duplication of content across platforms; however, the impact of this trend on a student's or teacher's platform experience requires further investigation.

Figure 1. Average number of platforms per country across income-level groupings



Many governments provide digital learning services through global-reaching private providers of platforms and learning management systems such as YouTube, Google, Microsoft, Coursera, and Moodle. Similarities across platforms were observed, especially for countries within the same region. Examples included:

- Countries based in Latin America, the Caribbean, and sub-Saharan Africa were likelier to incorporate [WhatsApp](#)⁶ messaging into the digital learning platform experience.
- Fifty per cent of countries in South Asia and 44% of countries in the Middle East and North Africa used a [YouTube](#)⁷ channel to support student learning or embedded YouTube videos into a separate digital learning platform; by comparison, 27% of all mapped countries globally used YouTube

⁶ <https://www.whatsapp.com> Retrieved on 19 August 2022.

⁷ <https://www.youtube.com> Retrieved on 19 August 2022.

- [Notesmaster](#)⁸ provided online courses curated by ministries of education in ten different countries across Latin America and the Caribbean and sub-Saharan Africa (e.g., Trinidad and Tobago, Malawi, Zambia, etc.)
- [Learning Passport](#),⁹ a platform delivered by UNICEF and powered by Microsoft Community Training, was found to be used in countries across all seven regions (East Asia & Pacific, Europe & Central Asia, Latin America & Caribbean, Middle East & North Africa, North America, South Asia, and sub-Saharan Africa)

Despite the high percentage of countries with at least one digital learning platform, sustained progress on digital learning following the Covid-19 pandemic has been uneven. In response to pandemic-related school closures, countries developed new digital platforms for remote learning in 2020. **However, since then, numerous national digital platforms have not been maintained. One out of three of the identified national digital learning platforms no longer exist, have not been updated since 2020, or have links that do not work.** This is especially true of platforms in sub-Saharan Africa and South Asia.

Additional findings from the mapping exercise are organised by the following areas:

- **Availability**, which we define as the quantity and quality of available platforms in a country and the resources offered by the platform(s).
- **Usability**, which we define as the overarching user experience for a student or teacher navigating the platform.
- **Inclusivity**, which we define as the capacity of platforms to meet the needs of marginalised students, particularly students with disabilities.

3.1. Availability

The mapping exercise revealed two main types of platforms:

1. Resource hubs that collate existing content from other platforms and sources.
2. LMS with online courses for various grades and subjects (e.g., Moodle or Learning Passport).

⁸ <https://notesmaster.com/> Retrieved on 19 August 2022.

⁹ <https://www.learningpassport.org/about-learning-passport> Retrieved on 19 August 2022.

Eighty per cent of mapped platforms were identified as resource hubs and 13% as LMS.¹⁰

For example, Bahrain's [My Digital Library \(Maktabati al-Raqmiyya\)](#),¹¹ is a resource hub that organises learning materials, videos, and PDF assessments for primary and secondary students. Barbados' [Online Learning Centre](#)¹² is a learning management system that offers free courses from the National Transformation Initiative and Coursera to Barbadian citizens.

The availability of platforms was further examined through four criteria points:

1. Who is the target audience (students, teachers, or both)?
2. Are foundational literacy and numeracy (FLN) resources presented?
3. Are all national languages represented?
4. Does the platform have offline functionality (i.e., resources or features that could be downloaded / synced online and then accessed at a later time offline)?

Out of all the eligible platforms, **more than half (56%) targeted both students and teachers.** In many cases, the platforms included learning materials that could be used directly by students or repurposed as a lesson plan or curriculum guide for teachers. Although the Covid-19 pandemic drew attention to an increasing need to support teachers and their professional development, **only 11% of the platforms were specifically developed for teachers.** In addition, the mapping exercise assessed whether platforms offered FLN resources, given the role of FLN as building blocks for children's learning and later success in life ([↑World Bank, 2021a](#)). **Forty-seven per cent of low-income countries offered a platform that provided FLN resources (compared to 65% of the countries globally).**

Most digital learning platforms (84%) offered features using all of a country's national languages. For example, the Philippines [DepEd YouTube Channel](#)¹³ offered videos in both Filipino and English. Based on a regional analysis of platform languages, we found that fewer countries in sub-Saharan Africa, compared to other regions, had platforms that used all the national languages. Many platforms in sub-Saharan Africa operated with only an English system, making it difficult for non-English-speaking learners to navigate. This trend may be due to the diversity of local languages observed in the region; for example, Ethiopia has five official languages and more than 90 indigenous languages in the country. The level of effort required to translate

¹⁰ Around 8% of the platforms were mapped as 'other' or 'unknown,' where we could not access the content to identify the platform type.

¹¹ <https://moedu.gov.bh/MyDigitalLibrary/> Retrieved on 19 August 2022.

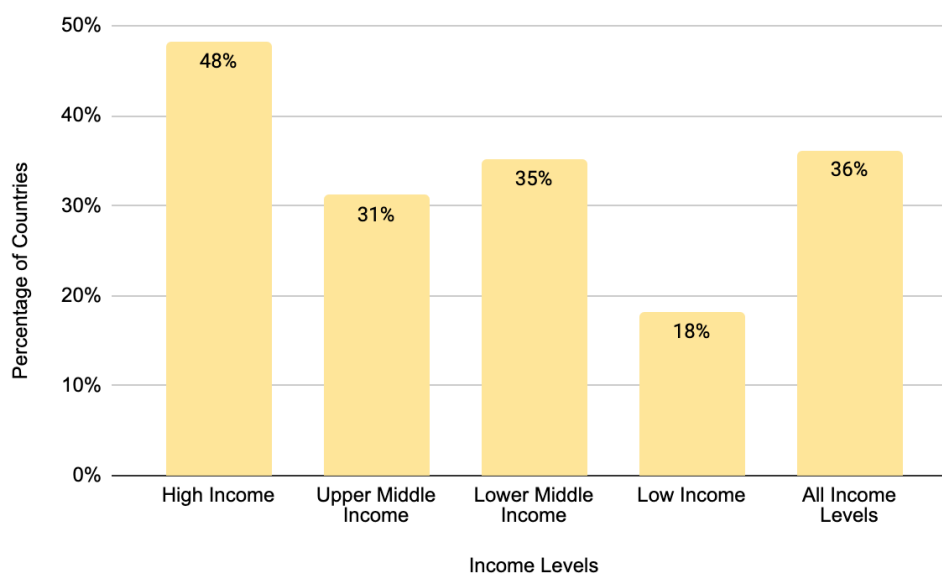
¹² <https://training.nti.org.bb/> Retrieved on 18 August 2022.

¹³ <https://www.youtube.com/c/DepEdTV/videos> Retrieved on 18 August 2022.

learning content and system languages may have hindered the development of a platform with multiple languages.

Although almost half of the world's population is still offline ([↑United Nations, 2021](#)), **platforms that provided offline features were a rare find.** Among all the eligible platforms, over 70% did not offer offline functionality. Further, the gap in access to offline resources persists between low- and high-income countries (see [Figure 2](#)). Forty-nine per cent of high-income countries had platforms with offline functionality, while only 18% of low-income countries offered the same.

Figure 2. Countries with one or more platforms that offer offline functionality across income-level groupings



For platforms that provided offline functionality, standard features included options to download multimedia content (beyond just PDFs), access to courses or learning content without an internet connection and mobile apps that supported offline learning. For example, Honduras' [Educatrachos](#)¹⁴ offers options to download multimedia content in a zip format; Montenegro's [UCI DOMA](#)¹⁵ allows video downloads for offline viewing; and Nigeria's [Learning Passport](#)¹⁶ enables learning to continue in areas with limited to no internet via a hub device (see [Figure 3](#) below).

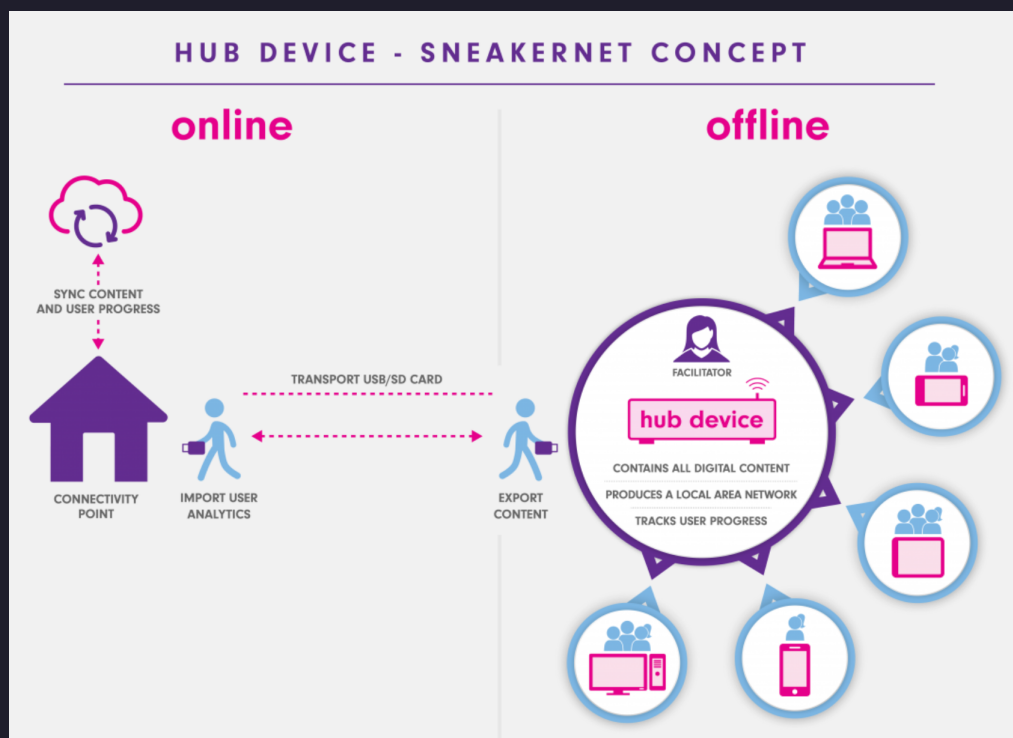
¹⁴ <http://www.educatrachos.hn/> Retrieved on 18 August 2022.

¹⁵ <http://www.educatrachos.hn/> Retrieved on 19 July 2023

¹⁶ <https://nlp.education.gov.ng/index.html> Retrieved on 18 August 2022.

Figure 3. Nigeria's *Learning Passport* (↑Nigeria Federal Ministry of Education, 2021)

Nigeria's Learning Passport is an online learning platform that enables mobile and offline functionality to ensure continuous access to quality education in places with low and no internet connectivity. The platform can function without an internet connection, with a hub device located in an offline classroom that acts as a local server and can be intermittently synced to an online database. Content and data can be transported with USB flash drives or SD cards.



3.2. Usability

While we observed significant variation across platforms, many national digital platforms were either underdeveloped or lacked a cohesive user experience. We used three criteria for our analysis to understand the usability of national digital learning platforms.

1. Can it be accessed without an account?
2. Can it run on a basic smartphone?
3. Does the platform include content that users can interact with (e.g., chatbots, forums, games)?

Sixty-eight per cent of the platforms could be accessed without an account, although functionality and available content were limited in some cases. Among these platforms, many required users to log in to access additional features. The requirements for accessing platform content varied significantly across platforms, with options including: enter as a guest; create an account with simple information (e.g., name, email address, etc.); create an account using unique identifiers (e.g., National ID, Teacher ID, etc.); or enter using a third-party account from Google, Facebook, and Microsoft.

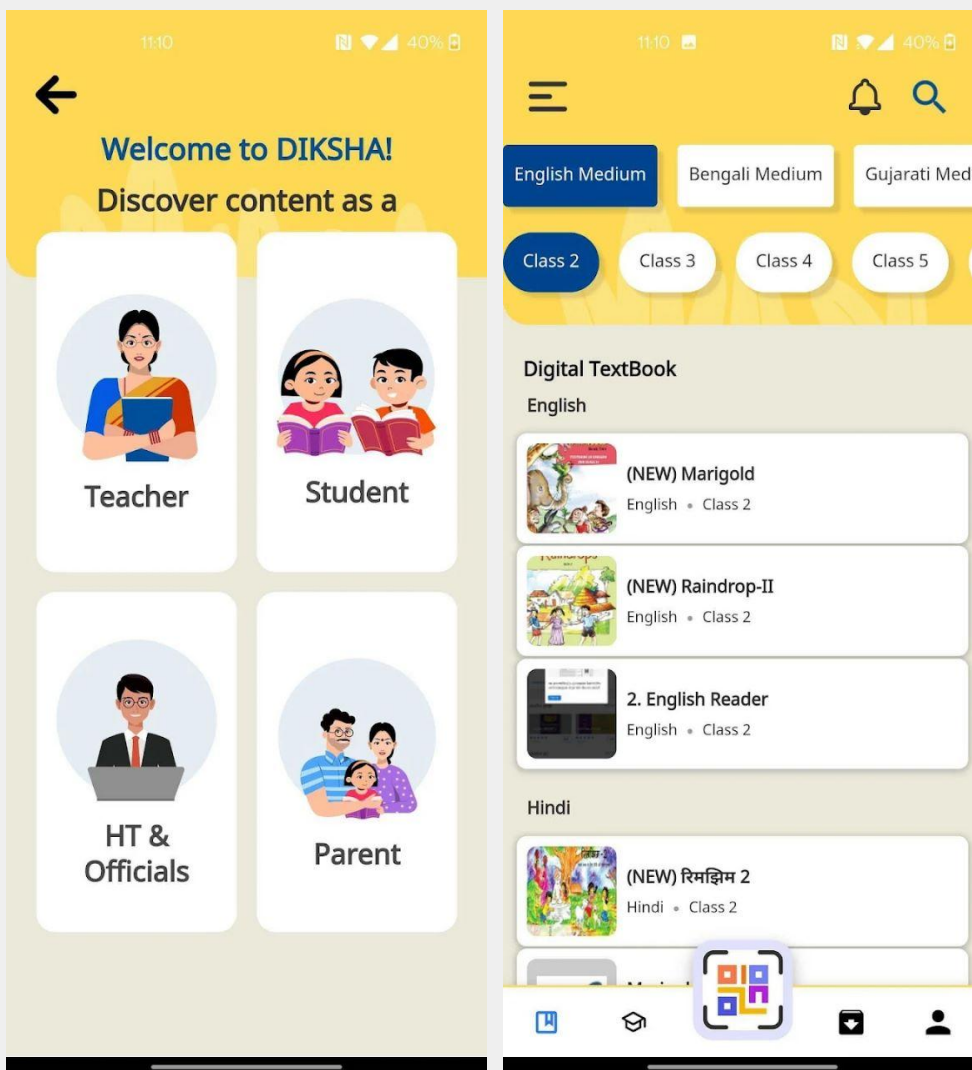
Eighty-five per cent of platforms were accessible on a basic smartphone.

Mobile accessibility continues to be a critical factor for digital learning platforms, as mobile ownership rates have rapidly increased in low- and middle-income countries (↑Orozco, 2021). For example, India's DIKSHA¹⁷ (Digital Infrastructure for Knowledge Sharing) platform has a web-based browser and a mobile app version (see Figure 4 below). Of the 471 platforms identified, 16 had mobile-app counterparts to the web page versions. However, having a mobile application does not always guarantee mobile compatibility. We found **six mobile apps that failed the mobile-accessibility test but web-based counterparts that did not.**

¹⁷ <https://diksha.gov.in/> Retrieved from DIKSHA Google Play app store on 16 June 2023.

Figure 4. India's *DIKSHA* (↑*Government of India, 2021*; ↑*UNICEF, 2022a*)

The Digital Infrastructure for Knowledge Sharing platform, or DIKSHA, is a resource hub offering students, teachers, and parents learning materials aligned with school curricula. The platform's open digital content can be accessed using a basic smartphone without an account. DIKSHA has one version based on a web browser and another as a mobile app. The website indicates that yet another desktop app version will be available soon, which will offer access to downloaded digital content to use offline on users' personal computers.



Despite interactivity being a central component of student-focused learning, only 33% of platforms contained content students could interact with. On the regional level, interactivity was more commonly observed in platforms developed for countries in the South Asia, East Asia, and Pacific regions. More than 60% of the countries in these regions had at least one platform containing interactive content or resources. Globally, however, **more than half**

of the countries (52%) did not have platforms with interactive features.

Most platforms offered only static content, such as textbooks in a PDF format and lecture videos.

For platforms where **interactivity** was observed, they often contained quizzes where students could receive feedback on their answers, forums where students could pose questions to each other or to moderators, and messaging via WhatsApp and chatbots. For instance, New Zealand's [AnyQuestions](#)¹⁸ platform connects students to librarians over live chats. Students can ask questions about different topics, and in response, the librarian provides links to books and other resources of interest. Online courses on Rwanda's [REB E-Learning Platform](#)¹⁹ offer forums for learners to post questions and discuss with each other. Saint Vincent and the Grenadines' [Education Alive](#)²⁰ offers quizzes, games, and options to submit questions or comments (see [Figure 5](#) below).

¹⁸ <https://anyquestions.govt.nz/> Retrieved on 19 August 2022.

¹⁹ <https://elearning.reb.rw/> Retrieved on 19 August 2022.

²⁰ <https://www.svgcd.edu/home> Retrieved on 19 August 2022.

Figure 5. *Saint Vincent and the Grenadines' Education Alive*
([↑Education Media Unit, no date](#))

Education Alive, developed by the Saint Vincent and the Grenadines Ministry of Education's Media Unit, provides educational resources for students across the pre-primary to secondary education levels. The platform offers various interactive features, such as games to review educational content and a form to submit questions to the Curriculum Development Unit in the Ministry of Education. Users are provided with an option called "submit your own resource", enabling the platform to crowdsource learning resources from users.



3.3. Inclusivity

Learners with disabilities were among the most vulnerable and excluded groups in remote learning during the Covid-19 pandemic ([↑World Bank, 2020b](#)). We primarily focused our analysis on inclusivity for students with visual and hearing impairments, while also acknowledging the range and intersectionality of marginalisation and variety of special educational needs and disabilities for students.

Our mapping exercise revealed that **most of the existing digital learning content remains out of reach for students with disabilities**. Only 22% of the

mapped platforms contained features that supported accessibility for children with disabilities (e.g., colour contrast, captions, audio content, and text size adjustments). Notably, most of these platforms were also mobile-accessible. Although these platforms include features for a specific disability, additional work is still needed to cover the complete range of features required for them to be fully accessible to children with different types of disabilities. Resources on inclusive education for teachers were more commonly observed than resources directly designed for students with disabilities. For instance, [Peru Educa](#)²¹ includes content on how to approach teaching children with disabilities.

Despite this limited offering, a select number of platforms excelled in terms of accessibility and inclusivity. One example is Colombia's [INSOR Educational portal](#),²² which was specifically developed to support learning for deaf students, teachers, and others in Colombia (see [Figure 6](#) below). Another example is the [Accessible Digital Textbooks for All initiative](#)²³ supported by UNICEF and partners.

²¹ <https://www.perueduca.pe/#/home> Retrieved on 19 August 2022.

²² <https://educativo.insor.gov.co> Retrieved on 19 August 2022.

²³ <https://www.accessibletextbooksforall.org/> Retrieved on 18 August 2023

Figure 6. Colombia's *INSOR Educational portal* (↑*National Institute for the Deaf, no date*)

Created by the National Institute for the Deaf in Columbia, the INSOR Educational portal provides learning content in Colombian sign language for deaf students, teachers, and parents. The platform contains educational resources across science, language, and maths, a dictionary of terms in Colombian Sign Language and Spanish, and a WhatsApp service to send short video and audio messages between deaf and hearing people. Each of the platform's tabs includes instructions in sign language, making it easier for deaf learners to navigate.

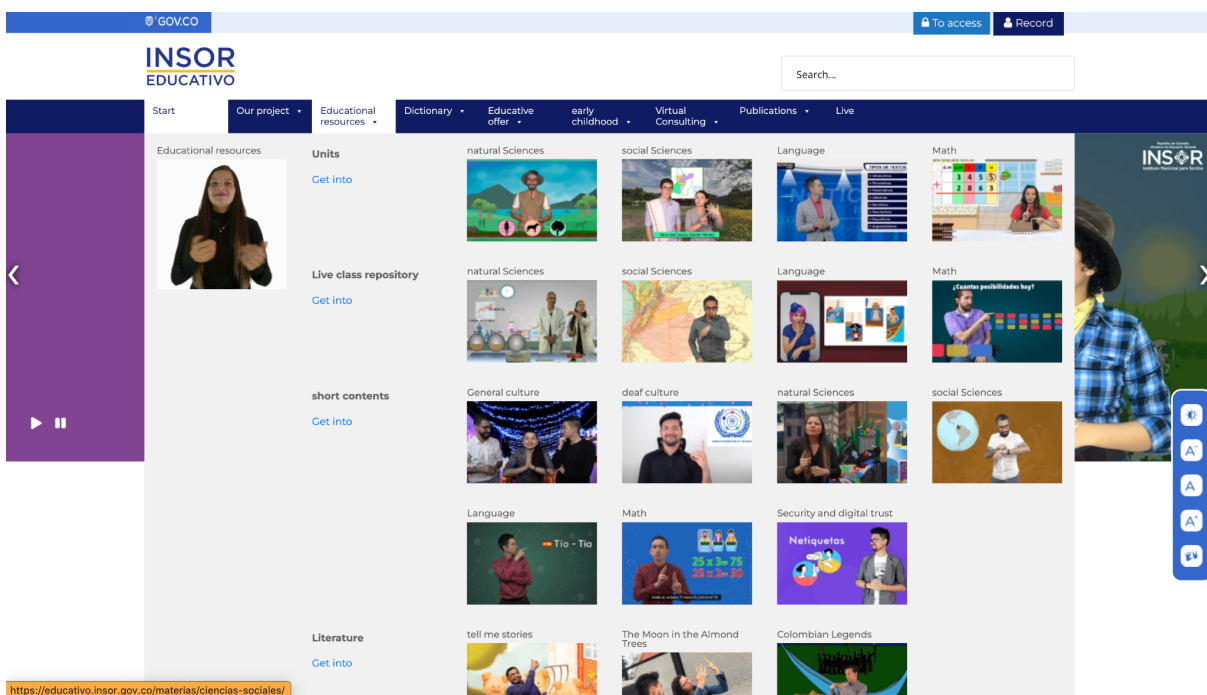


Figure 7. Description of UNICEF's *Accessible Digital Textbooks*, an innovative solution to make textbooks accessible for children with disabilities

UNICEF and its partners are driving an innovative solution called [Accessible Digital Textbooks \(ADTs\)](#) to make textbooks available, affordable, and accessible for children with and without disabilities. By adding specific features to digital formats (such as sign language and audio) and following Universal Design for Learning principles, textbooks can be made accessible to students who are blind or have low vision, are deaf or hard of hearing, or have intellectual, developmental, or learning disabilities, among others. ADTs have been piloted successfully in nine countries in Africa and Latin America

and have been shown to improve teaching and learning in classrooms among children with or without disabilities.

In Jamaica, sign language, voice-overs, music, and interactive activities are the features that will be available in the digital versions of the ADTs. UNICEF is working with the Ministry of Education, Youth and Information, the Jamaica Library Service, the Jamaica Association for the Deaf, the Salvation Army School for the Blind, and Bookfusion, an open e-book platform. The goal is that between 2021 and 2023, Jamaica will have adapted a core set of 12 picture books that the Ministry of Education, Youth and Information uses in primary Grades 1, 2, and 3. The books are part of the national curriculum and aim to be accessible for every child and adolescent by ensuring narration, sign language, interactive activities, and audio descriptions of images.

4. Case studies

This section presents three case studies showcasing national digital learning platforms in different regions of the world, including [Plan Ceibal](#) from Uruguay, [E-Learning Portal](#) from Egypt, and [Jules](#) from France. These case studies were selected by the research team among platforms that perform well in terms of availability, usability, and inclusivity (see criteria points in [Annex 3](#)). With the purpose of showcasing a few examples from different regions, the three case studies below illustrate different approaches governments have taken towards developing public digital learning platforms.

4.1. Uruguay's Plan Ceibal

To address challenges around school retention rates of economically disadvantaged students, Uruguay invested in equitable and inclusive incorporation of digital technologies through Plan Ceibal. Plan Ceibal is Uruguay's national education policy, which started in 2007 with the objective of developing technological and educational innovations. It focuses on public primary and secondary education and stands out for its strategic implementation process, which strongly emphasises equalising access to digital infrastructure.

Phase 1 of the implementation process focused on decreasing the digital divide by distributing devices and no-cost internet to all students and teachers. Phase 2 provided the recipients of the digital devices with digital skills training. Phase 3 focused on new educational initiatives that leverage the strengthened technological infrastructure. The [Plan Ceibal platform](#)²⁴ was created to host initiatives and tools to provide targeted digital resources for both students and teachers and gamification of learning resources.

A one-stop shop for digital resources

The Plan Ceibal platform hosts two targeted portals for disseminating digital learning resources, one for students and another for teachers. The [student portal](#)²⁵ hosts a range of grade-specific digital resources and educational applications for students to engage with independently. The [teacher portal](#)²⁶ provides innovative educational resources and tools supporting teaching and

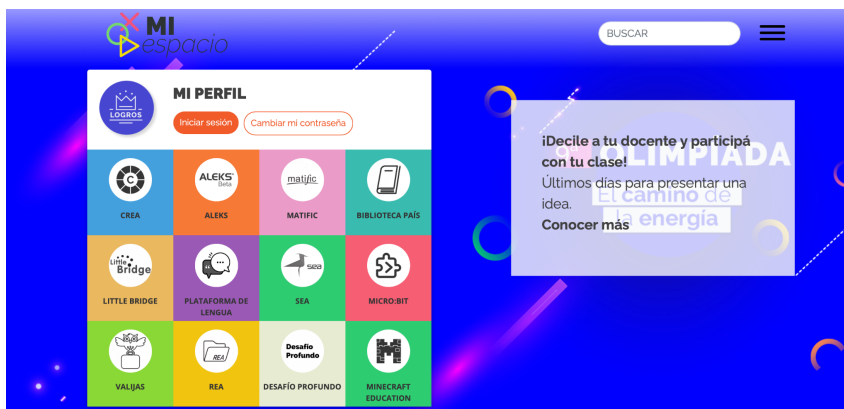
²⁴ <https://www.ceibal.edu.uy/es/> Retrieved on 22 August 2022.

²⁵ https://estudiantes.ceibal.edu.uy/?_ga=2.241114369.325671212.1659757943-292405364.1659757943 Retrieved on 22 August 2022.

²⁶ https://ingreso.ceibal.edu.uy/loginunico/username.xhtml?_ga=2.41767456.325671212.1659757943-292405364.1659757943 Retrieved on 22 August 2022.

learning. Both portals act as a one-stop shop for all of Plan Ceibal's content offerings, organised in an interactive and user-friendly manner.

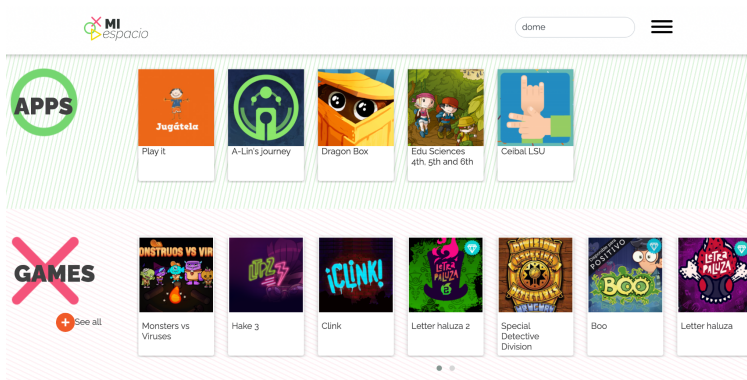
Figure 8. *Plan Ceibal login page for teacher and student portals*



Gamification and educational apps for students

Plan Ceibal strongly emphasises gamified learning and offers a range of features and services that leverage technology to enhance learning through playing. Plan Ceibal's open-access video game website, [Domo](http://domo.ceibal.edu.uy),²⁷ provides a safe, multiplayer space for children aged 9–14. The platform observes strict selection criteria that screen for high-quality and violence-free content. Domo users also have access to a range of audiovisual content. Additionally, to support accessible offline content, educational applications designed to support classroom teaching and learning can be downloaded from the platform onto tablets or mobile devices and operate without an internet connection.

Figure 9. *A selection of applications and games available on Domo*



Lessons learnt

Plan Ceibal's keen attention to user experience and functionality contributes to the platform's success. From having targeted user portals to providing offline application functionality, the platform ensures high levels of

²⁷ <http://domo.ceibal.edu.uy> Retrieved on 22 August 2022.

interactivity and usability. “ERY”, the platform’s chatbot, can be accessed using student identification, further enhancing the user experience. This model is replicable and applicable to other learning environments that aspire to motivate and retain users. The success of Plan Ceibal was especially evident during the Covid-19 pandemic, based on high levels of connectivity²⁸ and the prior development of both the EdTech policy and the platform.

4.2. Egypt’s E-Learning Portal

In Egypt, interest in digital learning has been driven by both the need to deliver learning virtually in response to Covid-19-related school closures and the possibility of providing out-of-school children (OOSC) with learning materials through digital platforms. According to the Egyptian Cabinet's Vision for Sustainable Development 2030 ([↑Information and Decision Support Center, 2021](#)), “the education system is still unable to accommodate less than half of the population of school age.” In light of existing gaps, [the Egyptian Ministry of Education’s E-Learning Portal](#)²⁹ is one of several national digital learning platforms that the Ministry of Education (MoE) has developed and maintained in the last decade to deliver learning to OOSC. The platform has proved critical as a content repository in the wake of Covid-19.

A repository of varied content

The E-Learning Portal provides educational content covering the curriculum for pre-primary, primary, and secondary levels. The platform also includes some additional resources not covered by the curriculum. These are organised by grade level, making navigation easier for users. The content hosted on the platform includes different types of resources (including digitised books, sample tests, maps, guides for teachers, and programmes). It is presented in a wide range of media formats (PDF, audio, video, games, etc.).

²⁸ In 2020, 86% of the population in Uruguay used the internet ([↑World Bank, 2020a](#)).

²⁹ <https://moe.gov.eg/elearningenterypage/> Retrieved on 22 August 2022.

Figure 10. Materials (objectives, presentation, activities) for a unit on English skills on Egypt's E-Learning Portal



Accessible content for children with disabilities

The Ministry's E-Learning Portal is designed to be accessible by all learners and includes inclusive resources. Providing audio resources is a significant step towards ensuring accessible content for deaf and hard-of-hearing students is available. The platform's content repository includes audio files; however, it is worth noting that not all platform content offers this feature. The website also includes options for different text sizes and different levels of brightness, both of which can help make the content accessible for visually impaired learners.

Figure 11. Options on the E-Learning Platform to change the website's brightness



Lessons learnt

The E-Learning Portal places concerted effort on providing learning materials with interactive elements to accommodate learners across a range of disabilities. For example, the website includes interactive Adobe Flash-based games for various subjects and grades to meet learners' different learning

styles and interests. Additionally, it offers basic accessibility features to reach hard-of-hearing learners and learners who have low vision.

As of July 2022, many learning resources on the E-Learning Portal are unavailable (or available only after overcoming some difficulties); the platform is one of many we found in our mapping exercise that has not been fully updated since 2020. Additionally, a large amount of content on the E-Learning Portal requires the use of Adobe Flash Player, which Adobe has not supported since December 2020. While it is possible for learners to use a simulator (e.g., [Ruffle](#))³⁰ to run this content online, they will need to be educated about this option and trained in how to use it safely, especially in light of security risks and vulnerabilities (↑[Rudolph et al., 2014](#)). Given the variety and richness of the content available on the platform, it may be worthwhile to upgrade the website's content so that it uses HTML5 standards in place of Flash.

4.3. France's Jules

The [CNED \(Centre national d'enseignement à distance\)](#)³¹ developed and launched [Jules](#),³² a digital learning platform commissioned by the French Ministry of Education, Youth, and Sports. The platform uses a custom-developed AI-enabled chatbot to provide students with quick resources and answers to their questions. With the primary objective of assisting students with homework and educational exercises, Jules offers an innovative approach to enhancing student autonomy and encouraging the development of research skills.

The platform was piloted in 2020 with content for two subjects: French and mathematics. As of 2022, it has grown to include content on history, geography, physics, chemistry, and life and earth sciences. The platform mainly operates in French, with a few features in English.

An interactive chatbot experience

The platform is designed to be an interactive and personalised experience for users. When users first access the platform, the chatbot prompts them to share their grade level and general area of inquiry (based on a list of choices or an open-ended response). The chatbot then provides a wide range of multimedia content, such as videos and audio clips, as well as further branching options tailored to the user's needs. The chatbot only provides content related to the user's specifications and limits the volume of content

³⁰ <https://chrome.google.com/webstore/detail/ruffle/donbcfbmhbcapadipfkeojnmajbakjdc> Retrieved on 22 August 2022.

³¹ <https://www.cned.fr/decouvrir-le-cned> Retrieved on 22 August 2022.

³² <https://jules.cned.fr/> Retrieved on 22 August 2022.

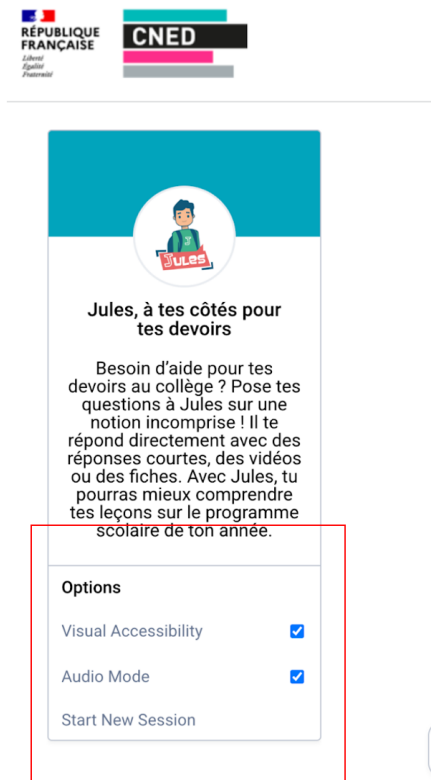
presented at any given time. The chatbot then nudges the user to dive deeper into any particular topic through prompts. Additional content is provided upon request by the user.

Figure 12. Content customised to the student's educational level (marked in green)



Access to learning support

Jules is provided free of charge so that any French-speaking user can access its resources. Access to Jules does not require creating an account or any authentication. The platform saves user progress based on their IP address to help ensure the continuation of learning. Additionally, with students with visual impairments in mind, the platform offers features such as voice recognition for students to ask questions, oral answers recited by the platform, and enhanced text size, among others (see [Figure 13](#) below).

Figure 13. Accessibility features offered by Jules (highlighted in red)

Lessons learnt

The Jules chatbot provides resources based on questions from users and sends prompts to nudge users further along their customised learning path. This design enables students to engage in self-directed learning, going through the content at their preferred pace and creating their own learning path. Jules compares well to other digital learning platforms that frequently present large volumes of resources without organising or associating them with particular questions or topics. By combining its curation of resources with AI (Artificial Intelligence) technology, Jules avoids overwhelming users with too much information at any one time.

5. Ways forward

As education recovery and transformation efforts progress, it is important to build on existing initiatives and lessons learnt from the Covid-19 pandemic ([UNICEF, 2022d](#)). National digital learning platforms remain critical for countries to mitigate learning loss and improve the quality of education by reaching a broader range of students and teachers with timely educational materials and different modalities. Investment in these platforms also increases the resources available to countries to respond to school closures caused by emergencies, strengthening the overall resilience of education systems. We identified four key recommendations for policymakers to inform future iterations of these platforms:

1. Establish alignment across all national digital learning platforms in a country, with particular attention to
 - a. Ensuring cohesive content and guidelines
 - b. Enabling learners to quickly and easily find and access different learning materials
 - c. Linking the platform to government and education ministry priorities to ensure sustainable resource allocation and platform management.
2. Optimise the platform user experience with more interactive features and regularly updated learning resources. The platform should encompass both online and offline functionality to achieve reach and effectiveness.
3. Make sure that the platform is accessible for students with disabilities. Provide content that can be readily adapted to the needs of different marginalised learners, such as girls, minority groups, and refugees. For countries with multiple spoken languages, ensuring digital learning platforms are available in all languages is also critical.
4. Develop platforms for teachers and their professional development to support teachers across education levels. Empowered, motivated, and effective teachers are essential to education recovery ([World Bank, 2021b](#)), yet only 11% of platforms examined in this study were specifically developed for teachers.

Our mapping exercise was conducted between June and July 2022. Moving forward, future studies and phases of mapping could, for example, expand on additional factors and research questions in the following areas:

- Is the content open source and / or has a Creative Commons licence?
- Of the platforms identified, which are best suited for which audience groups (e.g., age, income levels, access to the internet)?
- Which countries are using print materials in combination with digital learning platforms? How effective is this hybrid approach?

Furthermore, the inclusion criteria of our mapping exercise could be expanded horizontally to encompass:

1. Additional countries
2. Platforms developed for pre-primary and high education levels
3. Platforms with a target audience of parents and caregivers
4. Platforms used for education administration.

Given that the digital learning landscape is constantly changing, we recommend conducting a follow-up study over the next 1–2 years. For now, this current mapping exercise and report can serve as a benchmark for availability, usability, and inclusivity across national digital learning platforms. In the future, a similar mapping exercise of this kind can further complement ongoing initiatives and their monitoring mechanisms, such as the ones envisioned by UNICEF and UNESCO in the Gateways to Public Digital Learning Initiative ([↑United Nations, 2023](https://www.un.org/en/transforming-education-summit/gateways-public-digital-learning)).³³ Increased awareness and transparency will help to ensure that transforming education through digital means is equitable and sustainable for all.

³³ <https://www.un.org/en/transforming-education-summit/gateways-public-digital-learning>
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Annex 1: Countries covered

The mapping exercise covered 184 UNICEF programme countries.

1	Afghanistan	25	Burkina Faso	49	Ecuador
2	Albania	26	Burundi	50	Egypt, Arab Rep.
3	Algeria	27	Cabo Verde	51	El Salvador
4	Andorra	28	Cambodia	52	Equatorial Guinea
5	Angola	29	Cameroon	53	Eritrea
6	Antigua and Barbuda	30	Canada	54	Eswatini
7	Argentina	31	Central African Republic	55	Ethiopia
8	Armenia	32	Chad	56	Fiji
9	Australia	33	Chile	57	Finland
10	Austria	34	China	58	France
11	Azerbaijan	35	Colombia	59	Gabon
12	Bahrain	36	Comoros	60	Gambia, The
13	Bangladesh	37	Congo, Dem. Rep.	61	Georgia
14	Barbados	38	Congo, Rep.	62	Germany
15	Belarus	39	Cook Islands	63	Ghana
16	Belgium	40	Costa Rica	64	Greece
17	Belize	41	Côte d'Ivoire	65	Grenada
18	Benin	42	Croatia	66	Guatemala
19	Bhutan	43	Cuba	67	Guinea
20	Bolivia	44	Czech Republic	68	Guinea-Bissau
21	Bosnia and Herzegovina	45	Denmark	69	Guyana
22	Botswana	46	Djibouti	70	Haiti
23	Brazil	47	Dominica	71	Honduras
24	Bulgaria	48	Dominican Republic	72	Hong Kong SAR, China

73	Hungary	102	Malaysia	131	Paraguay
74	Iceland	103	Maldives	132	Peru
75	India	104	Mali	133	Philippines
76	Indonesia	105	Marshall Islands	134	Poland
77	Iran, Islamic Rep.	106	Mauritania	135	Portugal
78	Iraq	107	Mexico	136	Romania
79	Ireland	108	Micronesia, Fed. Sts.	137	Rwanda
80	Israel	109	Moldova	138	Saint Kitts and Nevis
81	Italy	110	Mongolia	139	Saint Lucia
82	Jamaica	111	Montenegro	140	Saint Vincent and the Grenadines
83	Japan	112	Morocco	141	Samoa
84	Jordan	113	Mozambique	142	São Tomé and Príncipe
85	Kazakhstan	114	Myanmar	143	Saudi Arabia
86	Kenya	115	Namibia	144	Senegal
87	Kiribati	116	Nauru	145	Serbia
88	Korea, Dem. Rep.	117	Nepal	146	Sierra Leone
89	Korea, Rep.	118	Netherlands	147	Slovak Republic
90	Kosovo	119	New Zealand	148	Slovenia
91	Kuwait	120	Nicaragua	149	Solomon Islands
92	Kyrgyz Republic	121	Niger	150	Somalia
93	Lao PDR	122	Nigeria	151	South Africa
94	Lebanon	123	Niue	152	South Sudan
95	Lesotho	124	North Macedonia	153	Spain
96	Liberia	125	Norway	154	Sri Lanka
97	Libya	126	Oman	155	State of Palestine
98	Lithuania	127	Pakistan	156	Sudan
99	Luxembourg	128	Palau	157	Suriname
100	Madagascar	129	Panama	158	Sweden
101	Malawi	130	Papua New Guinea	159	Switzerland

160	Syrian Arab Republic
161	Tajikistan
162	Tanzania
163	Thailand
164	Timor-Leste
165	Togo
166	Tonga
167	Trinidad and Tobago
168	Tunisia
169	Turkey
170	Turkmenistan
171	Tuvalu
172	Uganda
173	Ukraine
174	United Arab Emirates
175	United Kingdom
176	United States
177	Uruguay
178	Uzbekistan
179	Vanuatu
180	Venezuela, RB
181	Vietnam
182	Yemen, Rep.
183	Zambia
184	Zimbabwe

Annex 2. Methodology: Search terms and process

The following search terms were used to identify eligible digital learning platforms:

- [country name] digital learning platform
- [country name] educational platform
- [country name] e-learning platform
- [country name] online education platform
- [country name] learning management system
- [country name] digital learning app
- [country name] educational app
- [country name] e-learning app
- [country name] Ministry of Education learning app

In addition to a general web search on Google, the team also searched in Google within government and Ministry of Education web domain names. For countries where English is not the official language, the search was conducted in the country's official language(s). The mobile app search was limited to Android apps, given their ability to typically run on low-cost phones.

Annex 3. Rubric criteria, dropdown options, and notes

#	Rubric criteria	Rubric dropdown options	Notes
1	Country name	Open-ended	
2	Platform name	Open-ended	
3	Website	Open-ended	
4	App link	Open-ended	
5	Target audience	students teachers students and teachers	The scope of this initial mapping did not include parents / caregivers or education administrators.
6	Can it be accessed without an account?	yes no unknown	Platforms that offered some features that were accessible without an account, but required a user to create an account to access additional functionality were marked as 'yes.'
7	Does it have offline functionality?	yes no unknown	For web pages and mobile apps, we looked for any functionality that could be downloaded / synced online but then accessed at a later time offline. PDFs that could be downloaded were not counted as offline functionality; multimedia content (including audio, videos, games, and simulations) that could be downloaded were counted.
8	Does it run on a basic smartphone?	yes no unknown	Basic Android smartphones (screen sizes 360 × 800 or 720 × 1440) were used to test each platform. The platform was tested using the smartphones <i>and</i> the Google mobile-friendly test (↑Google, no date). We selected 'yes' for platforms that were accessible via a smartphone and successfully passed the mobile-friendly test.
9	Available languages	Open-ended	

10	Are all national languages represented?	yes no unknown	If some, but not all, national languages are represented within a platform, the team selected 'no.'
11	Working links?	yes no unknown	We checked if the majority of links were working on a platform and linked to live pages.
12	Regularly updated?	yes no unknown	We selected 'yes' if two or more recently published resources (within the past year) were identified and / or if the platform was dated 2021 or 2022.
13	Content a user can interact with? (i.e., beyond a collection of PDFs)	yes no unknown	<p>We selected 'yes' if the platform offered at least one interactive feature (quizzes, assessments, games). Animations and videos were not counted as interactive.</p> <p>If the platform is not hosted on YouTube, and it offers functionality for a user to comment on a video or post, we selected 'yes.'</p>
14	Foundational literacy and numeracy (FLN) resources?	yes no unknown	We looked for resources, content and / or activities on foundational literacy and numeracy (FLN; meaning literacy and numeracy skills are typically acquired during the early years of primary school (↑Evans & Hares, 2021)).
15	Inclusive and accessible for children w/ disabilities?	yes no unknown	<p>We selected 'yes' if the platform included at least one of the following features:</p> <ul style="list-style-type: none"> ■ provides audio content ■ colour-blind friendly (i.e., colour contrast) ■ provides inclusive content-curriculum ■ provides captions; text to speech ■ allows the user to adjust text size
16	Platform type	resource hub LMS other unknown	<p>The response options were defined as follows:</p> <ul style="list-style-type: none"> ■ resource hub: a platform that collates and organises learning resources and existing content from one or more source(s)

- LMS: a learning management system that includes asynchronous and / or synchronous courses for various grades and subjects. Moodle is one example of an LMS that some governments have used for their national digital learning platform
- other: this option was selected if the above two platform types did not apply

17 **Other notes**

Open-ended

Annex 4. List of digital learning platforms mapped

#	Platform name	Country
1	Nasab- Alternative Education Services	Afghanistan
2	Akademi (web)	Albania
3	Akademi (App)	Albania
4	Office national d'éducation et de formation à distance (ONEFD) [in English: The National Bureau for Distance Education and Training]	Algeria
5	Escolinha em casa	Angola
6	Google Classroom	Antigua and Barbuda
7	Seguimos educando	Argentina
8	Nuestra escuela	Argentina
9	Biblioteca nacional de maestros y maestras	Argentina
10	Sistema Integral de Información Digital Educativa	Argentina
11	Biblioteca digital	Argentina
12	Heravar	Armenia
13	Dasaram	Armenia
14	E-resurs	Azerbaijan
15	TV Lessons from the Ministry of Education	Azerbaijan
16	TV Lessons from the Ministry of Education	Azerbaijan
17	Elektron Dərslik Portalı	Azerbaijan
18	EduNET	Bahrain

19	eduNET.BH (Mobile App)	Bahrain
20	My Digital Library (Maktabati al-Raqmiyya)	Bahrain
21	eduTCC.BH (Mobile App)	Bahrain
22	Cox's Bazar Education Sector - Learning Passport	Bangladesh
23	Digital Content	Bangladesh
24	E-learning Resource Center	Barbados
25	Google G-Suite	Barbados
26	National Transformation Initiative	Barbados
27	National Education Internet Portal	Belarus
28	Belizean Studies	Belize
29	Teacher Learning Institute	Belize
30	National School Portal	Belize
31	Belize Education Management Information System (BEMIS)	Belize
32	INFRE	Benin
33	Ecole au Bénin TV	Benin
34	Imaginecole	Benin
35	Indo-Bhutan e-Library	Bhutan
36	Google Class Room	Bhutan
37	Sherig Youtube: Self Instructional Materials	Bhutan
38	Educa Bolivia	Bolivia
39	Educa	Bolivia

40	e-Nastava	Bosnia and Herzegovina
41	EThuto	Botswana
42	Plataforma MEC de Recursos Educacionais Digitais	Brazil
43	Banco Internacional de Objetos Educacionais	Brazil
44	AVAMEC	Brazil
45	National Teacher's Electronic Library	Bulgaria
46	Faso e-education	Burkina Faso
47	Imaginecole	Burkina Faso
48	Sistema de gestao de aprendizagem Moodle	Cabo Verde
49	Aprender e estudar em casa	Cabo Verde
50	think!think!	Cambodia
51	Distance Education	Cambodia
52	E-Learning MoEYS	Cambodia
53	E-Learning MoEYS	Cambodia
54	MINESEC Distance Learning	Cameroon
55	Portail de la Renaissance du Tchad FHD	Chad
56	Chad Educational TV	Chad
57	EduChad	Chad
58	GoClass	Chad
59	Aprendo en línea	Chile
60	China Education Network Television	China

61	Chang An Shu Yuan	China
62	Smart Education of China (web)	China
63	Smart Education of China (app)	China
64	National Public Service Platform for Educational Resources	China
65	Colombia aprende	Colombia
66	Contenidos para aprender	Colombia
67	INSOR educativo	Colombia
68	Mi señal Colombia	Colombia
69	Profe en tu casa	Colombia
70	Classera Comoros	Comoros
71	Ecole à Domicile Congo TV	Congo, Rep.
72	Ecole à Domicile (EAD)	Congo, Rep.
73	Portal Educ	Costa Rica
74	Aprendo Pura Vida: learning passport	Costa Rica
75	Imaginecole	Cote d'Ivoire
76	Mon école à la maison: Primaire	Cote d'Ivoire
77	Mon école à la maison:Préscolaire	Cote d'Ivoire
78	Mon école à la maison: Lycée	Cote d'Ivoire
79	Mon école à la maison: Collège	Cote d'Ivoire
80	Nikola Tesla Portal	Croatia
81	Skola za Život	Croatia
82	Cuba educa	Cuba

83	Mi clase TV	Cuba
84	Canal educativo	Cuba
85	E-learning platform Menfop	Djibouti
86	Plateforme des Dashboards	Djibouti
87	Digital Classroom	Dominica
88	Dominica Library and Information Service	Dominica
89	Espacio virtual de soporte para educación no presencial	Dominican Republic
90	Biblioteca virtual	Dominican Republic
91	Inteligencia Quisqueya	Dominican Republic
92	Radio televisión educativa dominicana	Dominican Republic
93	Ma classe	Congo, Dem. Rep.
94	Ma classe App	Congo, Dem. Rep.
95	Educar Ecuador	Ecuador
96	Educa	Ecuador
97	Elearning	Egypt, Arab Rep.
98	MOE E-Learning	Egypt, Arab Rep.
99	E-Learning Portal	Egypt, Arab Rep.
100	Egyptian Education Platform	Egypt, Arab Rep.
101	Edmodo	Egypt, Arab Rep.
102	hesas	Egypt, Arab Rep.
103	Discovery Education	Egypt, Arab Rep.
104	Electronic Vocational Training and Development Platform	Egypt, Arab Rep.

105	Live broadcast platform	Egypt, Arab Rep.
106	MoE Egypt Edu Stream	Egypt, Arab Rep.
107	Mi portal	El Salvador
108	Enlaces con la educación	El Salvador
109	Escuela en mi casa	Equatorial Guinea
110	E-learning & D-Library	Ethiopia
111	Learning Hub (web)	Fiji
112	Telecom Learning Hub (app)	Fiji
113	Ministry of Education, Heritage and Arts	Fiji
114	Gabon5000	Gabon
115	Apprendre à la maison Radio	Gabon
116	Apprendre à la maison TV	Gabon
117	Xgest mobile	Gabon
118	Xgest Web	Gabon
119	ilearngambia	Gambia, The
120	Virtual Classroom	Gambia, The
121	EL.GE	Georgia
122	Email.Mes	Georgia
123	Edmodo Ghana	Ghana
124	icampusghana	Ghana
125	National Teaching Council (NTC) E-learning Platform	Ghana

126	Photodentro- Greek National Aggregator of Educational Content	Greece
127	eBooks	Greece
128	Mathainoumeasfaleis	Greece
129	M-Star Learning Support Platform	Grenada
130	Aprendo en casa y en clase	Guatemala
131	Mineduc Digital	Guatemala
132	DIGECADE	Guatemala
133	M'Booré	Guinea
134	Imaginecole	Guinea
135	MoE Quiz Platform	Guyana
136	MoE website	Guyana
137	PR@TIC	Haiti
138	Lakou Jou	Haiti
139	Educatrachos	Honduras
140	STVE TELEBÁSICA	Honduras
141	Educatrachos-Pasaporte de aprendizaje (Learning Passport)	Honduras
142	DIKSHA (Web)	India
143	DIKSHA (App)	India
144	SWAYAM (Web)	India
145	SWAYAM (App)	India
146	Virtual Labs	India

147	O Labs	India
148	E-Pathshala (Web)	India
149	E-Pathshala (App)	India
150	National Digital Library of India	India
151	VidyaDaan	India
152	Rumah Belajar "Home Learning Portal" (web)	Indonesia
153	Rumah Belajar "Home Learning Portal" (mobile)	Indonesia
154	Radio Edukasi	Indonesia
155	m-edukasi	Indonesia
156	Sima Education Network	Iran, Islamic Rep.
157	Shadweb.iranlms.ir	Iran, Islamic Rep.
158	Educational channel on YouTube	Iraq
159	Iraq educational platform	Iraq
160	Newton	Iraq
161	MOEYI Book Fusion	Jamaica
162	Educate Jamaica	Jamaica
163	MoEYI eResources App	Jamaica
164	Primary Exit Profile	Jamaica
165	NoorSpace (web page)	Jordan
166	NoorSpace Jordan (mobile app)	Jordan
167	Darsak	Jordan
168	Darsak (mobile app)	Jordan

169	Teacher Training Platform	Jordan
170	JoLearn	Jordan
171	JoLearn (mobile app)	Jordan
172	Learning Bridges	Jordan
173	Jordan's Youth Learning Passport	Jordan
174	Learning Passport (mobile app)	Jordan
175	National Open Educaton Platform	Kazakhstan
176	Kundelik (Web)	Kazakhstan
177	Kundelik (App)	Kazakhstan
178	Samgau Digital- Learning Passport	Kazakhstan
179	Elimika	Kenya
180	Kenya Education Cloud	Kenya
181	Kribati Learning Passport	Kiribati
182	Learning Passport Kosovo	Kosovo
183	MOE Channel	Kuwait
184	Seraj	Kuwait
185	Seraj (mobile app)	Kuwait
186	IBILIM.KG	Kyrgyz Republic
187	Kitep	Kyrgyz Republic
188	Bilimduu Muun - Learning Passport	Kyrgyz Republic
189	Open Library - "Ачык китепкана"	Kyrgyz Republic
190	Khang Panya Lao (web)	Lao PDR

191	Khang Panya Lao (mobile app)	Lao PDR
192	Tele Liban E-learning	Lebanon
193	Mawaridy	Lebanon
194	Digital Library	Lebanon
195	School-ly	Libya
196	Kilasy pour tous	Madagascar
197	Bibliothèque numérique	Madagascar
198	MoE Malawi COVID-19 Support Group (on NotesMaster)	Malawi
199	TTC Digital Library	Malawi
200	TTC Malawi	Malawi
201	Digital Educational Learning Initiative Malaysia (Delima 2.0)	Malaysia
202	Eduweb TV	Malaysia
203	eLATiH	Malaysia
204	Filaa	Maldives
205	TeleKilaas by MOE Maldives	Maldives
206	Google Classroom	Maldives
207	So Kalan TV	Mali
208	So Kalan	Mali
209	Imaginecole	Mali
210	Plateforme TAALIMI	Mauritania
211	TAALIMI (mobile app)	Mauritania
212	TELEsecundaria	Mexico

213	TELEsecundaria	Mexico
214	Aprende en casa	Mexico
215	CONALITEG	Mexico
216	CONALITEG	Mexico
217	Nueva escuela mexicana	Mexico
218	Pasaporte al aprendizaje	Mexico
219	FSM Education Distance Learning	Micronesia, Fed. Sts.
220	Educati Online	Moldova
221	Mongolian Education Learning System (MEDLE) - web	Mongolia
222	Mongolian Education Learning System (MEDLE) - app	Mongolia
223	UCI DOMA	Montenegro
224	Digital Naskola	Montenegro
225	Skolski Portal	Montenegro
226	ABHATOO	Morocco
227	TelmidTice	Morocco
228	e-takwine-tanmia	Morocco
229	douroussi	Morocco
230	Massar Moudaris	Morocco
231	Massar Moutamadris	Morocco
232	Instituto de Educaçao Aberta e à Distância	Mozambique
233	DAE-Myanmar School Education Lessons (YouTube Channel)	Myanmar

234	MoE Radio Lessons	Myanmar
235	Namibia Reads	Namibia
236	Learn On One	Namibia
237	E-Paath	Nepal
238	E-Pustakalaya (Web)	Nepal
239	E-Pustakalaya (App)	Nepal
240	Learning Portal	Nepal
241	Nicaragua Educa	Nicaragua
242	Imaginecole	Niger
243	TDP Resource Hub	Nigeria
244	Nigeria Learning Passport (Web)	Nigeria
245	Nigeria Learning Passport (App)	Nigeria
246	Eduino Platform	North Macedonia
247	Mawred - Youtube Channel	Oman
248	MoE ICT platform	Oman
249	eLearn (Web)	Pakistan
250	eLearn (App)	Pakistan
251	Taleem Ghar (App)	Pakistan
252	Taleem Ghar (Web)	Pakistan
253	E-taleem	Pakistan
254	Educa Panama	Panama
255	Biblioteca Digital	Paraguay

256	Tu escuela en casa	Paraguay
257	Aprendo en casa	Peru
258	Aprendo en casa	Peru
259	Peru Educa	Peru
260	DepEd Commons	Philippines
261	DepEd Learning Resource Portal	Philippines
262	DepEd Climate Change	Philippines
263	Minecraft: Education Edition	Philippines
264	DepEd YouTube Channel	Philippines
265	Telescoala	Romania
266	Educred	Romania
267	Manuale	Romania
268	REB elearning (YouTube Channel)	Rwanda
269	REB elearning platform	Rwanda
270	Min of Education SLU Moodle Platform	Saint Lucia
271	Education Alive	Saint Vincent and the Grenadines
272	MESC Moodle	Samoa
273	Learning Passport	São Tomé and Príncipe
274	Future Gate	Saudi Arabia
275	Noor	Saudi Arabia
276	iEn Ethraia	Saudi Arabia

277	Madrasati	Saudi Arabia
278	IEN Portal (mobile app)	Saudi Arabia
279	Imaginecole	Senegal
280	Apprendre à la maison	Senegal
281	Canal Education Senegal	Senegal
282	PROMET	Senegal
283	PROMET Mobile	Senegal
284	Tele Ecole	Senegal
285	Learning Passport	Serbia
286	Portal of the Ministry of Education for Online Teaching	Serbia
287	MBSSE E-learning resources	Sierra Leone
288	Sierra Leone Learning Passport	Sierra Leone
289	iResource	Solomon Islands
290	Western Cape Government E-learning portal	South Africa
291	DBE Cloud	South Africa
292	ECD Mobi	South Africa
293	DBE Learners	South Africa
294	e-Thaksalawa	Sri Lanka
295	Nenasa Educational Mobile App	Sri Lanka
296	Rawafid educational portal	State of Palestine
297	Sudanese Electronic School	Sudan
298	Syrian Educational Platform	Syrian Arab Republic

299	Syrian MoE YouTube Channel	Syrian Arab Republic
300	Ravşanfikr	Tajikistan
301	MoEVT E-learning System	Tanzania
302	Office of the Private Education Commission (Digital Learning Centre)	Thailand
303	Digital Education Excellence Platform	Thailand
304	National TV and Radio Broadcasting Platform (Office of the Broadcasting Commission television business and the National Telecommunications)	Thailand
305	Timor-Leste Learning Passport	Timor-Leste
306	Eskola Ba Uma (YouTube Channel)	Timor-Leste
307	Eskola Ba Uma (app)	Timor-Leste
308	Imaginecole	Togo
309	TeleEduTogo	Togo
310	TeleEduTogo App	Togo
311	HAMA e-learning platform (HeLP)	Tonga
312	Student E Resources	Trinidad and Tobago
313	School Learning Management System	Trinidad and Tobago
314	MoE Virtual Class on Notesmaster	Trinidad and Tobago
315	CNTE	Tunisia
316	The Virtual Educational Library	Tunisia
317	Watania Educative YouTube Channel	Tunisia
318	EBA (Web)	Turkey

319	EBA (App)	Turkey
320	Kolibri	Uganda
321	MON Youtube Channel	Ukraine
322	All Ukrainian School Online	Ukraine
323	Alef Education	United Arab Emirates
324	EduShare	United Arab Emirates
325	Al Diwan	United Arab Emirates
326	Al Diwan (mobile app)	United Arab Emirates
327	Abu Dhabi Activity Platform	United Arab Emirates
328	Training Management	United Arab Emirates
329	Plan Ceibal	Uruguay
330	Crea	Uruguay
331	Crea	Uruguay
332	Matlific	Uruguay
333	Plataforma de lengua	Uruguay
334	Biblioteca País	Uruguay
335	TV educativa	Uruguay
336	Edu Portal	Uzbekistan
337	Maktab	Uzbekistan
338	Ministry of Education & Training SoundCloud	Vanuatu
339	Ministry of Education & Training	Vanuatu
340	Cada familia una escuela	Venezuela, RB

341	MOET E-learning Platform	Vietnam
342	MoGE-Notesmaster program	Zambia
343	The Learning Passport	Zimbabwe
344	MoE radio lessons	Zimbabwe
345	Banco de recursos educativos	Andorra
346	ABC TV Education	Australia
347	Scootle	Australia
348	Digital Learning Packs (NWS Government)	Australia
349	Resources, Anywhere: Digital Backpack (ACT Government)	Australia
350	ARC Education (State of Victoria)	Australia
351	FUSE (State of Victoria)	Australia
352	Edu Thek	Austria
353	Edu Tube	Austria
354	digi.konzept MOOC	Austria
355	digi4school: Digital Library	Austria
356	Happi	Belgium
357	Portail de l'enseignement en fédération Wallonie-Bruxelles	Belgium
358	E-Classe	Belgium
359	KlasCement	Belgium
360	Alberta Education	Canada
361	LearnAlberta Beta	Canada
362	Curriculum Nova Scotia	Canada

363	My learning at home: Manitoba	Canada
364	Angirrami Illinniarniq Nanavut	Canada
365	Learn at Home/Apprendre à la maison	Canada
366	Keep Learning	Canada
367	Open School /Ecole ouverte	Canada
368	Matières à emporter	Canada
369	Saskatchewan	Canada
370	Ucitelka	Czech Republic
371	Edu Česká Televize	Czech Republic
372	Nadalku	Czech Republic
373	iVysílání České televize	Czech Republic
374	ČT Děčko	Czech Republic
375	Přijímačky bez obav	Czech Republic
376	HistoryLab	Czech Republic
377	iŠkolství.cz	Czech Republic
378	emu.dk	Denmark
379	UddannelsesGuiden	Denmark
380	Opintopolku.fi portal	Finland
381	Yle Lapset	Finland
382	Yle Etäkoulu (Yle Distance School)	Finland
383	Lumni	France
384	Deutsch für Schulen CNED	France

385	English for School, CNED	France
386	Jules, à tes côtés pour tes devoirs	France
387	Classe virtuelle CNED	France
388	MaSpé Maths CNED	France
389	MobiCNED	France
390	Bayerischer Rundfunk: Schule daheim -Online lernen	Germany
391	Bildungsserver Berlin-Brandenburg	Germany
392	Bildungsserver Mecklenburg-Vorpommern	Germany
393	Thematic portal: online-supported learning	Germany
394	Hamburger Bildungsserver	Germany
395	Hessischer Bildungsserver	Germany
396	Mebis- Landesmedienzentrum Bayern	Germany
397	ODiMSaar - the online media library	Germany
398	Mundo (The open education media library of the federal states)	Germany
399	Thüringer Schulportal	Germany
400	Educational Resources online platform	Hong Kong SAR, China
401	Education Bureau Online Self-learning Courses	Hong Kong SAR, China
402	Oktatási Hivatal	Hungary
403	Digitalis oktatás	Hungary
404	The Public Education Registration and Study Basic System (KRÉTA)	Hungary
405	Up2University – Digital Educational Environment	Hungary

406	Tankönyvek és segédletek	Hungary
407	Menntamalastofnun Fraedslugatt	Iceland
408	Scoilnet	Ireland
409	PDST	Ireland
410	Ministry of Education YouTube Channel	Israel
411	National broadcasting system YouTube Channel	Israel
412	Pedagogical – Portal of Teaching Staff	Israel
413	Student Portal	Israel
414	WEBEX	Israel
415	INDIRE	Italy
416	RAI scuola	Italy
417	Steam Library	Japan
418	Learning inovation	Japan
419	Future Classroom	Japan
420	NHK for School	Japan
421	EBS	Korea, Rep.
422	KERIS e-learning	Korea, Rep.
423	KERIS Wedorang	Korea, Rep.
424	On-school	Korea, Rep.
425	Science all	Korea, Rep.
426	CareerNet	Korea, Rep.
427	Knowledge Spring (knowledge wall)	Korea, Rep.

428	Naujienos	Lithuania
429	Idomiosios pamokos	Lithuania
430	Schouldoheem.lu	Luxembourg
431	Enfance Jeunesse	Luxembourg
432	Education Lu	Luxembourg
433	Oli education	Luxembourg
434	Lesopafstand	Netherlands
435	Wikiwijs	Netherlands
436	Learning from home	New Zealand
437	Home Learning TV	New Zealand
438	Ki te Ao Mārama	New Zealand
439	Any questions	New Zealand
440	NR Skole	Norway
441	Zintegrowana Platforma Edukacyjna (ZPE)	Poland
442	ZPE Mobile	Poland
443	Skola Z	Poland
444	Apoio a escolas	Portugal
445	Estudo em casa	Portugal
446	Estudo em casa	Portugal
447	RTP Ensina	Portugal
448	Viki	Slovak Republic
449	ucimenadialku.sk (We Teach Remotely Portal)	Slovak Republic

450	SIO	Slovenia
451	Aprendo en casa online	Spain
452	Aprendo en casa TV	Spain
453	Pro comun	Spain
454	Pro comun	Spain
455	INTEF	Spain
456	Proyecto Edia- CEDEC	Spain
457	Educlan	Spain
458	Skola Hemma	Sweden
459	Educa agency	Switzerland
460	BBC Bitesize	United Kingdom
461	Oak Academy	United Kingdom
462	NCES: Kids' Zone	United States
463	DoDSTEM: Department of Defense	United States
464	Classroom Materials at the Library of Congress	United States
465	NASA STEM Engagement	United States
466	Smithsonian Science Education Center	United States
467	Data in the classroom: National Oceanic and Atmospheric Administration	United States
468	AK Learns: Alaska Department of Education and Early Development	United States
469	Digital DE: Government of Delaware	United States
470	Florida Virtual School: Florida	United States

471	MOOSE: Maine Online Opportunities for Sustained Education	United States
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The full dataset of digital learning platforms can be found [here](#). The datasheet includes the authors' organisation of the dataset under key indicators. Readers can use the datasheet to replicate or conduct their own analysis.