

Nepal's EdTech Landscape

Baseline Technical Note Utilizing the
EdTech Readiness Index



PICTURE © UNICEF Nepal/2017/NShrestha

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I. INTRODUCTION

What is the EdTech Readiness Index?

The EdTech Readiness Index (ETRI) is a global multi-dimensional tool that collects country level data about the extent to which education and technology (EdTech) is integrated into the broader education system (policies and practices).

The goal of the ETRI is to offer a rich source of information to key organizations operating within the country such as the ministry of education, multi-lateral organizations, and local administrations making investments in EdTech to: (a) identify good practices and areas where EdTech policies can be further strengthened, and (b) monitor progress and the status of EdTech implementation as countries take action. The ETRI goes beyond measuring the availability of devices and the level of connectivity to capture key elements of the larger education-technology ecosystem in a country, guiding efforts to reduce inequalities and increase learning opportunities. The global nature of the instrument allows for benchmarking and to set targets that are globally comparable.

The EdTech Readiness Index Pillars

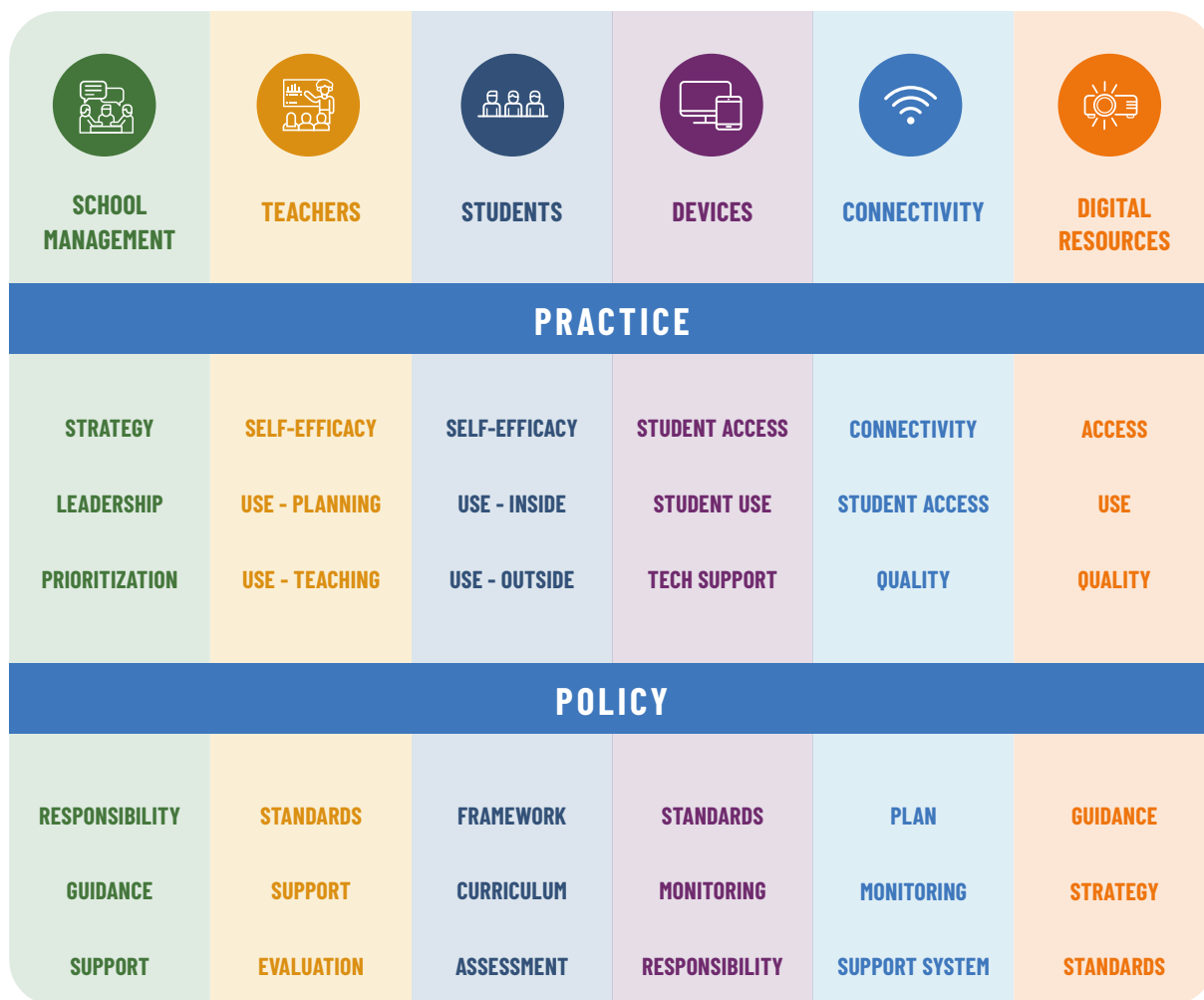
The ETRI indicators on practices and policies have been developed for 6 overarching pillars, which are considered to play a role in the education-technology ecosystem: School Management, Teachers, Students, Devices, Connectivity and Digital Education Resources (Figure 1). In essence,

ETRI is organized around the EdTech practices (or service delivery) and policies that could impact a country's desired access schooling and learning outcomes. The practices include the activities and conditions associated with the use of information and communications technology (ICT) in schools, considering basic inputs and infrastructure (devices, connectivity, and digital educational resources). Practices also includes the conditions to support and foster the integration of ICT into teaching and learning associated with the school management team, teachers, and students. The policies include how the system defines, articulates, and implements strategies to foster desired practices. The ETRI captures both, de jure policies in place, i.e., the legislation that exists and de facto policies, i.e., to what extent policies, strategies and laws are known and implemented by actors at the school level.¹

the ETRI identifies and measures the different factors that are key for EdTech to be effective, which can help governments pinpoint where there is room for improvement, and signal to countries their overall level of readiness to deploy effective EdTech policies.

¹ For more information about ETRI, visit the [ETRI website](#)

Figure 1. ETRI Overarching Pillars



Practice Pillars

Pillar 1, School Management: At the school level, the evidence points to two key elements in fostering the use of digital technologies in teaching and learning: a) the integration of ICT into the school's vision and strategic plans, and b) the consensus that principals' leadership approaches and practices, which together that aim to realize the vision and define the goals for e-learning have a positive effect in the and as well as the use and integration of digital technologies into teaching and learning.

Pillar 2, Teachers: The key factors associated with the use of ICT in the classroom are teachers' perception of their ability to use ICT for pedagogies (planning and preparation, teaching, and learning, and learning assessment), strategies to teach digital competences to students, and the extent of collaboration among teachers.

Pillar 3, Students: Based on the evidence, the student's indicator assesses students' use of ICT tools in and outside the school as well as students' sense of self-efficacy.

Pillar 4, Devices: Based on the evidence, the device's indicator assesses maintenance and the readiness of using digital devices (e.g., desktops, laptops, tablet devices, or smartphones) in teaching and learning and the availability and accessibility of devices within schools.

Pillar 5, Connectivity: The availability of and access to good quality Internet connection, especially by the teachers and students, is a basic enabling condition to realize the potential of ICT in teaching and learning.

Pillar 6, Digital Education Resources: Another key factor associated with the use of ICT in the

classroom is the availability of digital education resources (e.g., teaching, learning, and research materials; educational platforms; learning content, or digital learning games) that are of technical

quality, inclusive, responsive (can be used on multiple devices), and aligned with the curriculum and pedagogical practices defined by the school.

Policy Pillars

Pillar 1, School Management: The roles and responsibilities of the school management team are to: a) define the role of ICT in the schools' strategic plans; b) implement strategies for the organization wide integration and effective use of digital technologies in respect of its educational mission and activities; and c) monitor implementation.

Pillar 2, Teachers: A key driver for the effective use of digital technologies is teachers' ability to integrate them meaningfully into daily teaching practice and tailor them to specific subjects and specific activities within those subjects. Supporting teachers and strengthening their capacity to do so requires policies that a) define a framework of digital competencies for teachers, b) implement effective teacher professional development (TPD) strategies programs to support teachers to acquire those competencies, and c) incorporate incentives for teachers to participate in TPD programs. an evaluation system.

Pillar 3, Students: To support the use of EdTech by students, policies should define a competency framework that goes beyond just technical skills. It is relevant to incorporate 21st century skills, particularly digital competencies in the curriculum (across grades and subject areas) and define strategies to develop them and a mechanism to evaluate them.

Country Background

Nepal has made significant progress in education access and gender parity, across all levels in the last decade. Between 2010 and 2020, the gross enrolment rate at the early childhood education and development (ECED)/PPE level increased from 66.2 percent to 87.6 percent, net enrollment rate (NER) increased from 83.2 percent to 94.7 percent at the basic level, and

Pillar 4, Devices: EdTech policies should provide guidance on the expected standards that schools should meet to ensure enough availability and access of ICT devices, including: a) type of organizational arrangements to ensure the availability of devices, b) conditions for the provision of technical and pedagogical support; and c) requirements for the administration and maintenance of technological infrastructure.

Pillar 5, Connectivity: EdTech policies should define strategies to ensure equitable and quality access to Internet, including: a) definition of strategies to ensure the availability of Internet in both, urban and rural schools; b) mechanism/strategy to moderate the cost of its use in education to make it affordable; and c) standards for the quality of the connectivity to Internet and a strategy to meet them.

Pillar 6, Digital Education Resources: The provision of digital educational resources require that governments define robust but flexible standards that ensure their quality and ongoing mechanisms to evaluate them. Some of the key aspects to consider are a) technical quality: functional and usability aspects; b) inclusiveness: free of any cultural, gender or other form of bias; c) responsive: possible to be used in multiple devices, including mobile phones; and d) curriculum alignment: content and pedagogy.

from 24.0 percent to 50.9 percent at the secondary level. Nepal has also made commendable progress along the gender dimension and has achieved gender parity in basic and secondary education.

Learning levels remain low and have likely declined further due to CoVID-19 school closures. As per the National Achievement for Student

Achievement in 2018, only 28 percent of Grade 5 students demonstrated grade-appropriate skills and knowledge in math, and only 45 percent performed at the proficient or advanced level in Nepali². Learning is expected to fall further because of COVID-19 shutdowns. A study conducted in 2020 shows that nearly 35 percent of Grade 5 students could not do two-digit addition with carryover. For a majority of students (77 percent), school textbooks had been the major form of remote learning during school closures.³ Data collected from another study,⁴ conducted in 2022 in three local governments (LGs) in Nepal, show that more than 70 percent of children in Grades 4 and 5 were not able to read a Grade 2-level story. For Nepal, the learning adjusted years of schooling (LAYS) was 7.2 years before the pandemic.⁵ Even conservative estimates su-

ggests that LAYS will likely drop to 6.3 years—a 0.9-year drop.⁶

School education is one of the sectors that is most devolved in the new federal structure. Responsibility for basic (early childhood education and development [ECED] - Grade 8) and secondary education (Grade 9–12) has shifted to the local level. The provincial governments are mainly responsible teacher training, while the federal ministry continues to play a prominent role guiding education policy and setting standards. The Local Government Operations Act 2017, which provides further details on the functions of the LG, places 23 functions related to planning, monitoring, and management of basic and secondary education under the jurisdiction of LGs.

EDUCATION TECHNOLOGY IN NEPAL: NATIONAL SYSTEM AND CONTEXT⁷

ICT Regulations

In 2013, the Ministry of Education, Science and Technology (MoEST) developed the ICT in Education Master Plan (2013-2017) marking the inception of the first nationwide ICT plan in education. This plan centered around four key components: enhancing ICT infrastructure and connectivity, strengthening human resources, fostering the development of digital learning materials, and leveraging ICT to enhance the overall education system.⁸

In 2015, the government prepared the ICT policy to guide overall ICT-related plans, programs, and activities in different sectors. For the education sector, the policy set three policy statements: a) Expanding the use of ICT in education to improve quality in education and training; b) Promoting e-learning in schools as well as lifelong learning; and c) Implementing the ICT in Education Master Plan effectively. Similarly in 2015, the govern-

ment approved the Broadband Policy to improve connectivity and access to internet and expand the use of ICT in different sectors of development including a strategy to provide internet access to all schools.

The ICT and Broadband policies provided the basis for the Digital Nepal Framework (2019) which promotes digitalization of the country with the objectives of driving socioeconomic growth by focusing on eight sectors: Digital foundation, agriculture, health, education, energy, tourism, finance, and urban infrastructure. Out of the total 80 digital initiatives identified to digitalize Nepal, eight are related to the education sector: Smart Classrooms, Open Learning Exchange Nepal, Online Learning Platform, Rent-a-Laptop Program, EMIS, Centralized Admission System, Biometric Attendance Systems and CCTV Cameras, and Mobile learning centers in rural areas.

²NASA 2018 Grade 5 report.

³Radhakrishnan, K; N. Angrist; P. Bergman; C. Cullen; M. Matsheng; A. Ramakrishnan; S. Sabarwal; U. Sharma 2021. *Learning in the Time of COVID-19: Insights from Nepal*. World Bank, Washington, DC.

⁴Radhakrishnan, K; U. Sharma; S. Gupta. 2022. *Teaching at the Right Level: Experience from Nepal*.

⁵World Bank. 2018. *The Human Capital Project*. Washington, DC: World Bank

⁶Sharma, U., M. Sherpa, and K. Radhakrishnan. 2021. "Learning Loss as a Result of COVID-19 in Nepal." Unpublished Manuscript. Washington, DC: World Bank.

⁷Prepared by the local consultant, edited by the ETRI team.

⁸MOE (2013). *ICT Master Plan, 2013-2017*. Kathmandu, MOE.

The ICT in Education Master Plan and the School Sector Development Program (2016-2022) include programs to provide grants to schools for ICT infrastructure, such as connection charges, and cost for computers and projectors. The most recent ICT in Education Master Plan (2021-2026) includes digital materials for quality education, ICT infrastructure for equitable access, human resource development, and governance and management including EMIS. The government's Fifteenth Periodic Plan (2019/2020-2023/2024) focuses on developing digital learning materials to assist the teaching and learning process. Besides, the Nepal Telecommunication Authority (NTA), along with expanding connectivity, has supported more than 5,000 secondary schools with ICT infrastructure.

Both the federal governments and the local administrations have allocated school grants to facilitate internet access, procure essential computers, and cover internet service fees. However, it is worth noting that only approximately 70 percent of public secondary schools have received these basic ICT grants. Moreover, the Nepal Telecommunication Authority, via rural telecommunication funds, has been extending support to schools with internet connectivity and ICT infrastructure. Furthermore, certain provincial and local governments have also been granting funds for ICT-related initiatives in selected schools. In addition to government efforts, non-government agencies, philanthropic organizations, commercial banks, corporate agencies, and individual

Electricity, Devices and Connectivity

Due to the difficult and uneven geographical structure of the country along with challenges to provide electricity across the board, internet access is difficult to obtain in several communities and schools. For instance, the 2021 EMIS data shows that only 50 percent of the 28,833 public schools have electricity supplies, 42 percent (about 12,000 schools) have computers and ICT equipment, and only 19 percent (about 5,400 public schools) are connected to the internet.⁹ Unstable and weak connection is another pro-

blem related to internet connectivity. In terms of use, out of the 12,000 schools that have computers according to the same source, only 37 percent (about 4,400 schools) reported using them for teaching and learning, 36 percent use them for administrative work, while the remaining 27 percent of schools do not use them at all.¹⁰ The current school level curriculum of grades 6 to 8 includes some ICT-related contents as a part of the science and technology subjects.

contributors also contribute to supplying certain schools with ICT equipment.

The School Education Sector Plan (SESP) for period 2022-2031 prepared by the MoEST, which started in July 2022, covers all levels of public education including early childhood education (ECE), Basic Education, Secondary Education and Non-formal Education including Life-long learning. The SESP also covers seven cross cutting areas, namely, Curriculum and Evaluation, Teacher Preparation and Development, Equity and Inclusion, ICT in Education, School Meals and Nutrition, School Infrastructure, and Education in Emergencies and Crisis. For ICT in education the SESP indicates:

- a) Establishing an integrated educational ICT center.
- b) Developing the capacities of all teachers to use ICT for teaching and making basic ICT skills mandatory for new teachers.
- c) Developing interactive digital materials for different grades and subjects and making them easily accessible to students.
- d) Integrating basic ICT skills in different subjects.
- e) Providing basic ICT skills to all school-level students.

The implementation of the SESP has just begun from this fiscal year (July 2022) with a target of expanding ICT infrastructures and connectivity up to 20,000 public schools during the period SESP.

⁹ CEHRD (2021).

¹⁰ CEHRD (2021).

Use of ICT During the COVID-19 Pandemic

During the COVID-19 pandemic, Nepal adopted various alternative modes to delivery education, including supplying textbooks and printed materials to schools or students' home, as well as remote education alternatives using TV, radio, and an online platform. Furthermore, some municipalities and schools arranged mobile teachers or volunteers to support students in certain communities or group of households by gathering a small number of students in an open space following safety health protocol.

Distance Education. During this period, the CEHRD's distance education unit employed various methods to facilitate learning. Recorded lessons were broadcasted via a national TV channel and radio. Additionally, local municipalities and NGOs took the initiative to prepare and broadcast their own lessons through local radio or television platforms. Virtual online classes were conducted by numerous schools, higher education institutions, and teacher training centers, enabling interactive learning experiences. Furthermore, the CEHRD established a comprehensive learning portal where reading materials and recorded lessons were uploaded for easy access by students. In order to provide personalized guidance, several teachers utilized phone communication to connect with students and offer support throughout their learning journey.

Since the onset of the pandemic, the Curriculum Development Centre has been diligently producing and consistently uploading digital versions of school textbooks and other education resources. However, it is important to note that the availability of digital resources was restricted to certain subjects or topics, and the majority of these resources lacked interactivity. Additionally, the production of materials tailored for children with diverse disabilities posed significant challenges during this period.

It is presumed that only a minority of students were able to benefit of the distance education alternatives, resulting in the widening of educational inequalities during this period. Despite

efforts made to provide low or no-tech alternatives, such as distributing reading materials and conducting mobile classes, the potential impact on bridging the gap was limited. Nonetheless, it is believed that a substantial number of teachers had the opportunity to improve their digital skills and pedagogical practices in the digital realm.

Digital Materials. Digital copies of textbooks have been uploaded on the website of the Curriculum Development Center and the Education portal of the CEHRD (both are government agencies, working under the Ministry of Education, Science and Technology). The Curriculum Development Center has prepared limited digital resources in Math, Science and English subjects for Grades 6, 7 and 8 under the School Sector Development Program, 2016-2022, and a few textbooks are available in digitized form for the visually impaired. Private-sector organizations have also been developing some digital resources for students of different grades and subjects. Overall, digital resources are available in limited topics and most of the existing resources or tools are not interactive in nature, thus not providing space for discussion and presentation. Furthermore, there are challenges in producing materials suitable for children with different forms of disability.

Teacher Development and Teachers' practices. The competency framework for teacher training and professional development program encompasses eight areas of a teacher's competencies, with one specifically focusing on ICT skills. Some instructional content related to ICT has been incorporated into the teacher professional development courses delivered by Provincial Education Training Centers. However, there are certain limitations to consider. On one hand, these centers conduct teacher professional development programs in a phased manner, requiring teachers to wait for several years before participating. On the other hand, the current introductory course on ICT appears to have limited effectiveness in developing teachers' capacity to utilize ICT effectively in classroom teaching.

To address these concerns, the MoEST is actively working on the development of the Teacher Professional Support Guideline. The main objective of this guideline is to provide continuous support to teachers, ensuring the implementation of effective teaching and learning practices in classrooms.

EMIS and the use of ICT. Since the establishment of the Education Management Information System (EMIS) in Nepal in 1962, periodic educational statistics have been collected and analyzed. Since 2004, using school data collection forms, school-level educational statistics have been collected twice a year, which was named the “Flash Report”. Since then, flash data has been used in the planning and decision-making process. Microsoft Excel has been used to analyze flash data. In 2014, instead of paper-based survey forms, an electronic data transfer system was introduced, which was changed to

a web-based data entry system in 2018. The current web-based data collection system, called Integrated Education Management Information System (IEMIS) for school education, has a dedicated portal with access to each school with a unique ID. The EMIS section of the CEHRD has access to the web-based data collection which compiles, analyses, and prepares flash reports twice a year. The MoEST and the National Planning Commission use information from a flash report for planning and decision-making purposes. Besides, the University Grants Commission and CTEVT respectively collect higher education and CTEVT related EMIS and prepare reports.

The MoEST, and the CEHRD have access to EMIS information for all schools in the country, whereas schools, local government, education development and coordination units at district level, and provincial government have access to the web based IEMIS within their jurisdiction.

About this Technical Note

This technical note provides an overview of the ETRI implementation in Nepal, showcasing the baseline results collected by the end of 2022. The note is divided into four sections that cover: 1) Introduction and country background, 2)

Methodology of ETRI and data collection, 3) Results described along the six ETRI pillars, and 4) Summary and Policy Recommendations. These four sections are followed by an Appendix that provides links to additional relevant information.

II. METHODOLOGY

Data Collection Tools

The EdTech Readiness indicators are populated by data collected through two surveys: The School Survey and the Policy Survey.

The Policy Survey gathers data related to policies of ICT in education (de jure). The survey includes 43 questions related to the 6 pillars of the index, including a brief context report on the political framework of ICT in education. The data was gathered from interviews with Government officials from different institutions including the Centre for Education and Human Resource Development (CEHRD), Curriculum Development Centre (CDC), and the Ministry of Education Science and Technology (MOEST). Furthermore, different sources were consulted to complete this survey, including the National Curriculum Framework for School Education, an EMIS Report, National Policy Documents (science and broadband) and the ICT policy and Master Plans.

The School Survey collects crucial data regarding school practices and the implementation of

specific policies, which are deemed vital in facilitating the seamless integration of EdTech within the education system. In doing so, the survey captures the de facto (in practice) implementation of the policy frameworks as they relate to education and technology in schools. The school survey includes around 48 questions structured around the 6 pillars. It was implemented remotely by phone, primary from principals, some of which had preliminary consultations with grades 5 and 9 content course teachers as well as the ICT teacher, when available. The survey took on average 40 minutes to administer and the data collection started in August 2022.

While the policy survey was administered by a local and experienced consultant with extensive government experience, the school survey was managed by a local firm named Nepal Development Research Firm (NDRI). For more details about the survey tools see Appendix 1.

Description of the Sample

The school survey was conducted in 329 schools across the country, ensuring a nationally representative sample. The schools were retrieved into three categories: public and private; urban and rural; and grade level (grades 5 and 9). Table 1 presents a breakdown of the sample based on the stratification level, while Table 2 illustrates the distribution of the sample across provinces.

Table 1. Description of the Sample of Schools by Sampling Strata

DESCRIPTION OF THE SAMPLE	N
GRADE STRATUM	
Grade 5 only	124
Grade 9 only	4
Grade 5 and Grade 9	201

LOCATION STRATUM	
Urban	169
Rural	160
TYPE STRATUM	
Public	170
Private	159
TOTAL SAMPLE	329

Table 2. Description of the Sample of Schools by Province

DESCRIPTION OF THE SAMPLE	N
Bagmati	49
Gandaki	20
Karnali	13
Lumbini	68
Madhesh	67
Province 1	68
Sudurpaschim	44
TOTAL	329

Note. Province was not used as stratum for the sampling of schools.

Presentation of the Results

The survey responses are consolidated into indicators and sub-indicators, which are then assigned scores ranging from 1 (indicating the worst) to 5 (indicating the best).¹¹ The results are color-coded to provide a clear understanding of the system's strengths and weaknesses (see next table). It's important to note that the current thresholds used for each color are preliminary and will be reevaluated after the ETRI pilot phase in 2023.

SCORE RANGE	COLOR	DATA INDICATE THAT PERFORMANCE AND THE QUALITY OF THE PRACTICE/POLICY...
1 – 2.99	Need Improvement	...are not satisfactory, and a series of improvements are needed.
3 – 3.99	Caution	...can be improved. Although is not in a critical stage, a series of actions will be needed to achieve a satisfactory level.
4 – 5	On Target	...are satisfactory to great extent.

¹¹ For more details on how each of the indicators are computed see "Metadata on the indicators of the EdTech Readiness Index (ETRI)".

All the results are compared between:

- **Practices** (what is implemented in the schools) and de facto policies (how policies are understood on the ground)
- **De facto policies** (how policies are understood on the ground) versus **de jure policies** (what policies/regulations/strategies are available)

All statistics presented in the result section, are weighted to make the results nationally representative.

III. RESULTS

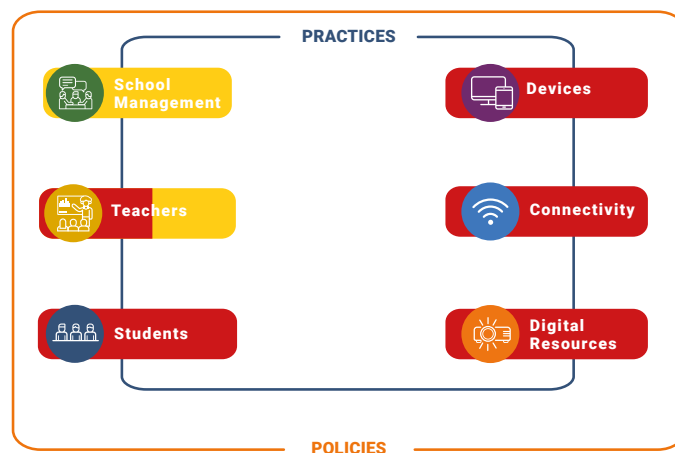
Summary of Findings Across the Six Pillars

- Results show progress in the **School Management** pillar and in both policies and practices, but there is still room for improvement specially at the policy level. The findings reveal the presence of plans at the school level aimed at integrating ICT into teaching, as well as and sense of prioritization at the practice level. However, at the policy level there is a lack of a comprehensive guidance for incorporating ICT in teaching and learning, and insufficient support in the form of teacher training.
- At the policy level, both the **Teachers and Students pillars** exhibit low readiness due to the absence of competence standards, insufficient integration of ICT activities in the curriculum, and the absence of support systems in the form of professional

development and assessments for ICT competences. While teachers display a high level of self-efficacy and some utilization of ICT for lesson planning, the use of ICT for teaching and assessment remains significantly restricted, resulting in minimal ICT usage among students.

- The implementation of the **Devices, Connectivity and Digital Resources pillars** exhibits limited development in both policies and practices. The absence of standards, guidance, and support systems at the policy level, affects accessibility and utilization at the practice level.
- The overall findings suggest that enhancing the EdTech Readiness of Nepal requires efforts in improving all six pillars, with a particular emphasis on five of them.

Figure 2. Country Level Results for the Six ETRI Pillars



SUMMARY OF THE FINDINGS ACROSS SUB-PILLARS

Examining the sub-pillar levels, sheds light on specific areas that require improvement.

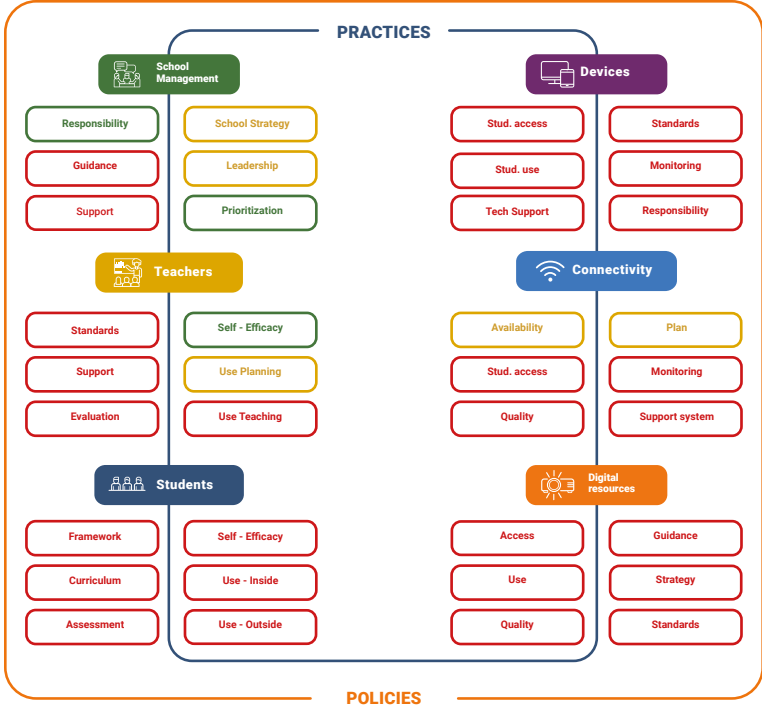
In terms of **practices**, the following areas present the greatest weaknesses:

- The utilization of education technology by Teachers for instructional purposes, in comparison to its implementation in planning and management.
- The incorporation of EdTech by students, both within and beyond the classroom environment.
- The availability of devices and reliable connectivity for students, as well as the quality of internet connections.
- The accessibility and utilization of digital educational resources (DER), along with the overall quality of these resources.

Regarding **policies**, these could be enhanced by:

- Providing comprehensive guidance and support to educators to effectively integrate ICT into teaching and learning.
- Establishing an ICT competency framework for teachers, accompanied by robust training programs and regular evaluations to measure and enhance their ICT competencies.
- Establishing clear standards for students' ICT proficiency and implementing regular assessments to measure their competence in using digital tools.
- Developing guidance, strategies and benchmarks for digital resources, devices, and connectivity to ensure consistency and quality in their usage.

Figure 3. Country Level Results for the ETRI Sub-Pillars





PILLAR 1. SCHOOL MANAGEMENT

1.1 WHAT DOES SCHOOL MANAGEMENT MEASURES AND WHY DOES IT MATTER?

The *School Management Practices* indicator assesses the readiness of the school management to use and promote the use of ICT in education. The indicator tracks three aspects: 1) the existence of an ICT strategy, 2) the presence of leadership practices to ensure a broader set of stakeholders are part of the ICT strategy, and 3) the prioritization of ICT as it relates to student outcomes.

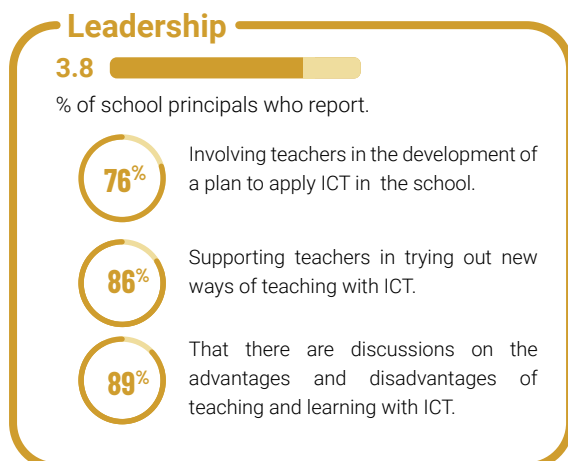
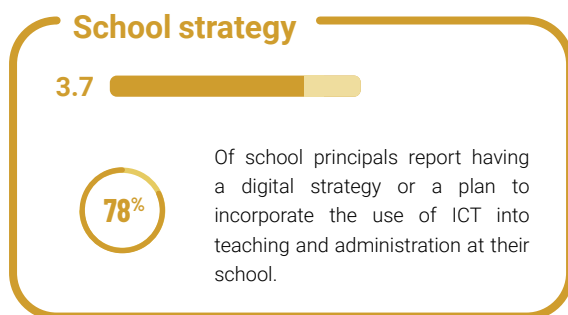
The *School Management de facto Policies* indicator measures the respondents' awareness of the school management to use and promote the use of ICT in education. The indicator monitors three aspects: 1) the responsibility assigned for the integration of the use of ICT if there is an ICT strategy, 2) the presence of guidance for incorporating ICT into teaching and learning, and 3) the support through training.

The results are presented in Figure 4 and summarized below:

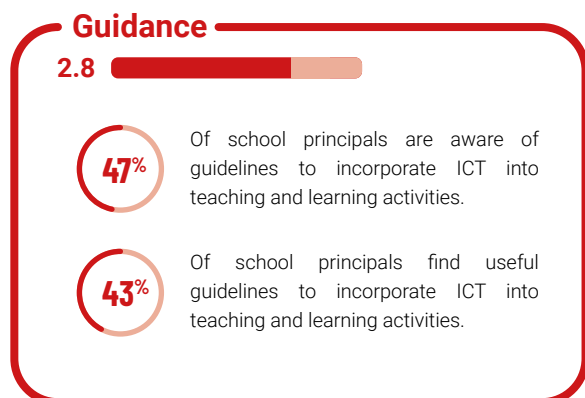
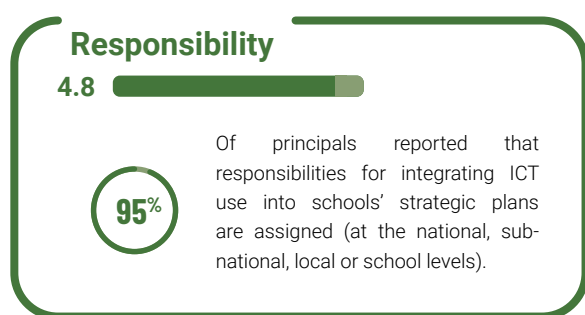
- Overall, “School ICT Strategy” and “Leadership” indicators suggest that the country is moving toward a better adoption of ICT at their schools.
- Most school principals report that the “Prioritization” of ICT skills, along with the “Responsibilities” for the integration of ICT in schools’ strategic plan are clear.
- Areas for improvement include providing better “Guidance” for incorporating ICT in teaching and learning and “Support” in the form of teacher training on the use of ICT.

Figure 4. Results for the School Management Pillar

Practices



Policies



Prioritization

4.2

% of school principals who report ensuring students have the skills to use ICT is important for.

87%

Basic computer functions.

93%

Accessing and using information .

84%

Using digital devices safely and appropriately.

91%

Improving their learning generally.

Support

2.2

37%

Of school principals report attending or participating in training on the use ICT in school over the last 12 months.

21%

Of school principals report the training was required.





PILLAR 2: TEACHERS

The Teacher Practices indicator considers the readiness of grades 5 and 9 teachers to integrate ICT in their class instruction. The indicator monitors three aspects: 1) teacher’s efficacy, 2) use of technology for lesson preparation, and 3) use of technology for teaching and assessment.

The Teacher *de facto* Policies indicator assesses the respondents’ awareness of grades 5 and 9 teachers ICT skills and teachers’ professional development. The indicator tracks three aspects: 1) the existence of standards/competency framework, 2) the presence of a support system for teachers through training and professional development, and 3) the presence of an evaluation system.

The results are presented in Figure 5 and summarized below:

- Overall, teachers feel confident of using ICT to contribute to forums and share resources,

produce presentations, and assess student learning.

- The utilization of ICT for lesson preparation and planning among teachers is relatively uncommon, and the use of ICT for teaching purposes is even more infrequent.

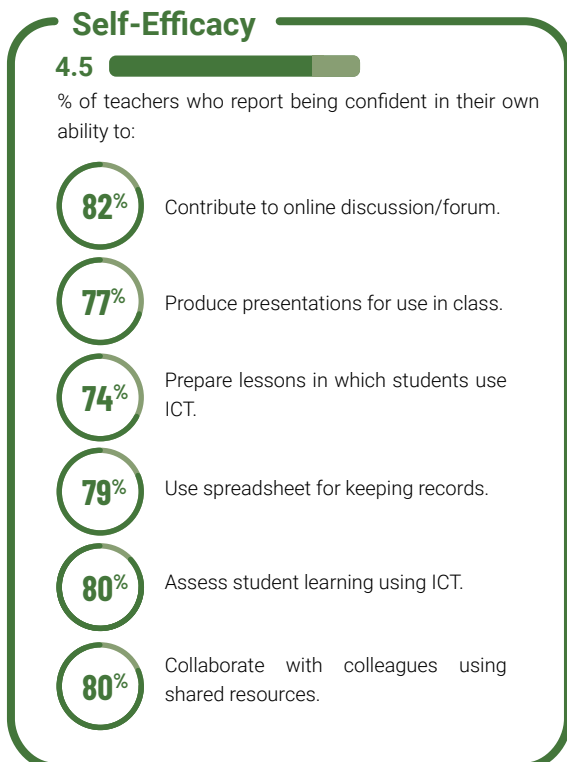
- Areas for improvement are related with ICT policies and standards for digital competences. Investing in the development and utilization of guidance documents on digital competencies would prove advantageous.

- Training on how to use ICT could be improved, as less than half of the respondents reported receiving training on how to use ICT for teaching purposes. Additionally, it seems that these training programs are not mandatory.

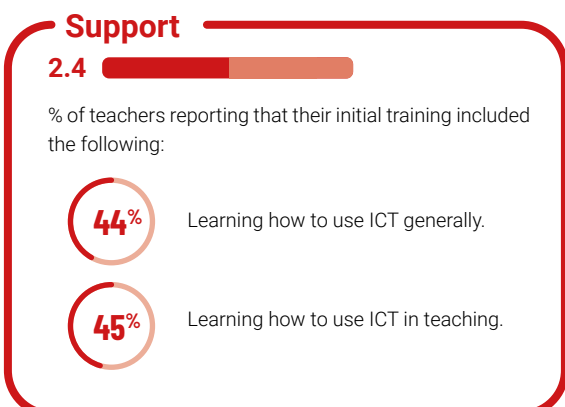
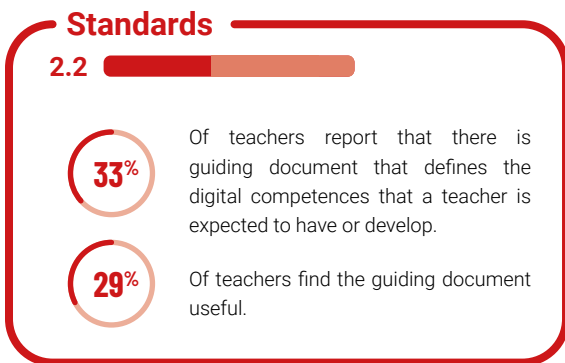


Figure 5. Results for the Teacher Pillar

Practices



Policies



Use - Planning

3.0

% of teachers reporting doing the following using digital devices while preparing/planning their lessons:

- 43% Searching for content to use during class.
- 39% Sharing educational content with other teachers.
- 23% Participating in project developed with other.
- 47% Preparing presentations to use for teaching.
- 45% Expanding your knowledge about the use of ICT.
- 26% Carrying out administrative class management.

Support

28%

Of teachers report participating in professional development activities on using ICT in teaching and learning practices, but it was never required.

Evaluation

1.9

23%

Of teachers report having been formally evaluated on their use of ICT during the last school year.

Use - Teaching

2.0

% of teachers reporting doing the following during direct class instruction

- 20% Using ICT to search for information for discussions
- 19% Using ICT to present information during instruction
- 11% Using classroom management tools
- 17% Asking students to search for information
- 12% Asking students to present results using ICT
- 13% Using digital tools to assess students learning





PILLAR 3: STUDENTS

The Student Practices indicator assesses the performance of grades 5 and 9 students in using ICT in and outside school. The indicator tracks three aspects: 1) the self-efficacy of students in using ICT, 2) the use and frequency with which students use ICT inside the school, and 3) the use and frequency with which students use ICT outside the school.

The student *de facto* Policies indicator assesses the respondents' awareness of key elements in the policies that enable students' performances on ICT and their assessment. The indicator measures three dimensions: 1) the existence of a competency framework for students, 2) the integration of ICT in activities in the curriculum and outside the school and 3) the existence of an assessment of ICT competencies.

The results are presented in Figure 6 and summarized below:

- In terms of **practices**, most teachers report that students' self-efficacy to perform

different activities using ICT was relatively low. Low levels of self-efficacy are likely connected to the low levels of use of digital devices inside and outside the school.

- According to teachers, use of devices inside and outside of school is mostly for searching for information (45%) and browsing for schoolwork (52%).

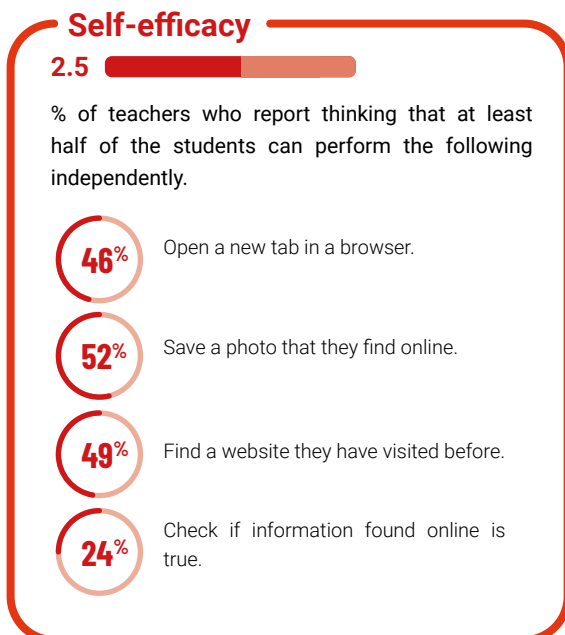
- In terms of **policies**, most teachers do not know of or use a guiding document (skill framework) defining students ICT competencies (23%). This is aligned with the fact that only 32 percent of teachers formally assess the digital competencies of their students.

- Slightly less than half of the teachers (48%) report that the education curriculum recommends using ICT for teaching.

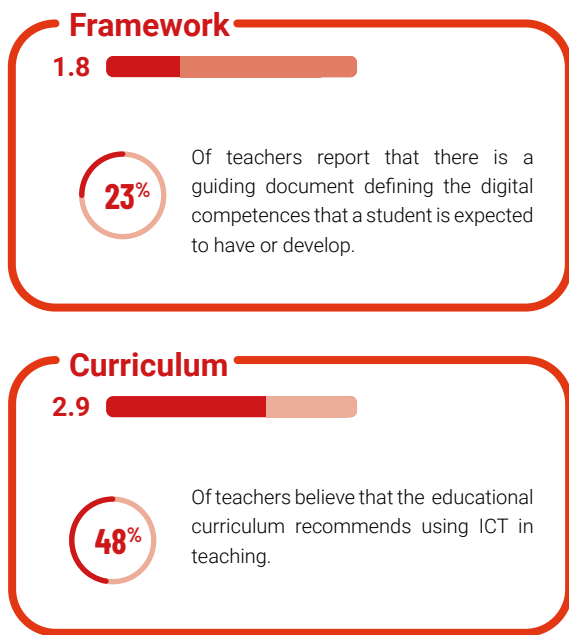


Figure 6. Results for the Student Pillar

Practices



Policies



Use - Inside

1.9

% of teachers who report students use digital devices while in school in most/every lessons for:

- 45%** Searching for information for lesson exercises.
- 36%** Communicating with students on projects.
- 36%** Sharing assignment results with students.
- 32%** Submitting completed work for assessment.
- 32%** Evaluating information resulting from a search.
- 32%** Producing documents, presentations or videos.

Use - Outside

2.2

% of teachers who believe students use digital devices outside of school at least once a week for:

- 52%** Browsing the internet for schoolwork.
- 36%** Communicating with teacher (social networks or email).
- 22%** Doing homework on a digital device.
- 37%** Using learning apps/websites.

Assessment

2.3

- 32%** Of teachers report that the digital competences of students were formally assessed.





PILLAR 4: DEVICES

The Device Practices indicator assesses the readiness of use digital devices in teaching and learning and their availability in schools. The indicator tracks three aspects: 1) student access to devices, 2) students' use of the devices, and 3) the existence of technical support.

The Device *de facto* Policies indicator assesses the extent to which respondents are knowledgeable about crucial components within policies pertaining to digital devices implemented in schools. The indicator monitors three facets: 1) the availability standards, 2) the existence of monitoring tools and 3) the understanding of the allocation of responsibilities for maintenance and support.

The results are presented in Figure 7 and summarized below:

- Student access to devices is still deemed insufficient for instruction (22%), although two thirds of schools seem to have working-devices (62%).

- In terms of student use, results are mixed: While most respondents indicate that 58 percent of students use devices in class at least once a week, only 4 percent of schools have devices adapted for students with disabilities. Implementing a proactive strategy that educates, guides, and clarifies the appropriate use of digital devices in the classroom could be beneficial.

- Integrating the effective use of educational technologies in the curriculum (in the different subjects but also as a subject) is also recommended.

- In terms of practices, areas of improvement encompass enhancing technical support within schools to maintain ICT resources and revising policies pertaining to device access and usage. In terms of policies, the current standards, monitoring practices, and responsibilities for maintaining school ICT infrastructure are considered poor.



Figure 7. Results for the Device Pillar

Practices

Student access

2.8

62%

Share of working digital devices that are available to students for learning.

22%

Proportion of school principals that agree that there is sufficient number of digital devices for instruction

Student use

2.1

4%

Of school principals report that the school has devices that are adapted for the use of students with disabilities.

58%

Teachers report that digital devices available at the school were used in class at least once or twice a week.

Policies

Standards

2.1

26%

Of school principals know if there are standards in place that require students in all schools to have access to functioning digital devices (PCs, laptops, tablets and/or other digital devices).

Monitoring

2.0

% of school principals who report that there is someone or any institution or mechanism that monitors.

29%

That all schools have access to functioning digital devices.

21%

If digital devices and connectivity are used by the students.

Tech Support

2.3

26%

Of school principals agree that there is sufficient technical support to maintain ICT resources so that they are fully functional.

Responsibility

1.7

18%

Of school principals report that there is a government legislation that assigns responsibility for maintaining school ICT infrastructure and for providing technical support.





PILLAR 5: CONNECTIVITY

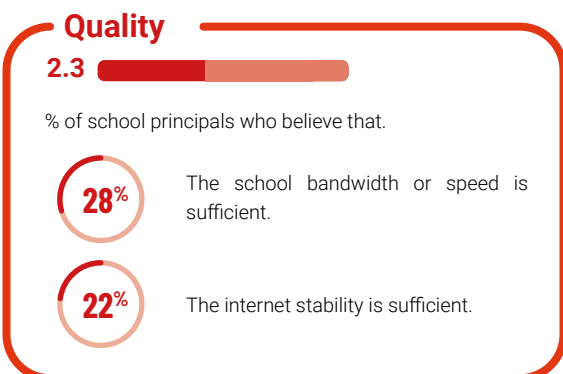
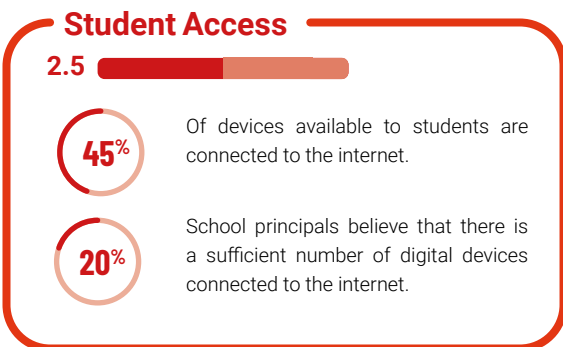
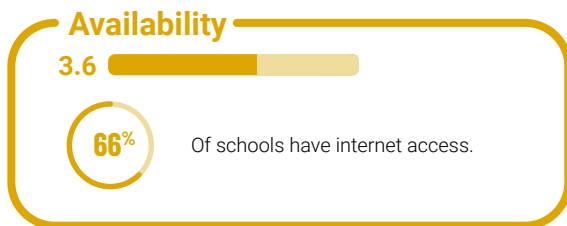
The *Connectivity Practices* indicator assesses the readiness of schools to connect students to internet. The indicator tracks three aspects: 1) availability of internet in the school, 2) student access to the internet via available devices, and 3) the perceived quality of the internet connectivity.

The *Connectivity de facto Policies* indicator assesses respondents' awareness of key elements in the policies related to internet connectivity in schools. The indicator tracks three aspects: 1) the existence of a connectivity plan, 2) the existence of monitoring tools and 3) the existence of a system to provide technical support to schools.

The results are presented in Figure 8 and summarized below:

Figure 8. Results for the Connectivity Pillar

Practices

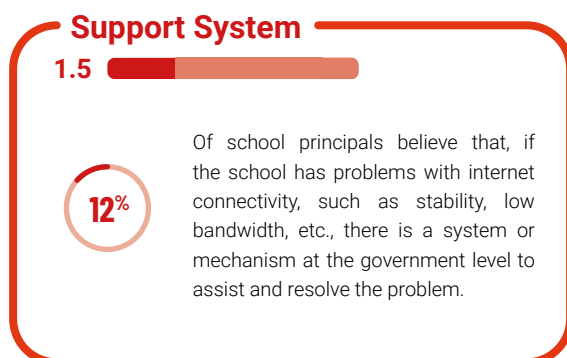
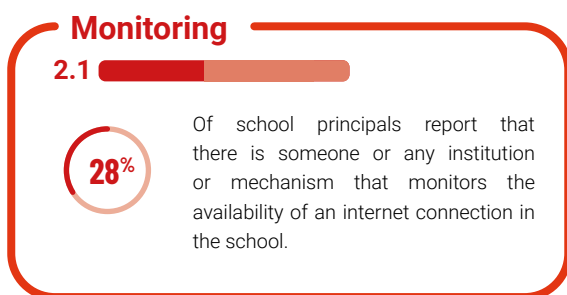
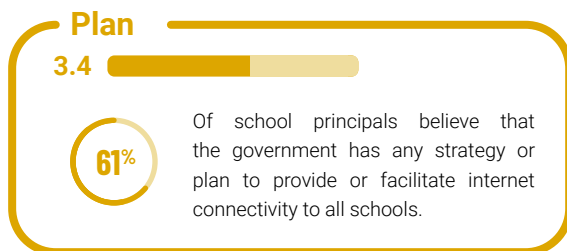


• Although two-thirds of the schools reported having connectivity, the student access and the quality of the internet are relatively poor: only 20 percent reported that there are sufficient devices connected to internet, and less than 30 percent indicate that the bandwidth or stability is sufficient.

• Thus, by implementing effective measures, the overall quality of connectivity can be significantly enhanced, encompassing improvements in device connectivity, speed, and stability.

• Support and monitoring systems are seen as greatly lacking.

Policies





PILLAR 6: DIGITAL RESOURCES

The *Digital Educational Resources Practices* indicator assesses the readiness of school to use quality digital educational resources. The indicator tracks three aspects: 1) access to digital resources, 2) use of digital resources, and 3) quality of digital resources.

The *Digital Educational Resources de facto Policies* indicator assesses respondents' awareness of key elements in policies related to the use of quality digital educational resources. The indicator tracks three aspects: 1) the knowledge of a strategy to ensure access to digital education resources, 2) the knowledge of a legislation or policy defining quality standards for digital education resources and 3) the knowledge of guidance to ensure alignment with the curriculum.

The results are presented in Figure 9 and summarized below:

- Across the board, practices and policies related to digital education resources (DERs) could be greatly improved.

- Access to quality DERs is particularly low (25%).

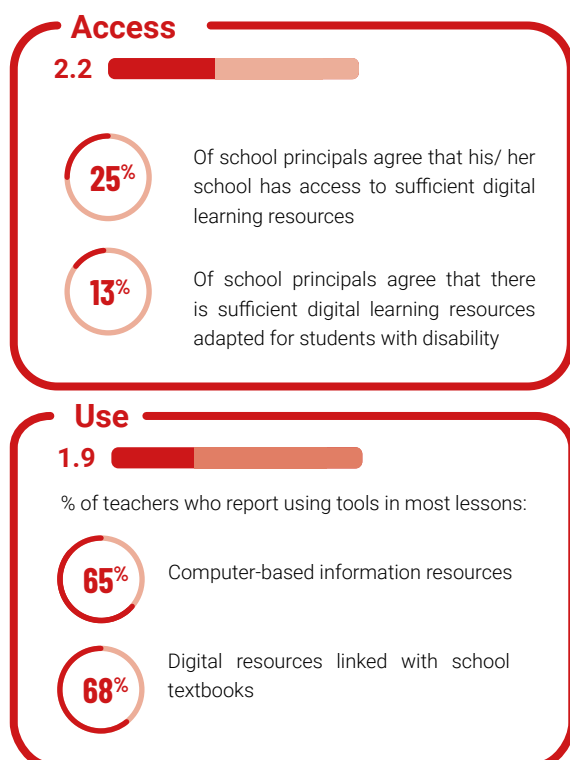
- Digital resources linked with school textbooks are used to great extent, but other more recent tools such learning games, collaborative, graphing/drawing software, word-processing, and presentation software, are less used.

- On the policy side, guidance, strategy, and standards should be improved, especially again keeping in mind specific needs of students with disabilities.

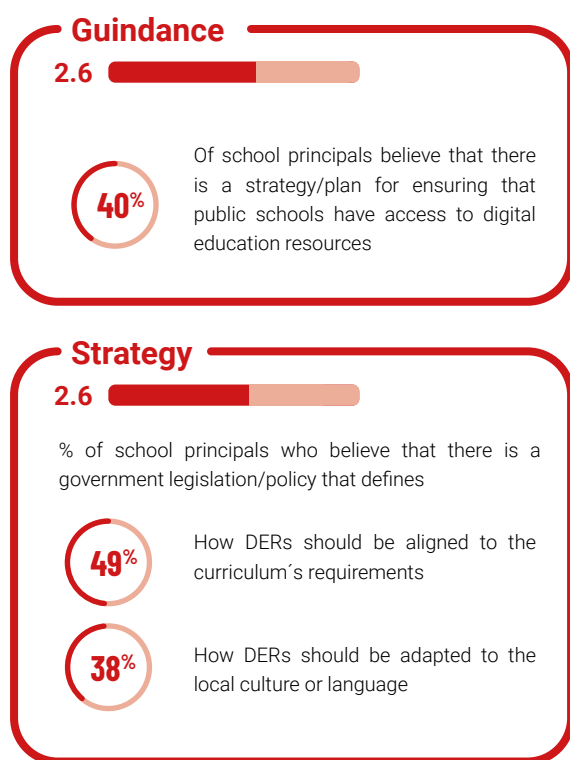
- When formulating strategies to promote and utilize DER, it is essential to take into account the restricted availability of connected devices, necessitating the inclusion of offline-friendly resources.

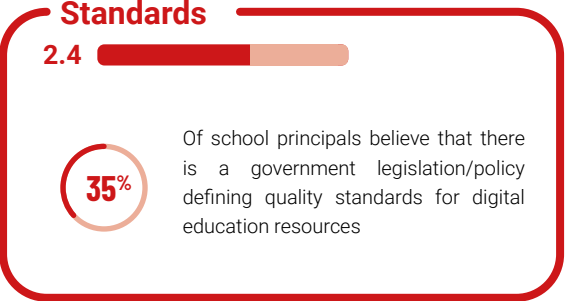
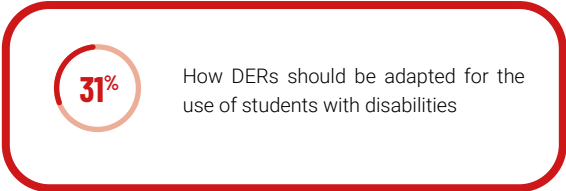
Figure 9. Results for the Digital Resources Pillar

Practices



Policies



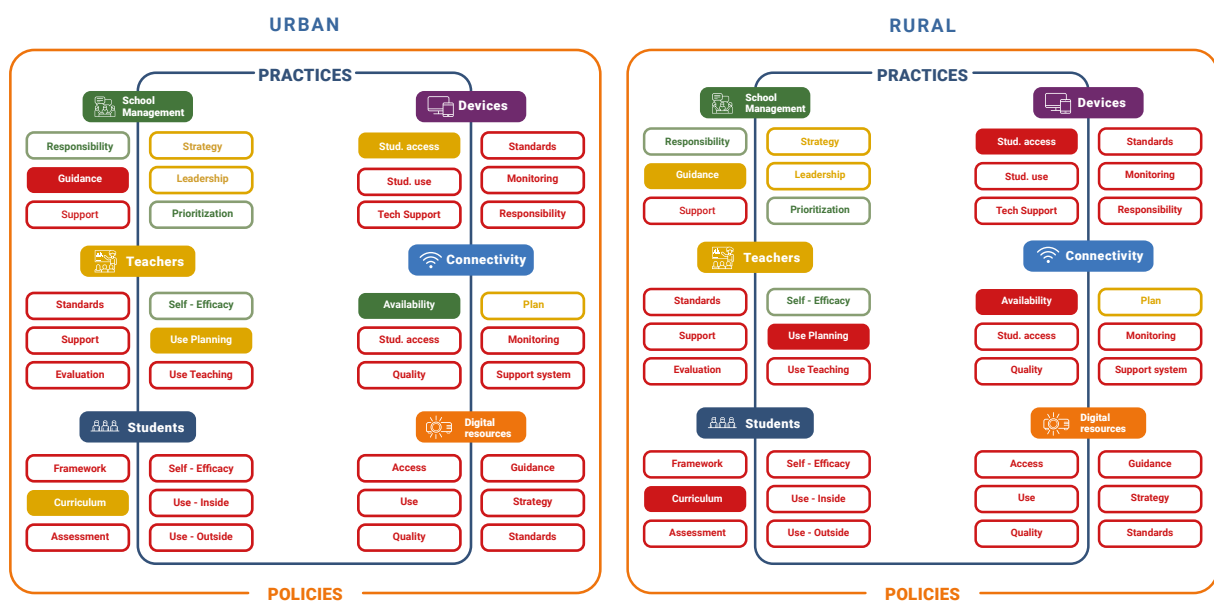


Results for Urban and Rural Areas

- Some differences are observed between urban and rural locations. More respondents at urban schools (than in rural schools) believe that teachers use ICT for lesson planning.
- Similarly, respondents reported that more students at urban schools (than in rural schools) use digital devices, and that the curriculum includes recommendations to integrate ICT-assisted instruction.

- For connectivity and as expected, more principals in urban areas reported that their schools are connected to internet.
- The overall perception is that rural schools need better support in areas such as teacher planning, curriculum guidance, availability of devices and connectivity specially to benefit students.

Figure 10. Results for Urban and Rural Areas



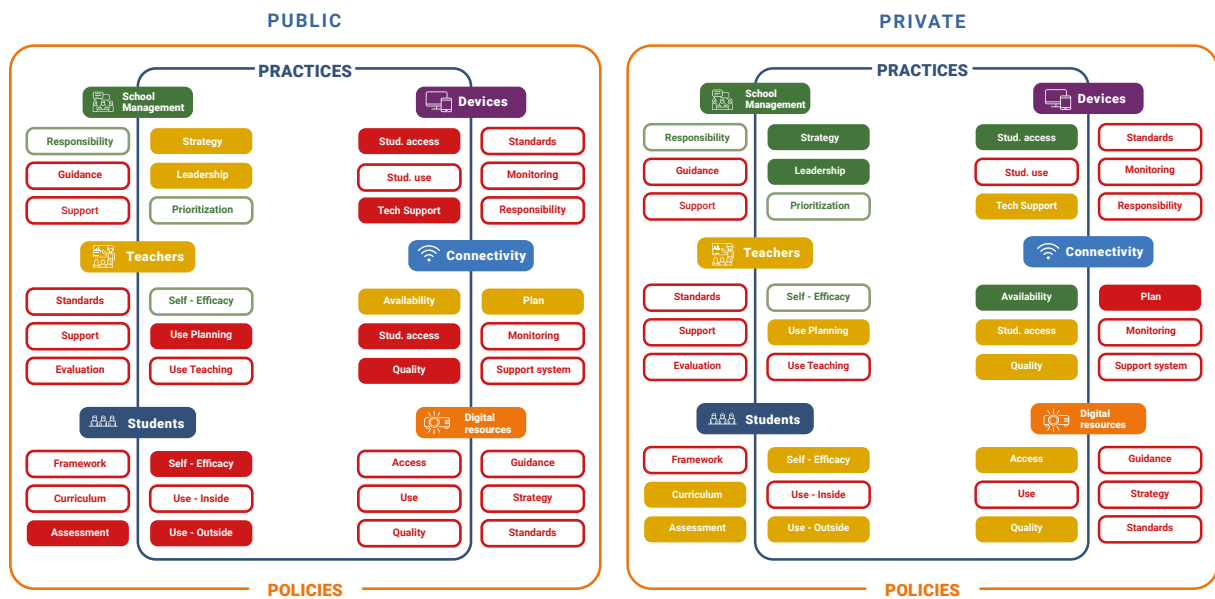
Note. When disparities exist between urban and rural results, the box is shaded with color

Results for Public and Private Schools

- More respondents in private schools (than in public schools) consider that at the School Management there is an ICT strategy in the school and that school leaders support the use of digital technologies.
- Similarly, more respondents in private schools indicate that students have higher levels of “self-efficacy” and that students attending private schools are more likely to use technology outside school.
- More respondents in private schools than in public schools reported that their schools are connected to internet.

- Also, the percentage of digital devices that are available to students and that are connected to internet is higher in private schools.
- Finally, student access to digital resources is perceived as being better and of better quality at private schools compared to public schools.

Figure 11. ETRI Results for Public and Private Schools



Note. When disparities exist between public and private results, the box is shaded with color.

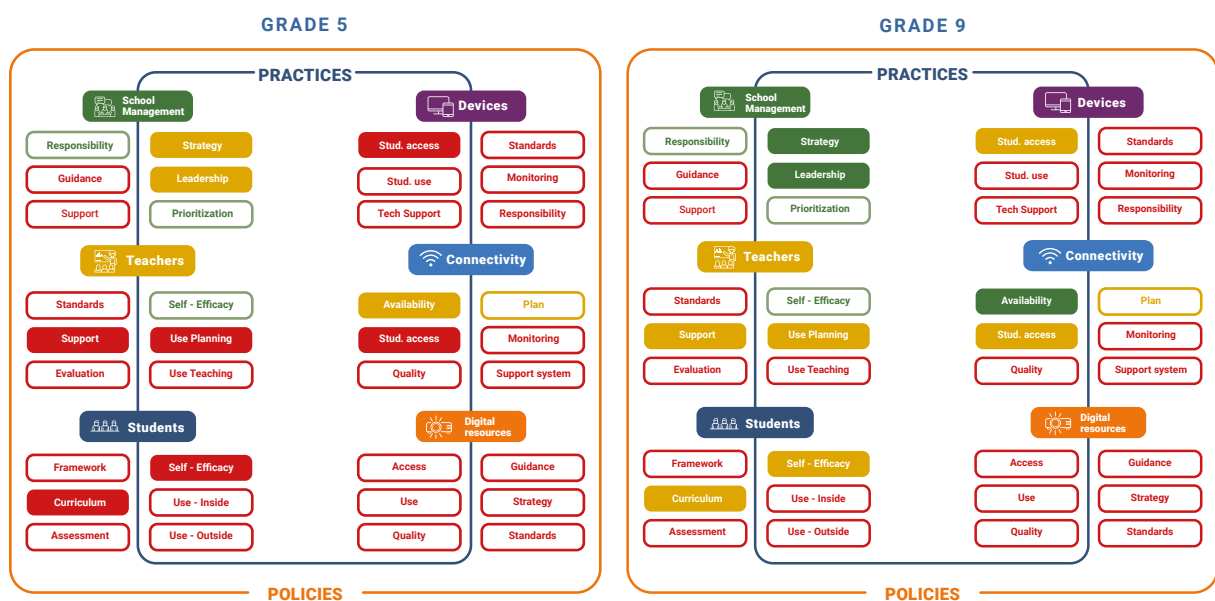
Results for Grades 5 and 9 Levels

- Respondents indicate that more teachers in grade 9 (than in grade 5) use digital devices for lesson planning. However, the use of digital devices for teaching is low for both grade levels.
- Similarly, more respondents in grade 9 believe that students' sense of self-efficacy

and use of ICT technology outside of the school is higher in grade 9 (than in grade 5).

- Finally, availability of internet and devices connected to internet and accessible to students is higher in grade 9 than in grade 5.

Figure 12. ETRI Results for Grades 5 and 9 Levels



Note. When disparities exist between Grade 5 and Grade 9 results, the box is shaded with color.

Results describing the comparison between de facto and de jure policies

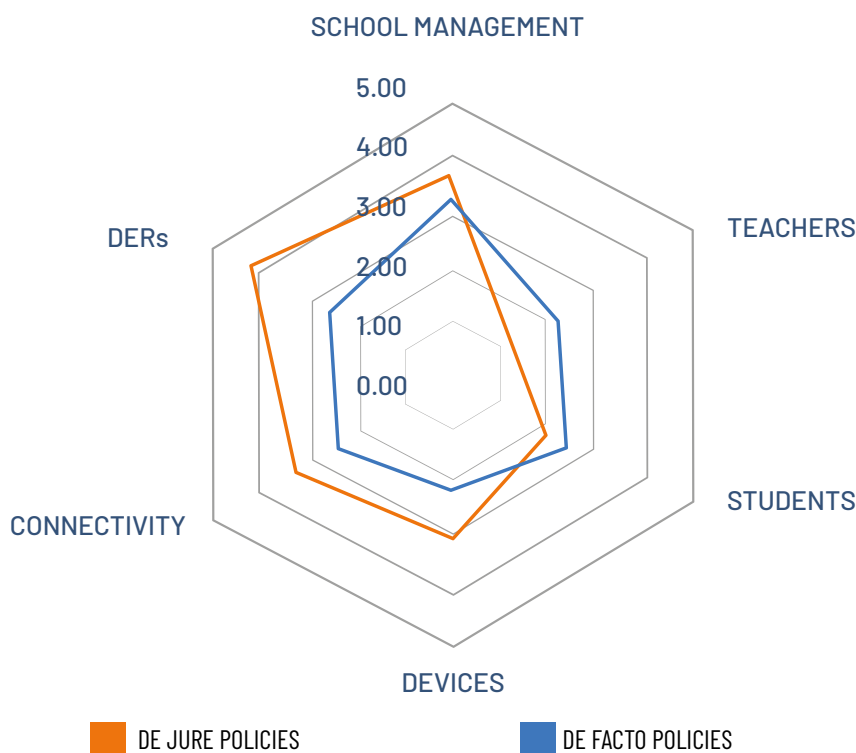
To compare the level of alignment between de facto and de jure policies a radar plot is presented in Figure 13. In the figure, the orange line represents the mapping of de jure policy indicators—how well policies about ICT in education are defined or official within government. The blue line represents the mapping of de facto policy indicators—how these policies are understood on the ground by schools.

- In the case of DER, the de jure and de facto results are very different and not aligned, which suggests that principals and teachers have a weak understanding of the policies on DER use in schools, and that the overall level of readiness of schools to use DER is low.
- For most pillars, the de jure and de facto policies are not well aligned, with the scores for de jure policies being higher than the scores for de facto policies for most pillars.

This suggests that principals do not have a good understanding of what is expected of them, but the policy, plan or strategy that is official is relatively well defined—especially for DER, connectivity and devices.

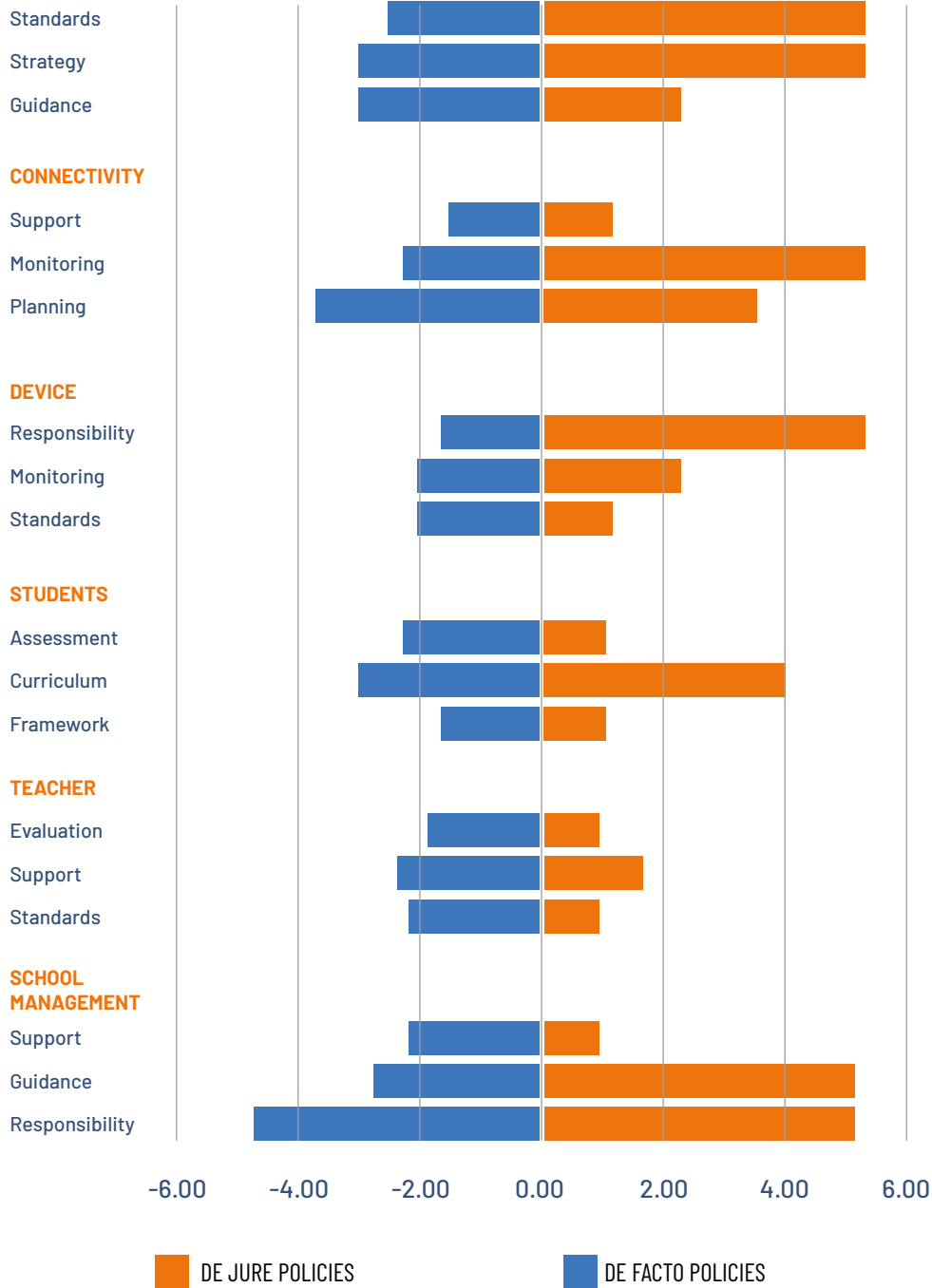
- The pillar with the lowest de jure policies score is for teachers (1.24), suggesting that the use of DER by teachers is not well-defined and requires improvement. For both the teachers and students pillar, the de facto policies score higher than the de jure policies, which means that principals report knowing of and using policies and standards to some extent—even where there are not formal policies to guide them.
- In general, the ideal scenario is to have official policies that clearly define how ICT should be incorporated into the education system, and which are then communicated to the school level.

Figure 13. Comparison of de facto and de jure policies



DE FACTO AND DE JURE POLICIES

DIGITAL EDUCATION RESOURCES



IV. SUMMARY AND POLICY RECOMMENDATIONS

1. Develop comprehensive policies and formulate EdTech strategies for effective integration of education technology within schools

- The successful integration of ICT into teaching and learning necessitates well-defined policies, guidance, and standards. These policies should outline the key issues and offer a range of strategies to effectively tackle these challenges. It is crucial that EdTech policies are accompanied by comprehensive implementation strategies or action plans supported by competent technical teams, adequate funding, political endorsement and robust monitoring and accountability mechanisms.
- The ETRI findings for Nepal reveal that policies for the pillars of Teachers, Students, Devices, Connectivity and Digital Resources are in a nascent stage.
- Through national ICT in Education policies and a national EdTech strategy, the government can ensure a systemic approach to digital learning.

2. Empowering teachers in the use of ICT requires the provision of guidance, training, and evaluation

Despite the high confidence of teachers, the very low use of ICT in teaching could be related to the lack of supporting policies. Here are some considerations to empower teachers:

- Define and adopt an **ICT Competency Framework** for teachers that focuses on developing their digital skills as well as their pedagogical skills (digital literacy) that are required for technology integration. Such a competency framework should guide how teachers use digital technology for their professional practice, to deliver the curriculum, and to develop students' digital competences.
- Provide **training to teachers** aligned with the competency framework, to develop ICT skills for teaching and planning, and improve teachers' self-efficacy over time.
- Adopt a formal **evaluation or monitoring mechanism** to assess progress and provide tailored training and support.
- To facilitate these actions, it is essential to ensure the presence of **enabling infrastructure**, including reliable access to electricity, availability of devices, and seamless connectivity.

3. Expected ICT skills for students should be defined and integrated into the curriculum

- As for teachers, there is need for an official **ICT competency framework** for students to outline the required knowledge and skills.
- The ICT skills denoted in the competency framework should be integrated into the **curriculum** (*within* the different subjects but also as a subject). Such integration of digital competences into the curriculum should occur for all grades and subject areas.
- It is crucial to establish a comprehensive **evaluation policy and assessment plan** that effectively measure students' digital skills,

enabling a deeper understanding of their strengths and areas for improvement. By implementing these measures, educators can gain valuable insights to tailor instructional strategies and provide targeted support to enhance students' proficiency in using digital tools and technologies.

- The digital infrastructure and accompanying guidance should be designed to effectively **support and enhance the utilization** of advanced digital technologies for learning purposes.

4. Despite the limited availability of digital devices, there is potential for improvement in both practices and policies

- Digital devices can serve as valuable tools in education, particularly when coupled with computer-assisted learning programs that enable **personalized tutoring**, tailoring instruction to the individual student's level of understanding.
- Digital devices can play a crucial role in **supporting students with disabilities**, making them valuable assets in inclusive education. Therefore, it is highly recommended to provide assistive devices tailored to the specific needs of learners with disabilities, ensuring equitable access to educational resources and opportunities.

- To fully realize the efforts invested in delivering devices to all public schools, it is vital for the MoEST to establish and strengthen robust technical assistance systems. These systems should encompass a range of crucial aspects, including continuous training, diligent monitoring, regular maintenance, and proactive repositioning support. By prioritizing these efforts, the country can guarantee that the ICT devices are not only readily available but also optimally configured for effective usage and meaningful learning experiences.

5. Enhanced connectivity is crucial for maximizing the efficiency of ICT technology utilization

- The quality of **internet connectivity** is a major challenge to ensuring the expansion of EdTech at the national level. This is especially acute in **rural schools**.
- Continue the efforts to provide **quality connectivity** to all public schools in the country, improving the school **bandwidth, speed, and internet stability**.

- While the country works to improve connectivity quality, additional steps can be taken to consider EdTech solutions that do not require constant connectivity (offline).
- Implementing an appropriate **planning and monitoring system** to identify and address connectivity issues should be prioritized.

6. Digital Education Resources have the potential to provide significant support for teaching and learning

- DER can help to alleviate some of the resource-related challenges, particularly, the shortage of resources supporting inclusive education, indigenous language-based, and gender-responsive resources.
- However, across the board, several challenges associated with DER should be addressed at the policy and practice levels.
- Nepali teachers are using DER for lesson planning to some extent, but to safeguard the quality of education and support instruction, it is important to establish **quality standards** and ensure the alignment of DER content with the **national curriculum**.
- Such **supporting policies** should also promote inclusive and equitable access to quality resources.
- It is also key to provide **training** to principals and teachers to increase knowledge and use of these resources to support teaching and learning.
- The strategies for promoting and using DER should consider the limited availability of internet connectivity and prioritize those education platforms and content that can be used without having regular connectivity (e.g., poor connection or simply no access to internet). This principle should be considered when selecting, curating, or procuring DER, tools and apps that work offline for times when teachers or students cannot reach internet.

7. Addressing inequalities requires prioritizing the most disadvantaged schools by providing increased attention and an improved package of services

- Practices: While it is important to improve connectivity and device support in all schools, a greater emphasis must be placed on **rural areas** and **public schools** to ensure they are adequately supported and can bridge the existing gaps effectively.
- Policies: in addition to the challenges previously described in this study, it is critical to allocate **dedicated efforts to ensure that schools in rural areas** receive equitable or even greater **attention** from both *de jure* policy and practice. This proactive approach aims to diminish the prevailing disparities and reduce the existing gaps, emphasizing the importance of equitable access to educational technology and resources for all students, regardless of their geographical location.

APPENDIX

School Survey – Grade 9 (English)

EdTech Readiness Index (ETRI)

School questionnaire

Introduction

The World Bank is collaborating with Imaginable Futures and is developing an EdTech Readiness Index (ETRI) to support countries in assessing where they stand on education technologies. The ERI aims at capturing key elements of the 'ecosystems' within the education and technology sectors in a given country whose development are considered critical if investments in 'EdTech' are likely to bear fruit.

The indicators of the ETRI are organized following the three same dimensions of the [World Bank's Global Education Policy Dashboard](#) –practices (or service delivery), policies, and politics, three dimensions that can impact the expected outcomes, that is learning. The indicators on

practices and policies have been developed for six overarching components: school management, teachers, students, devices, connectivity, and digital resources.

Overall, the indicators will be populated with data collected using two questionnaires. This document contains the questionnaire that collects, remotely, data at the school level. The school's principal will be the only informant and will provide the necessary data to produce both practices and de facto policy indicators. The ETRI survey second questionnaire (Questionnaire on policies and politics) is focusing on the de jure policy indicators and some key aspects on the politics of ICT in the education sector.

EDTECH READINESS INDEX (ETRI)

School questionnaire

Intended respondent: *school's principal*

Type of survey administration: *remotely*

Identification of school and information:

Name:

Telephone:

Address:

E-mail:

Province:

School EMIS Code:

Type of Secondary:

General

Technical

Grades[1] taught at the secondary school:

Grade 9

Grade 12

Grade 10

Special needs

Grade 11

Introduction

We are conducting a survey on the availability, access and use of information and communication technologies (ICT) in secondary education schools to enable the development of ICT skills among youth. The study is implemented in a set of schools in *Country, as well as* in other selected countries around the world and we hope that the results of the study will support the design of policies to improve the learning experience of the children of those countries.

This study is conducted by the World Bank, *with the support of the Ministry of Education.*

We would like to ask you a few questions about your background and different aspects related to the use of ICT for teaching and learning. Your interview will take approximately *XX* minutes.

Your responses to the interview questions will be kept confidential. Research staff will protect your

identity and personal information closely, so no one outside the global research team will be able to identify that the responses are coming from you. The data you share with us may be used as the basis for publications or presentations in the future, but we will never use your name or information that would identify you. Your colleagues and superiors will not see your responses and nothing you share will be linked to you.

Your participation in this study is completely voluntary, and you may refuse to participate or withdraw from the study at any time. You may skip any question during the interview. Your relationship with any school or the *Ministry of Education* will not be affected by your decision to participate or not.

If you have questions or concerns about this research, please contact: *XX*

Consent

No

Yes

If no, do not continue with the interview

A General background information on the respondent and the school	Skips
<p>1. What is your position in the school? (most senior position)</p> <ul style="list-style-type: none"> a. Principal. b. Deputy Principal. c. Head teacher/Teacher. d. Teacher assistant. e. Owner/Co-owner. f. Other (Specify: _____). <p>2. Have you ever taught in a school?</p> <ul style="list-style-type: none"> a. Yes b. No <p>3. What year did you begin teaching?</p> <p>Years: _____</p>	<p>If A2=b, go to A6</p> <p>(Between 1950 and 2022)</p>

4. Do you presently teach at this school?

- a. Yes
- b. No

If A4=b, go
to A6

5. Which grades do you teach this academic year?

- a. Grade 9.
- b. Grade 10.
- c. Grade 11.
- d. Grade 12.
- e. Special needs.

6. What is the highest level of education that you have completed?

- a. No education or less than primary education.
- b. Primary education completed.
- c. High school or secondary education completed.
- d. Tertiary non university degree.
- e. University degree – bachelor.
- f. University degree - master or doctoral.
- g. Other (Specify).

7. In what year did you take your present position in this school?

Years: _____

8. What is your gender?

- Male Female
- Prefer not to answer Other

9. How many students are currently enrolled in this school (in total)? An estimate is fine.

Number: _____

10. How many grade 9 students are currently enrolled in this school (in total)? An estimate is fine.

Number: _____

B School leadership and ICT

11. To what extent do you agree or disagree with the following statements about the use of ICT at your school?

(1. Strongly disagree, 2. Disagree, 3. Agree, 4. Strongly agree)

- a. In my school, there is a digital strategy or a plan/strategy to incorporate the use of technology and/or devices into the teaching and administration of the school.
- b. In my school, the school leaders involve teachers in the development of the school's digital strategy.
- c. In my school, school leaders support teachers in trying out new ways of teaching with ICT.
- d. In my school, there are discussions on the advantages and disadvantages of teaching and learning with ICT.

See the glossary for the definition of digital strategy.

12. In your school, how important is it to ensure students have the skills to use ICT in each of the following ways?

(1. Not Important; 2. A little important; 3. Moderately important; 4. Very important)

- a. For basic computer functions (e.g. Internet use, email, word processing, spreadsheet application, database management).
- b. For accessing and using information.
- c. For using digital devices safely and appropriately.
- d. For improving their learning in non-ICT topics.

13. Which level of the education system is mainly responsible for integrating ICT use into schools' strategic plans?

- a. National level.
- b. Sub-national/local level.
- c. School level.
- d. No level; those responsibilities are not assigned.
- e. I don't know.

If B12a=4,
go to B12c

14. Does your school use guidelines (e.g. ICT in Education Master Plan 2021-2026) or supporting tools provided by the national or sub-national educational authorities on incorporating ICT into teaching and learning activities?

- a. Yes, and they are useful.
- b. Yes, but they are not very useful for what my school needs.
- c. No, the educational authorities do not provide these guidelines.
- d. I don't know about the existence of these guidelines/tools.

15. To what extent do you agree or disagree with the following statements about cyber bullying in your school?

(1. Strongly disagree, 2. Disagree, 3. Agree, 4. Strongly agree)

- a. There is enough information describing the different forms of cyber bullying.
- b. There are rules and regulations to prevent cyber bullying.
- c. There are rules and regulations to guide student behaviors, including children who bully and who are bystanders.
- d. Teachers know how to identify and respond to cyber bullying.
- e. Students are informed of the different forms of cyber bullying.
- f. Students know how and to whom to report cyber bullying.

16. Over the last 12 months, did you attend or participate in any training on the management and use of ICT teaching and learning?

If B16=d, go to C19

- a. Yes. In official training that was required by government.
- b. Yes. In official training with optional attendance.
- c. Yes. In unofficial training (e.g. meetings and workshops) with other principals/teachers where such practices were shared.
- d. No.

17. How was this training delivered?

- a. In-person training.
- b. Remote training i.e. using online media or tele-conferencing facilities.
- c. A combination of both/blended.

18. Did you find this training effective i.e. did you use anything you had learned during the training in practice following the sessions?

- a. Yes
- b. No

C Teachers' practices related to the use of ICT

The following 8 questions (19 to 26) refer to teachers' practices related to the use of ICT. When responding, please do it based on the knowledge you have of the teacher or teachers in charge of teaching grade 9 Maths or Language in your school.

If there is more than one teacher in charge of teaching grade 9 Maths or Language in your school, respond based on the knowledge of the teacher who is first in the list of those teachers, in alphabetical order.

19. Considering the last 3 months, to what extent did the grade 9 teacher do the following activities at any time during his/her direct class instruction?

(1. Never or hardly ever; 2. In some lessons; 3. In most lessons; 4. In every lesson; 9. I don't know)

- a. Use ICT to search for information during in-class discussions.
- b. Use ICT to present information (e.g. text, images, videos) during class instruction.
- c. Use classroom management tools (e.g. Google classroom, Microsoft Teams).
- d. Ask students to search for information (content) on the Internet.
- e. Ask students to present results or outputs using digital tools.
- f. Use digital tools to assess students' learning (e.g. tests, quizzes, etc.).

20. During the last 3 months, to what extent did the grade 9 teacher do the following activities using digital devices (e.g. computer, tablet, smartphone, etc.) while preparing or planning his/her lessons?

(1. Never or hardly ever; 2. Once or twice a month; 3. Once or twice a week; 4. Every day or almost every day; 9. I don't know)

- a. Search for lesson/educational content to use in the classroom (resources on the Internet, on education portals, etc.).
- b. Share educational content with other teachers.
- c. Participate in a project developed with other teachers and educators.
- d. Prepare presentations or other educational materials to use for teaching.
- e. Develop or deepen knowledge about the use of teaching and learning technologies.
- f. Administrative class management (e.g. recording absenteeism, producing grade reports, etc.).

21. How confident are you that the grade 9 teacher can perform the following tasks using ICT

(1. Not confident at all; 2. A little confident; 3. Moderately confident; 4. Very confident; 9. I don't know)

- a. Contribute to a discussion forum or user group on the Internet (e.g. a wiki or blog).
- b. Produce presentations (e.g. using Microsoft PowerPoint or a similar program) to be used during class.
- c. Prepare lessons that involve the use of ICT by students.
- d. Use a spreadsheet program (e.g. Microsoft Excel) for keeping records or working with data.
- e. Assess student learning using ICT.
- f. Collaborate with colleagues using shared resources (e.g. Google Docs, OneNote).

22. Is there an ICT framework or set of guidelines that defines the digital competences* that a teacher is expected to have or develop?

A digital competence is the knowledge, skills and attitudes that are required when using ICT and digital media to communicate, access, manage, combine, share and evaluate information in order to perform tasks or solve problems.

- a. Yes, and this framework/set of guidelines is useful.
- b. Yes, but the framework/set of guidelines is not relevant within this school.
- c. No, there isn't a framework/set of guidelines.
- d. I don't know of such framework/guidelines.

23. During the last school year, was the grade 9 teacher formally evaluated on their use of ICT?

- a. Yes.
- b. No.
- c. I don't know.

24. Did the initial training programme taken by the grade 9 teacher in your school include the following elements?

(1. Yes; 2. No; 9. I don't know)

- a. Learning how to use ICT generally.
- b. Learning how to use ICT in teaching.

25. Over the last 12 months, did the grade 9 teacher participate in any professional development activities on using ICT in teaching and learning practices?

- a. Yes. In official training that was required by government.
- b. Yes. In official training with optional attendance.
- c. Yes. In unofficial training (e.g. meetings) with other principals/teachers where such practices were shared.
- d. No.
- e. I don't know.

D Students' practices related to the use of ICT

The following 6 questions (27 to 32) refer to students' practices related to the use of ICT for learning and associated regulations. When responding, please do it based on the knowledge you have of the grade 9 students in your school.

26. Thinking about the last 3 months, how often do the grade 9 students use digital devices for the following activities while in school?

(1. Never or hardly ever; 2. In some lessons; 3. In most lessons; 4. In every lesson; 9. I don't know)

- a. Searching for information or data for a project.
- b. Communicating with other students on projects.
- c. Sharing assignment results or other schoolwork with other students.
- d. Submitting completed work for assessment.
- e. Evaluating information resulting from a search.
- f. Producing a document, presentation, or creating visual outputs or videos

Thinking about the last 3 months, how often do the grade 9 students use digital devices for these other activities while in school?

(1. Never or hardly ever; 2. In some lessons; 3. In most lessons; 4. In every lesson; 9. I don't know)

- a. Learning educational content (e.g. mathematics, language, reading).
- b. Learning soft skills such as negotiation, time management, and teamwork.
- c. Practicing a technical or vocational skill.
- d. Doing practical exercises (e.g. in mathematics, writing) using adaptive learning programs.
- e. Using computer games for learning.

How important is for you that grade 9 students ...?

(1. Not important; 2. Moderately important; 3. Important; 4. Very important; 9. I don't know)

- a. Have the capacity to filter digital misinformation (fake information) and judge the veracity of content.
- b. Know how to identify the source of the digital information.
- c. Identify whether the information presented is anecdotal, factual, or an opinion.
- d. Know the implications of sharing private information with a range of people: friends, the public, app providers, etc.
- e. Know computer programming and coding.

27. Thinking about the last 3 months, how often do the grade 9 students use digital devices for the following activities outside of school?

(1. Never or hardly ever; 2. Once or twice a month; 3. Once or twice a week; 4. Every day or almost every day; 9. I don't know)

- a. Browsing the Internet for schoolwork (e.g. when preparing for an essay or presentation).
- b. Using a messaging application (e.g. WhatsApp, Facebook Messenger) or social networks (e.g. Facebook, Twitter) for communication with teachers.
- c. Using email for communication with teachers and submission of homework or other schoolwork.
- d. Doing homework on a digital device.
- e. Using learning apps or learning websites on a digital device.

Thinking about the last 3 months, how often do the grade 9 students use digital devices for the following activities outside of school?

(1. Never or hardly ever; 2. Once or twice a month; 3. Once or twice a week; 4. Every day or almost every day; 9. I don't know)

- a. Browsing the internet.
- b. Using social networks (e.g. Instagram, Facebook, Twitter, TikTok).
- c. Playing computer games.
- d. Using virtual reality technology.
- e. Using learning apps like Duolingo.

28. Approximately what proportion of your grade 9 students do you think can perform the following activities independently (without assistance)?

(1. Almost all; 2. More than half; 3. About half; 4. Less than half; 5. None; 9 I don't know)

- a. Open a new tab in a browser.
- b. Save a photo that they find online.
- c. Find a website they have visited before.
- d. Check if the information they find online is true.
- e. Post online videos or music that they have created themselves.
- f. Make basic changes to online content that others have created.

29. Does the educational curriculum recommend using ICT in teaching of grade 9 students?

- a. Yes, it does.
- b. No, it does not.
- c. I don't know.

30. Is there a framework or set of guidelines defining the digital competences* that a student is expected to have or develop?

**A digital competence is the knowledge, skills and attitudes that are required when using ICT and digital media to communicate, access, manage, combine, share and evaluate information in order to perform tasks or solve problems.*

- a. Yes, and this framework/set of guidelines is useful.
- b. Yes, but this framework/set of guidelines is not relevant within this school.
- c. No, there isn't a framework/set of guidelines.
- d. I don't know of such a framework/set of guidelines.

31. During the last school year, were the digital competencies of the grade 9 students formally evaluated/assessed?

- a. Yes.
- b. No.
- c. I don't know.

E Digital devices and internet connectivity

32. How many digital devices (specifically desktop computers, portable computers and/or tablets) are at this school? This includes all devices that might be used by staff or students in the school. An estimate is fine.

Number of digital devices: _____

If E32=0, go to E37

33. How many of those digital devices are currently in working condition at this school? An estimate is fine.

Number of digital devices currently in working condition: _____

If E33=0, go to E37

34. Out of the digital devices that are currently working, how many are available for students to use in learning activities? An estimate is fine.

Number of working digital devices that are available to students

If E34=0, go to E37

35. Does your school have digital devices that are adapted for the use of students with disabilities?

- a. Yes.
- b. No.
- c. I don't know

36. How often did the grade 9 students use these digital devices in class in the last month?

- a. Never.
- b. Once or twice.
- c. Once or twice a week.
- d. Every day or almost every day.
- e. I don't know.

<p>37. Does this school have Internet access?</p> <p>a. Yes.</p> <p>b. No.</p>	<p>If E37=b, go to E39</p>
<p>38. Approximately, how many of all digital devices (computers, portable computers and tablets) available to students in the school are connected to the Internet?</p> <p>Number of digital devices available to students and connected to Internet:</p>	<p>Check if E32=0 or E34=0, go to E39</p>
<p>39. To what extent do you agree with the following statements about your school?</p> <p><i>(1. Strongly disagree, 2. Disagree, 3. Agree, 4. Strongly agree)</i></p> <p>a. The number of digital devices for instruction is sufficient to support teaching and learning effectively.</p> <p>b. The number of digital devices connected to the Internet is sufficient to support teaching and learning effectively</p> <p>c. The school's Internet bandwidth or speed is sufficient to support teaching and learning effectively.</p> <p>d. The school's Internet stability (i.e. connection without service interruption) is sufficient to support teaching and learning effectively.</p> <p>e. There is sufficient technical support to maintain ICT resources so that they are fully functional.</p> <p>40. If your school has problems with Internet connectivity, such as stability, low bandwidth, etc., is there a system or mechanism at the government level to assist you and resolve the problem?</p> <p>a. Yes, I have used it.</p> <p>b. Yes, but I have not used it.</p> <p>c. No, there is no system</p> <p>d. I don't know.</p>	<p>Check if E3=a, go to E41</p>

41. Do you know if there are standards in place which require that students in all [public/private] schools have access to functioning digital devices (PCs, laptops, tablets and/or other digital devices)?

- a. Yes.
- b. No.
- c. I don't know

See the glossary for the definitions of policy and standards.

42. Does the government have any strategy or plan to provide or facilitate Internet connectivity to all public schools?

- a. Yes.
- b. No.
- c. I don't know

See the glossary for the definition of strategy and plan

43. Is there someone or any institution or mechanism (such as education information system, regular survey, etc.) that monitors the following?

(1. Yes, there is; 2. No, there isn't; 3. I don't know)

- a. That all public schools have access to functioning digital devices (PCs, laptops, tablets, mobiles, etc.).
- b. Availability of an Internet connection.
- c. If digital devices and connectivity are used by the students.

44. Is there government legislation that assigns responsibility for maintaining public school ICT infrastructure and/or technical support?

- a. Yes, those responsibilities are mainly assigned to the national government level.
- b. Yes, those responsibilities are mainly assigned to the subnational/local education authority level.
- c. Yes, those responsibilities are assigned to the school level.
- d. No, those responsibilities are not given to any level of school government.
- e. I don't know.

See the glossary for the definitions of legislations and policies.

F Digital Education Resources (DERs)

See the glossary for the definition of digital education resources (DERs).

45. To what extent do you agree or disagree with the following statements about using digital learning resources in teaching at your school?

(1. Strongly disagree, 2. Disagree, 3. Agree, 4. Strongly agree)

- a. My school has access to sufficient digital learning resources (e.g. learning software or apps).
- b. The available digital learning resources are of adequate quality.
- c. The available digital learning resources are aligned to the needs of the curriculum.
- d. The available digital learning resources are adapted to the local context and language needs.
- e. The available digital learning resources are adapted for the use of students with disabilities.

See the glossary for the definition of digital learning resources.

46. How often did the grade 9 teacher use the following tools in her/his teaching this school year?

(1. Never or hardly ever; 2. In some lessons; 3. In most lessons; 4. In every lesson; 9. I don't know)

- a. Computer-based information resources (e.g. topic-related websites, wikis, encyclopedias).
- b. Digital resources linked with school textbooks.
- c. Digital learning games.
- d. Collaborative software (e.g. Google Docs, OneNote).
- e. Graphing or drawing software (e.g. Paint, drawing tools).
- f. Word-processor software (e.g. Microsoft Word).
- g. Presentation software (e.g. Microsoft PowerPoint).

47. Is there government legislation/policy about digital education resources that defines any of the following?

(1. Yes; 2. No; 3. I don't know)

- a. A strategy for ensuring that public schools have access to digital educational resources.
- b. Quality standards for digital educational resources.
- c. How DERs should be aligned to the curriculum's requirements.
- d. How DERs should be adapted to the local culture or language.
- e. How DERs should be adapted for the use of students with disabilities.

See the glossary for the definitions of legislations and policies.

QUESTIONS SHARED IN ADVANCE

Information about school (shared in advance)

10. How many students are currently enrolled in this school (in total)? An estimate is fine.

Number: _____

11. How many grade 9 students are currently enrolled in this school (in total)? An estimate is fine.

Number: _____

Information about devices (shared in advance)

32. How many digital devices (specifically desktop computers, portable computers and/or tablets) are at this school? This includes all devices that might be used by staff or students in the school. An estimate is fine.

Number of digital devices: _____

33. How many of those digital devices are currently in working condition at this school? An estimate is fine.

Number of digital devices currently in working condition: _____

34. Out of the digital devices that are currently working, how many are available for students to use in learning activities? An estimate is fine.

Number of working digital devices that are available to students: _____

38. Approximately, how many of all digital devices (computers, portable computers and tablets) available to students in the school are connected to the Internet?

Number of digital devices available to students and connected to Internet: _____

END OF THE QUESTIONNAIRE

[1] Text in blue indicates that it must be adapted to each country.

Policy Survey (English)

EdTech Readiness Index (ETRI)

Policy Questionnaire

Introduction

The World Bank is collaborating with Imaginable Futures and is developing an EdTech Readiness Index (ETRI) to support countries in assessing where they stand on education technologies. The ETRI aims at capturing key elements of the ‘ecosystems’ within the education and technology sectors in a given country whose development are considered critical if investments in ‘edtech’ are likely to bear fruit.

The indicators of the ETRI are organized following the same three dimensions of the World Bank’s Global Education Policy Dashboard –practices (or service delivery), policies, and politics, three dimensions that can impact the expected outcomes, that is learning. The indicators on practices and policies have been developed for six overarching components: school management, teachers, students, devices, connectivity, and digital resources.

Overall, the indicators will be populated with data collected using two questionnaires. This document contains the questionnaire that collects data on the de jure policy indicators and on key aspects of the politics of the ICT in the education sector. The ETRI school survey questionnaire is implemented in parallel and remotely at the school level and school principals will provide information on the six components mentioned above.

This questionnaire on policies and politics is organized in seven sections and will be completed by national experts on ICT in education specifically hired for the ETRI project. It is expected that each of the responses provided will be supported by the relevant documentation.

The questionnaire should be accompanied by a context report that is related to the national education context and the role of EdTech within this environment. Details related to the report are provided below.

Identification of the consultant:

Name:

E-mail address:

Country of the study:

Questionnaire

A Political framework on ICT in education

SKIPS

1. Does your country have a national policy¹ or a national plan for ICT in education?

1. The country has a national policy.

(0 = No; 1 = Yes)

2. The country has a national plan.

(0 = No; 1 = Yes)

See the glossary for the definitions of policy and plan.

2. Select all ISCED education levels² that are covered by the national policy or plan for ICT in education:

(0=No; 1=Yes; 9 = not applicable)

	National policy	National plan
1. Pre-primary (ISCED 0)		
2. Primary (ISCED 1)		
3. Lower secondary (ISCED 2)		
4. Upper secondary (ISCED 3)		
5. Post secondary non tertiary (ISCED 4)		
6. Tertiary (ISCED 5 to 8)		

3. Does your country have a regulatory institution or body that has been given responsibility by the government for coordinating the implementation of ICT in education?

0 = No.

1 = Yes.

4. Is there a specific law (or other legislation) that mandates the role and responsibilities of this regulatory institution?

0 = No.

1 = Yes.

If A1.1 AND
A1.2=0, go
to A3

If A3=0, go
to A5

5. For each year, specify if your country had a budget or fund allocated to...?

(For each year, specify 0 = No; 1 = Yes)

	2019	2020	2021
ICT acquisition for schools			
Connectivity infrastructure			
ICT maintenance costs for schools			
Research and development on the use of ICT in education.			

6. Which of the following best describes the country's expenditure on ICT in education during the last 5 years?

1. No public expenditure, or public expenditure on ICT in education made during only one year out of the last 5 years.
2. Public expenditure on ICT in education is made occasionally (between 2 to 4 years out of the last 5 years).
3. Public expenditure on ICT in education made during each of the last 5 years.

B Policies on school management for ICTs

7. Is there legislation and/or policies governing schools that assign responsibility for integrating ICT use into schools' strategic plans?

1. Yes, those responsibilities are mainly assigned to the national level.
2. Yes, those responsibilities are mainly assigned to the sub-national levels.
3. Yes, those responsibilities are mainly assigned to the local levels.
4. Yes, those responsibilities are assigned to the school level.
5. Responsibilities are not explicitly assigned in the legislation and/or policies.

<p>8. Does your country provide schools with guidelines or supporting tools to incorporate ICT into teaching and learning activities?</p> <p>0 = No 1 = Yes</p> <p>9. Select all ISCED education levels that are covered by these guidelines or supporting tools:</p> <p>1. Pre-primary (ISCED 0). (0 = No; 1 = Yes)</p> <p>2. Primary (ISCED 1). (0 = No; 1 = Yes)</p> <p>3. Lower secondary education (ISCED 2). (0 = No; 1 = Yes)</p> <p>4. Upper secondary (ISCED 3). (0 = No; 1 = Yes)</p> <p>10. Are the principals of public schools required to complete training on the management and use of ICTs for teaching and learning as part of their continuing professional development?</p> <p>0 = No 1 = Yes</p>	<p>If B8=0, go to B10</p>
<p>C Policies on teacher practices related to ICT</p>	
<p>11. Does your country have an official digital competency framework (DCF) for teachers?</p> <p>0 = No 1 = Yes</p> <p><i>See the glossary for definition of digital competency framework for teachers (DCF).</i></p> <p>12. Does this framework define minimum performance standards in ICT that teachers must meet?</p> <p>0 = No 1 = Yes</p>	<p>If C11=0, go to C13</p>

13. Does your country have a mechanism or strategy for assessing teachers' digital competencies?

0 = No

1 = Yes

14. Does the typical initial teacher training programme for pre-primary to upper secondary education (ISCED 0 to 4) include the following elements?

a. Learning how to use ICT generally.

1. Pre-primary (ISCED 0).

(0 = No; 1 = Yes)

If yes, specify in what year that element was added to the teacher training curriculum of the reference programme: _____

2. Primary (ISCED 1).

(0 = No; 1 = Yes)

If yes, specify in what year that element was added to the teacher training curriculum of the reference programme: _____

3. Lower secondary education (ISCED 2).

(0 = No; 1 = Yes)

If yes, specify in what year that element was added to the teacher training curriculum of the reference programme: _____

4. Upper secondary (ISCED 3).

(0 = No; 1 = Yes)

If yes, specify in what year that element was added to the teacher training curriculum of the reference programme: _____

b. Learning how to use ICT in teaching.

1. Pre-primary (ISCED 0).

(0 = No; 1 = Yes)

If yes, specify in what year that element was added to the teacher training curriculum of the reference programme: _____

2. Primary (ISCED 1).

(0 = No; 1 = Yes)

If yes, specify in what year that element was added to the teacher training curriculum of the reference programme: _____

<p>3. Lower secondary education (ISCED 2).</p> <p>(0 = No; 1 = Yes)</p> <p>If yes, specify in what year that element was added to the teacher training curriculum of the reference programme: _____</p> <p>4. Upper secondary (ISCED 3).</p> <p>(0 = No; 1 = Yes)</p> <p>If yes, specify in what year that element was added to the teacher training curriculum of the reference programme: _____</p> <p>15. Are public school teachers required to complete training on the use of ICT for teaching and learning as part of their continuing professional development?</p> <p>0 = No</p> <p>1 = Yes</p> <p>16. Does the government provide any courses within its teacher training programme that supports teachers' continuing professional development in the following areas:?</p> <p>a. Training on the basic use of ICT.</p> <p>(0=No; 1=Yes)</p> <p>b. Training on ICT for teaching in specific subjects.</p> <p>(0=No; 1=Yes)</p> <p>c. Training on ICT for teaching and learning that is not subject-specific.</p> <p>(0=No; 1=Yes)</p>	
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D Policies on the integration of ICT into the curriculum and a Digital Competency Framework for Students

<p>17. Does your country's educational curriculum recommend that ICT-assisted instruction forms part of subject delivery for specific grade(s)?</p> <p>0 = No</p> <p>1 = Yes</p>	<p>If D17=0, go to D19</p>
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18. Please check all the grades that apply:

(For each year, specify 0 = No; 1 = Yes)

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
Primary education (ISCED 1)							
Secondary education (ISCED 2 and 3)							

If D19=0,
go to D21

19. Does your country's educational curriculum define a set of digital or ICT competencies that students are expected to develop?

0 = No

1 = Yes

20. Select all ISCED education levels that are covered:

1. Pre-primary (ISCED 0)

(0=No; 1=Yes)

2. Primary (ISCED 1)

(0=No; 1=Yes)

3. Lower secondary education (ISCED 2)

(0=No; 1=Yes)

4. Upper secondary (ISCED 3)

(0=No; 1=Yes)

21. Does your country have a mechanism or strategy for assessing students' digital competencies?

0 = No

1 = Yes

E Policies on ICT devices in schools

22. Is there a policy or are there standards in place which require that students in all public schools have access to PCs, laptops, tablets and/or other digital devices?

0 = No

1 = Yes

23. Is there a policy in place which requires that digital devices that support learning at the school are accessible to children with disabilities?

0 = No

1 = Yes

24. Is there government legislation and/or policies that assign responsibility for maintaining public school ICT infrastructure and/or technical support?

1. Yes, those responsibilities are mainly assigned to the national level.

2. Yes, those responsibilities are mainly assigned to the sub-national levels.

3. Yes, those responsibilities are mainly assigned to the local levels.

4. Yes, those responsibilities are assigned to the school level.

5. Responsibilities are not explicitly assigned in the legislation and/or policies.

25. Is there a central system or mechanism that monitors the availability of functioning digital devices for the students and their usage in all public schools?

0 = No

1 = Yes, it monitors the availability of digital devices for the students, but it does not monitor if they are functioning or used.

2 = Yes, it monitors the availability of digital devices for the students and if they are functioning, but it does not monitor if they are used.

3 = Yes, it monitors the availability of functioning digital devices for the students and if the devices are used.

F Policies on the connectivity in the schools.

26. Is there a national policy, strategy or plan to provide Internet connectivity to all public schools?

0 = No

1 = Yes

27. Does the national policy, strategy or plan define any quality standards for the Internet connection in public schools?

0 = No

1 = Yes

28. Does the national policy, strategy or plan define any mechanism to moderate the cost of Internet use in education to make it affordable?

0 = No

1 = Yes

29. Is there a central system or mechanism to monitor the availability of Internet connections in all public schools?

0 = No

1 = Yes

30. Is there a central system or mechanism to assist schools with problems related to Internet connectivity, such as Internet stability, low bandwidth, etc.?

0 = No

1 = Yes

If F26=0, go to F29

G Policies on Digital Education Resources

See the glossary for the definitions of policy and plan.

31. Does the legislation and/or policies governing the education system contain any of the following?

1. A strategy for ensuring that there are enough digital educational resources available.

(0=No; 1=Yes)

2. Defined quality standards to use when evaluating the quality of digital educational resources.

(0=No; 1=Yes)

3. Defined procedures or mechanisms for aligning digital educational resources to the curriculum's requirements.

(0=No; 1=Yes)

4. Defined procedures or mechanisms for adapting digital educational resources to the local culture or language.

(0=No; 1=Yes)

5. Defined procedures or mechanisms for adapting digital educational resources to students with disabilities.

(0=No; 1=Yes)

H Policies on EMIS and Multiple Measures of Data and collection methodology

32A Does your country have a policy or plan governing school data collection and software application interoperability within the Ministry of Education and other Governmental agencies or Planning Units?

1. The country has a national policy.

(0 = No; 1 = Yes)

2. The country has a national plan.

(0 = No; 1 = Yes)

3. The country does not have a national policy or plan, but (at least some) regions do.

(0 = No; 1 = Yes)

32B Does your country have a centralized data or software platform for the digital collection of school data implemented at school level? (0=No; 1=Yes)

(If answer=0, skip 34C and 34D)

32C How regularly is the centralized data collected or updated (e.g. through a school census or other mechanism)?

a. More than once a year

b. Once a year

c. Every few years

32D Does the Ministry of Education in your country collect school data covering any of the following categories?

1. Student demographics: Descriptive information about the learning community (e.g. student enrollment, attendance, drop out rate, gender) (0=No; 1=Yes).

2. Teacher demographics: Descriptive information about the teachers (e.g. age, gender, level of qualification, years of experience, school name) (0=No; 1=Yes).

3. Student learning: Outcomes of the educational system (in terms of learning data, standardized tests, norm/criterion referenced tests, etc.) (0=No; 1=Yes).

4. School infrastructure: Information related to infrastructure at the school level (facilities characteristics, number of working devices available to students, Internet connectivity, learning management system) (0=No; 1=Yes).

5. School processes: Data on teaching processes e.g. classroom observations, coaching, training available, school event records, etc. (0=No; 1=Yes).

I. Policies on Data Usage

33A Does your country have a policy or plan outlining how the education data are accessed, disseminated, and shared within the Ministry of Education and other Governmental agencies, Planning Units, and relevant stakeholders to be incorporated into policymaking?

1. The country has a national policy.

(0 = No; 1 = Yes)

2. The country has a national plan.

(0 = No; 1 = Yes)

33B Does your country have a policy or plan in place to develop the capacity for interpretation and analysis of data at various levels through regular training?

1. The country has a national policy.

(0 = No; 1 = Yes)

2. The country has a national plan.

(0 = No; 1 = Yes)

END OF THE QUESTIONNAIRE

CONTEXT REPORT

The education system and national context

Please describe in 3,000 words (up to 5 pages) the national education context and the main characteristics of the educational system including how the system incorporates (or plans to incorporate) EdTech (education technology). Consider the following items to guide the elaboration of your country synthesis. Avoid using acronyms.

- **National Background:** Identify the main characteristics of the national educational system (e.g. student/teacher population, school-age, funding mechanism, public and private school ratio, economic and education performance, dropout levels, etc.).
- **Governance:** Which institutions in the country have the responsibility for establishing the overarching goals and priorities, and the implementation of the policies to support Education and Technology (EdTech)? How are these goals and priorities implemented? Highlight the milestones of the EdTech policy in the country for the last 10 or 20 years.
- **Students:** Explain how, when and through what mechanisms student learning is supported with the use of technology.

- **Teachers:** Explain how the education system promotes and monitors the adoption of EdTech to support (i) teacher professional development, (ii) teaching practices and (iii) carrying-out administrative tasks using technology (e.g. assessment, grading, school attendance, etc.).

- **EMIS:** Identify the governance and key stakeholder who work with administrative education management systems (EMIS).

- **Platform and devices:** Describe the key developments or the large-scale implementation of EdTech tools to support education policies (e.g. connectivity, provision of educational platforms, software, devices, etc.).

- **COVID-19 Pandemic:** Explain what EdTech related actions and transformations have been implemented in response to the school lockdown (interruption of in-person schooling), and/or to support remote learning and or school reopening. Note if such changes are likely to be temporary in response to the pandemic or incorporated into the education system on a more permanent basis.

Picture, Training of NDRI Enumerators



