



EdTech Readiness Index



Ho Chi Minh City (HCMC), Vietnam: ETRI Indicators and Results

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Background and field work



EdTech Readiness Index

6 Pillars to Understand the System



School Management



Teachers



Students



Devices



Connectivity



Digital Resources

PRACTICE

- Strategy
- Leadership
- Prioritization

- Self-Efficacy
- Use – planning
- Use – teaching

- Self-Efficacy
- Use – Inside
- Use – Outside

- Availability
- Student access
- Tech Support

- Connectivity
- Student access
- Quality

- Access
- Use
- Quality

POLICY

- Responsibility
- Guidance
- Support

- Standards
- Support
- Evaluation

- Framework
- Curriculum
- Assessment

- Standards
- Monitoring
- Responsibility

- Plan
- Monitoring
- Support system

- Guidance
- Strategy
- Standards



Field work

- Data was collected remotely (phone)
- August – September 2022
- Targeted a representative sample of 277 schools in HCMC covering primary and secondary schools in urban and semi-urban/rural locations
- The realized sample comprises
 - 277 schools (4 replacement)
 - 93 primary school principals and 184 secondary school principals
 - 302 teachers (101 in grade 5, 101 in grade 8 and 100 in grade 11)



Results are summarized for key indicators and compared

- Answers are aggregated into indicators and sub indicators.
- Results are color coded (as below) to understand strengths and weaknesses of the system
 - The thresholds used are only indicative at this stage and will be reassessed after the ETRI pilot phase (2023)
- 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)
- Analysis is included in bubbles on the slides

**Points:
4-5**

Good

**Points:
3-4**

Caution

**Points:
1-3**

**Needs
Improvement**

Results

Preview of recommendations

1) **EDTECH STRATEGY:** To plan, revise and improve the coherence and quality assurance in the Edtech strategy.

2) **HUMAN CAPACITIES:** To place teachers and students at the center of the Edtech strategy (building capacities, providing guidance, and support).

3) **DEVICES:** To include and prioritize in the Edtech strategy the acquisition, distribution, and effective use of digital devices in the schools.

4) **DIGITAL EDUCATIONAL RESSOURCES:** Actions to secure effective use of digital resources are (still) needed.

5) **INTERNET:** Connectivity can be considered as an opportunity (if the quality is secured).

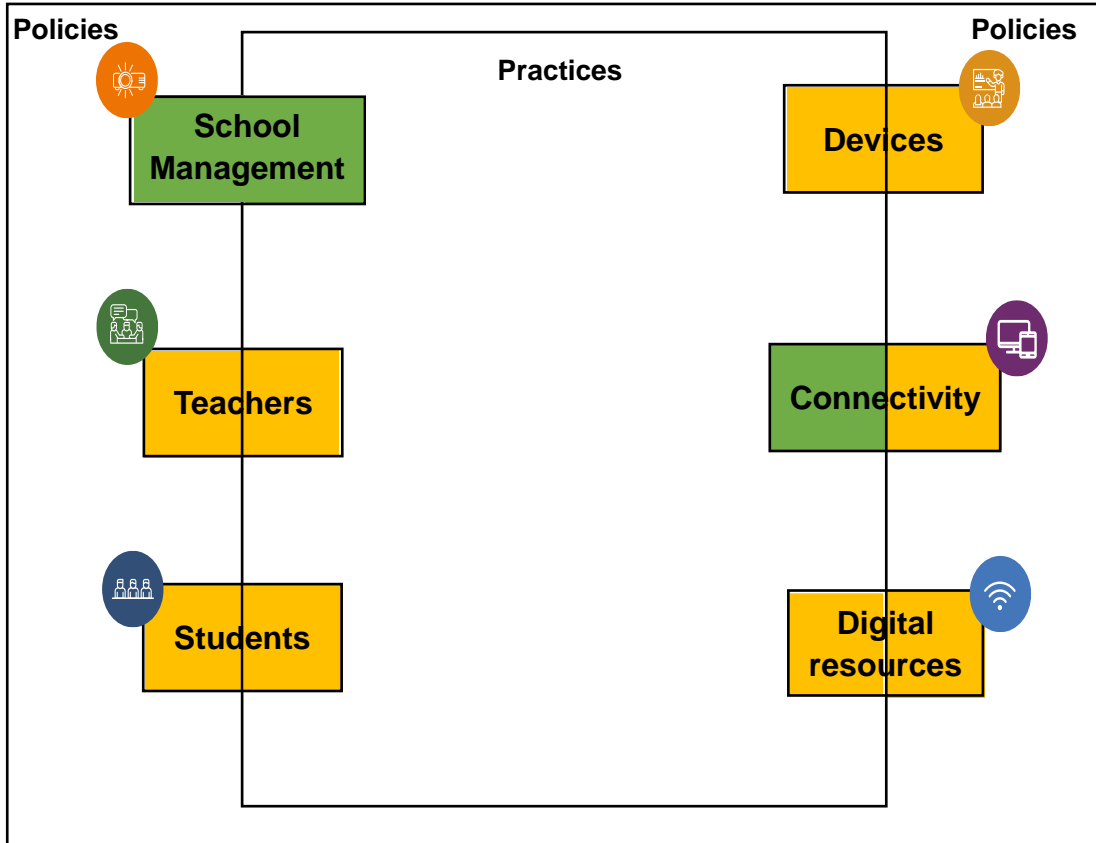
6) **CONSISTENCY:** To assign special attention to the earlier grades of education.

7) **MANAGEMENT:** To build on the existing school management to support the planning, implementation, and monitoring of the EdTech policies.

8) **DIVIDE:** To keep working toward bridging the urban and rural divide.

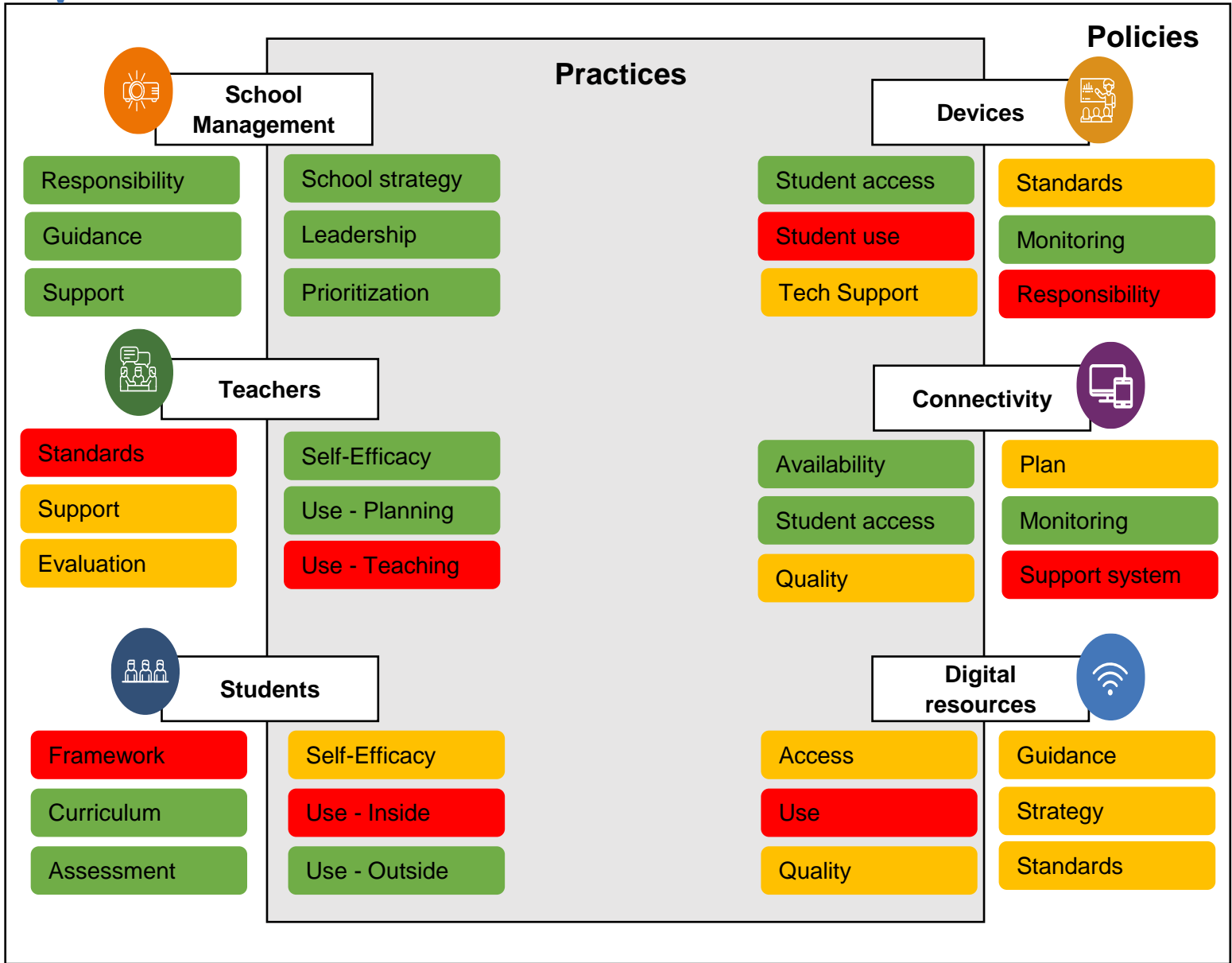


City level results



- *There is no problematic pillar*
- *Results are better for School Management and for practices around Connectivity*
- *Mismatch between practices and de facto policies is greatest within the pillar of Connectivity.*

City level results



Looking at the sub-pillar levels highlight areas of improvements

In terms of **practices**, the weakest points are:

- Use of Ed Tech by students, inside of the classroom
- Use of EdTech by teachers for teaching (as opposed to planning, management, etc.)
- Student use of available devices

In terms of **policies**, knowledge and use by school principals and teachers could be improved in the areas of:

- Support for DERs
- Standards/framework for Teachers/Students ICT competencies
- Responsibilities around the maintenance and technical support for Devices



School Management



Practices

School strategy 4.5

- 100% of school principals report having a digital strategy or a plan to incorporate the use of ICT into teaching and administration at their school

Leadership 4.3

% of school principals who report

- Involving teachers in the development of plan to apply ICT in the school: 94%
- Supporting teachers in trying out new ways of teaching with ICT: 100%
- That there are discussions on the advantages and disadvantages of teaching and learning with ICT: 100%

Prioritization 4.3

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

- basic computer functions: 99%
- accessing and using information: 96%
- using digital devices safely and appropriately: 94%
- improving their learning generally 94%

Policies

Responsibility 4.8

- 97% of principals reported that responsibilities for integrating ICT use into schools' strategic plans are assigned (at the national, sub-national/local or school levels)

Guidance 4.7

- 92% of school principals aware of guidelines to incorporate ICT into teaching and learning activities
- 87% of school principals find useful guidelines to incorporate ICT into teaching and learning activities

Support 4.3

- 94% of school principals report attending or participating in a training on the use ICT in school over the last 12 months
- 74% of school principals report the training was required

- *Overall, school management of Ed Tech seems strong.*
- *To further improve this panel, one could focus on leadership, prioritization, and support of ICT.*
- *Most school principals report that the responsibilities related to ICT are clear, they use the guidelines, and they participate in training*



Teachers

Practices

Self-Efficacy 4.6

% of teachers who report being confident in their own ability to :

- Contribute to online discussion/forum: 78%
- Produce presentations for use in class: 84%
- Prepare lessons in which students use ICT: 78%
- Use spreadsheet for keeping records: 78%
- Assess student learning using ICT: 85%
- Collaborate with colleagues using shared resources: 73%

Use – Planning 4.3

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

- Searching for content to use during class: 99%
- Sharing educational content with other teachers: 76%
- Participating in project developed with other: 31%
- Preparing presentations to use for teaching: 84%
- Expanding your knowledge about the use of ICT: 79%
- Carrying out administrative class management: 71%

Use – Teaching 2.4

% of teachers reporting doing the following during direct class instruction:

- Using ICT to search for information for discussions: 34%
- Using ICT to present information during instruction: 42%
- Using classroom management tools: 17%
- Asking students to search for information: 16%
- Asking students to present results using ICT: 6%
- Using digital tools to assess students' learning: 16%

Policies

Standards 2.9

- 47% of teachers report that there is a guiding document that defines the digital competences that a teacher is expected to have or develop
- 46% of teachers find the guiding document useful

Support 3.8


% of teachers reporting that their initial training included the following:

- Learning how to use ICT generally: 83%
- Learning how to use ICT in teaching: 62%

80% of teachers report participating in professional development activities on using ICT in teaching and learning practices, but it was never required

Evaluation 3.9

- 74% of teachers report having been formally evaluated on their use of ICT during the last school year

- 
- *To some extent (although not enough), teachers use ICT for research and presentations, and encourage students to use it for research.*
 - *Despite availability of devices (as we will see later), in very rare cases, teachers are using ICT in their teaching or in collaborating with other teachers in the planning of their lessons.*
 - *This lack of use may be related to training, since relatively few say that they were trained on how to use this for teaching; And it appears that these type of training are not required.*
 - *About half of teachers report that there is a document defining digital competencies.*
 - *Investing on the development and use of guidance documents on digital competencies would be beneficial*



Students

Practices

Self-Efficacy 3.8

% of teachers who report thinking that at least half of the students can perform the following independently:

- Open a new tab in a browser: 88%
- Save a photo that they find online: 89%
- Find a website they have visited before: 84%
- Check if information found online is true: 61%

Use – Inside 2.5

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

- Searching for information for lesson exercises: 76%
- Communicating with students on projects: 66%
- Sharing assignment results with students: 59%
- Submitting completed work for assessment: 61%
- Evaluating information resulting from a search: 56%
- Producing document, presentation, or videos: 69%

Use – Outside 4.1

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

- **Browsing the Internet for schoolwork: 93%**
- **Communicating with teacher (social networks or email): 97%**
- Doing homework on a digital device: 73%
- Using learning apps/websites: 83%

Policies

Framework 2.2


- 30% of teachers report that there a guiding document defining the digital competences that a student is expected to have or develop

Curriculum 4.9

- 99% of teachers believe that the educational curriculum recommends using ICT in teaching

Assessment 4.2

- 80% of teachers report that the digital competencies of students were formally assessed

- 
- *Most teachers do not know of or use a guiding document (framework) defining students ICT competencies (30%). This is contradictory to the fact that 85% of these same teachers report formally assessing the digital competencies of their students. This could indicate that assessment is done without framework (i.e. informally), highlighting the importance of having a such a framework*
 - *Only a bit more than half ~~a quarter~~ of teachers report that students use digital devices in school.*
 - *According to teachers, use of devices outside of school is mostly for research (browsing for info) and communicating through social network or email.*
 - *Surprisingly, given the low level of reported use, almost all the teachers report that the education curriculum recommends using ICT for teaching. The missing pieces may be standards on competencies and training on how to use ICT for teaching.*
 - *On self-efficacy, validating information found online is weak.*

Devices

Practices

Availability 4.1

- Share of working digital devices that are available to students for learning: 81%
- Proportion of school principals that agree that there is sufficient number of digital devices for instruction: 83%

Student access 3.2

- 4% of school principals report that the school has digital devices that are adapted for the use of students with disabilities
- 78% teachers report that digital devices available at the school were used in class at least once or twice a week

Tech Support 3.8

- 87% of school principals agree that there is sufficient technical support to maintain ICT resources so that they are fully functional

Policies

Standards 3.9

- 73% of school principals know if there are standards in place which require that students in all schools have access to functioning digital devices (PCs, laptops, tablets and/or other digital devices)

Monitoring 4.3

- % of school principals who report that there someone or any institution or mechanism that monitors:
- that all schools have access to functioning digital devices: 86%
 - If digital devices and connectivity are used by the students: 77%

Responsibility 2.6

- 39% of school principals report that there is a government legislation that assigns responsibility to MOET or DOET for maintaining school ICT infrastructure and for providing technical support

- Available devices are mostly working, but are still deemed somewhat insufficient (number).
- Although this could be improved, most principals know there are standards in place which require functioning digital devices and may compare what is available against this.
- Most working devices in schools are available to students but only actually used in class at least once a week by 78% of teachers.
- Almost NO SCHOOL have devices adapted for students with disabilities. A proactive strategy that train, guide and explains how and when digital devices can be used in class could help.
- Tech support is not too bad (although it could be improved) despite the fact that clear assignment of responsibilities related to maintenance of school ICT infrastructure is considered poor.



Connectivity

Practices

Availability 5.0

- 100% of schools have Internet access

Student Access 4.4

- 99% of devices available to students are connected to the Internet
- 86% school principals believe that there is a sufficient number of digital devices connected to internet:

Quality 3.8

- % of school principals who believe that:
- The school bandwidth or speed is sufficient: 89%
 - The Internet stability is sufficient: 80%

Policies

Plan 3.3

- 58% of school principal believe that the government have any strategy or plan to provide or facilitate Internet connectivity to all schools

Monitoring 4.2

- 80% of school principals report that there someone or any institution or mechanism that monitors the availability of an Internet connection in the school.

Support System 2.2

- 31% of school principals believe that, if the school has problems with Internet connectivity, such as stability, low bandwidth, etc., there is a system or mechanism at the government level to assist and resolve the problem

- *Quality of connectivity is can be improved across the board (devices connected, speed, and stability), not driven by a specific issue*
- *As seen under devices, there is some lack of satisfaction from principals related to the number of devices connected, despite all available devices being connected*
- *Support is seen as greatly lacking, and the absence of knowledge about a plan in almost half of the schools may contribute to this*

Digital Educational Resources (DER)

Practices

Access 3.9

- 93% of school principals agree that his/her school has access to sufficient digital learning resources
- 52% of school principals agree that there is sufficient digital learning resources adapted for students with disability

Use 2.8

- % of teachers who report using tools in most lessons:
- Computer-based information resources: 97%
 - Digital resources linked with school textbooks: 81%
 - Digital learning games: 88%
 - Collaborative software: 68%
 - Graphing or drawing software: 57%
 - Word-processor software (e.g. Word): 99%
 - Presentation software (e.g. PowerPoint): 98%

Quality 3.7

- % of school principals who agree that, in his/her school:
- Available digital learning resources are of adequate quality: 89%
 - Available digital learning resources are aligned to the needs of the curriculum: 92%
 - Available digital learning resources are adapted to the local context: 80%

Policies

Guidance 3.8

- 70% of school principals believe that there is a strategy/plan for ensuring that public schools have access to digital educational resources

Strategy 3.1

- % of school principals who believe that there is a government legislation/policy that defines :
- How DERs should be aligned to the curriculum's requirements: 63%
 - How DERs should be adapted to the local culture or language: 55%
 - How DERs should be adapted for the use of students with disabilities: 39%

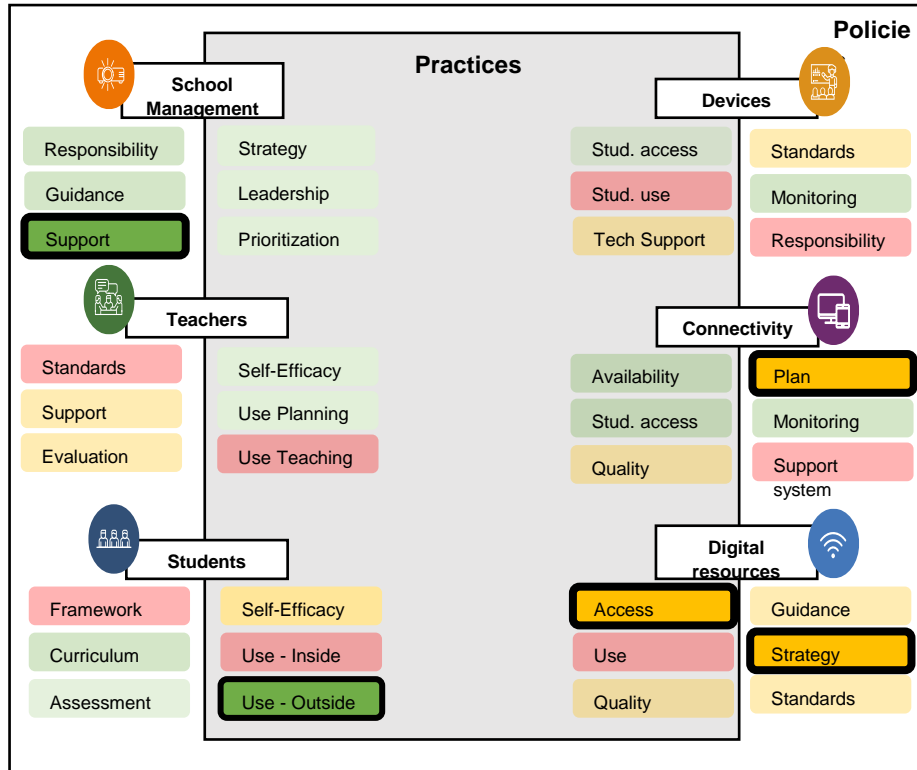
Standards 3.3

- 57% of school principals believe that there is a government legislation/policy defining quality standards for digital educational resources

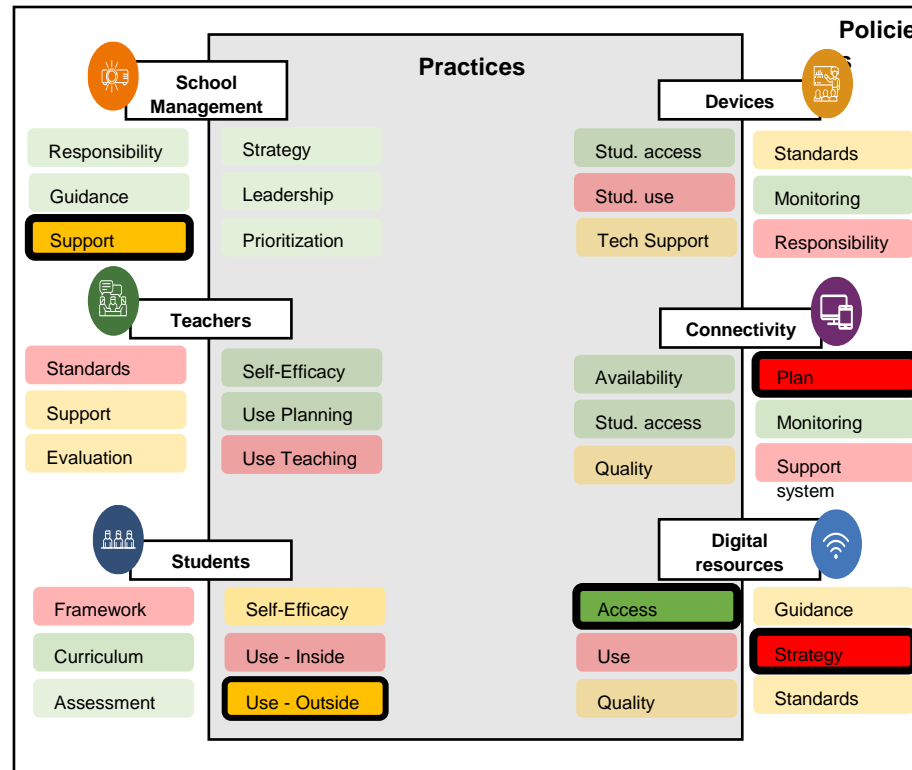
- *Access to quality Digital Educational Resources (DERs) could be improved.*
- *But most importantly, improvement should focus on ensuring that available DERs are used.*
- *Traditional software (e.g. word processing and presentation softwares) and browsing are used to some extent, but other more recent tools such collaborative or graphing/drawing software, and to some extent as digital learning games, are not used.*
- *On the policy side, strategy should be improved, especially again keeping in mind specific needs of students with disabilities*
- *Although 70% of principals believe that there is a strategy for access to DERs, most also believe that legislations/policies lack sufficient definition of quality standards and guidance on adapting DERs to the curriculum, local culture/language and students with disabilities.*

Group level results - by location

Urban



Rural/Peri-urban



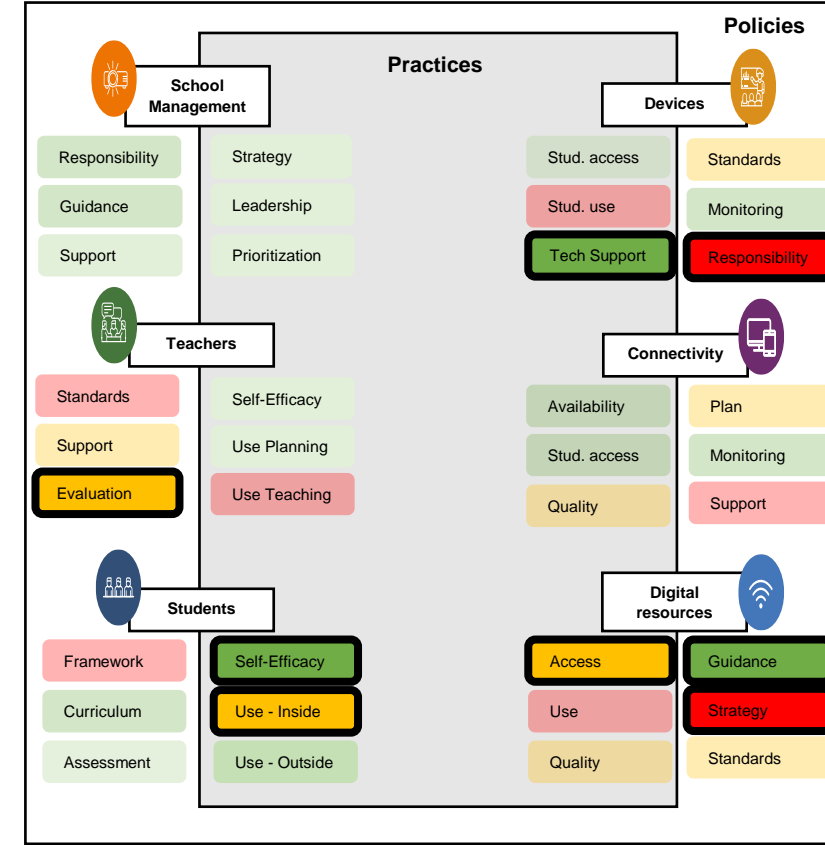
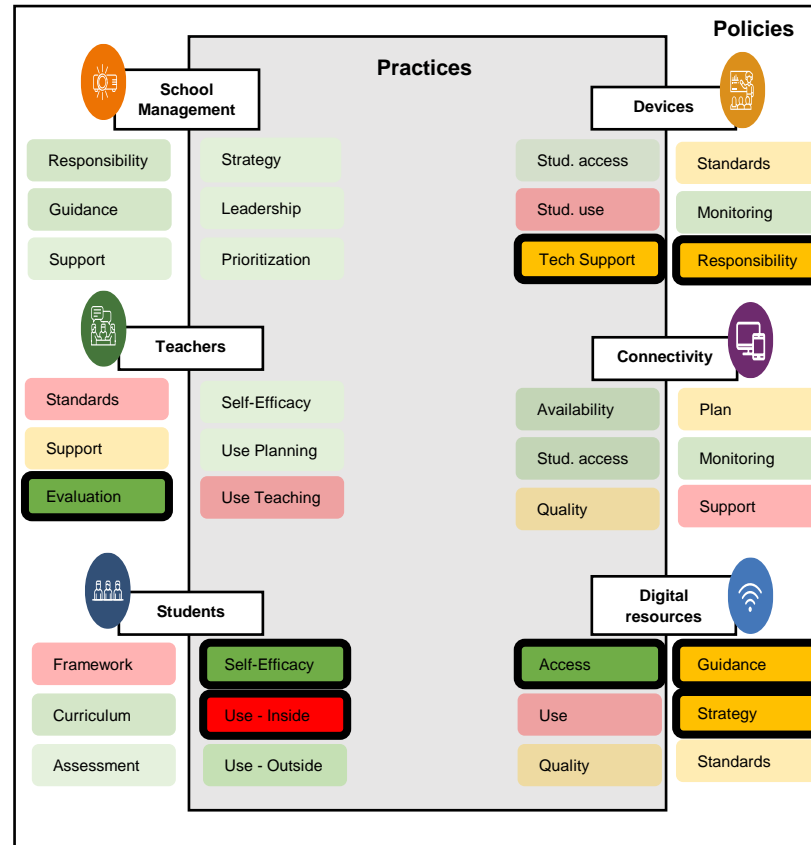
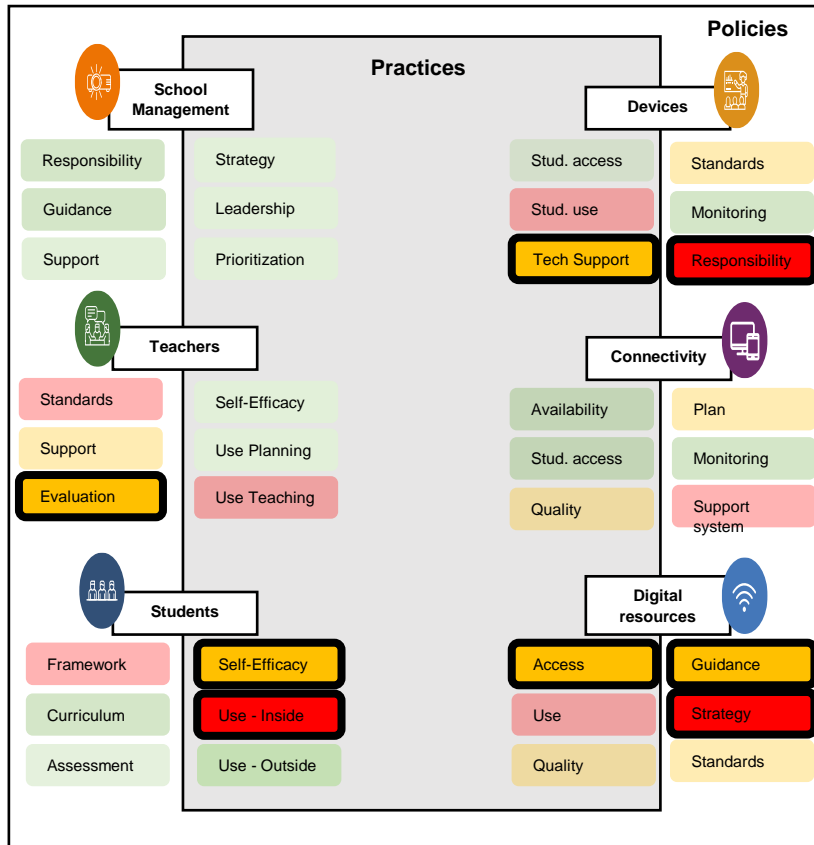
- Only few differences across location
- More principals at urban schools (than rural/peri-urban schools) believe there is a strategy for connectivity and digital resources at their school and report having participated in training
- Urban schools report better support
- But student access to digital resources is perceived as being better at rural/peri-urban schools
- And teachers in these rural schools have lower confidence in the ability of students to perform ICT-related activities without assistance.

Group-level results - by grade served

Schools with grade 5

Schools with grade 8

Schools with grade 11

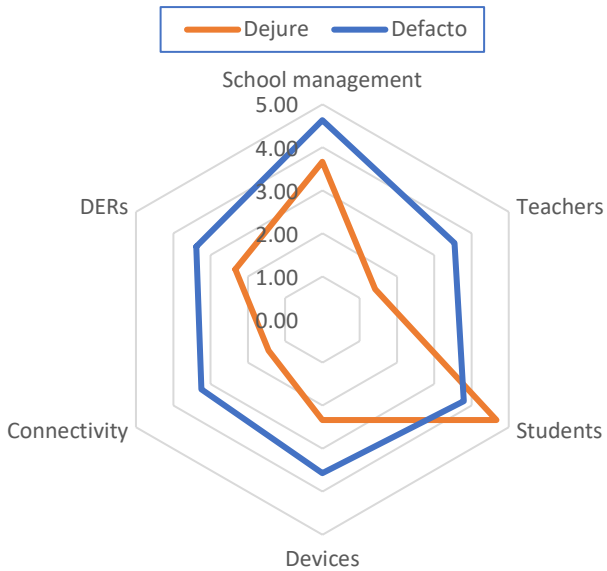


- The main differences across grades are around practices of students and digital resources
- Teacher's confidence in student ability in using ICT and belief that students do use ICT inside and outside school increases with grades. Use inside the classroom remains the weakest among the three indicators at all levels.
- Like rural/peri-urban, schools with grade 11 have a better perception of technical support for devices as well as guidance on digital resources.
- There are few items on which schools with grade 8 score better. It is assessment of digital competencies of students as well as access and strategies for digital resources.
- Beyond assessment, teaching doesn't seem different according to grades level thought, which is surprising
- Belief in the existence of a government strategy or plan to provide or facilitate Internet connectivity to all schools is especially bad in primary schools

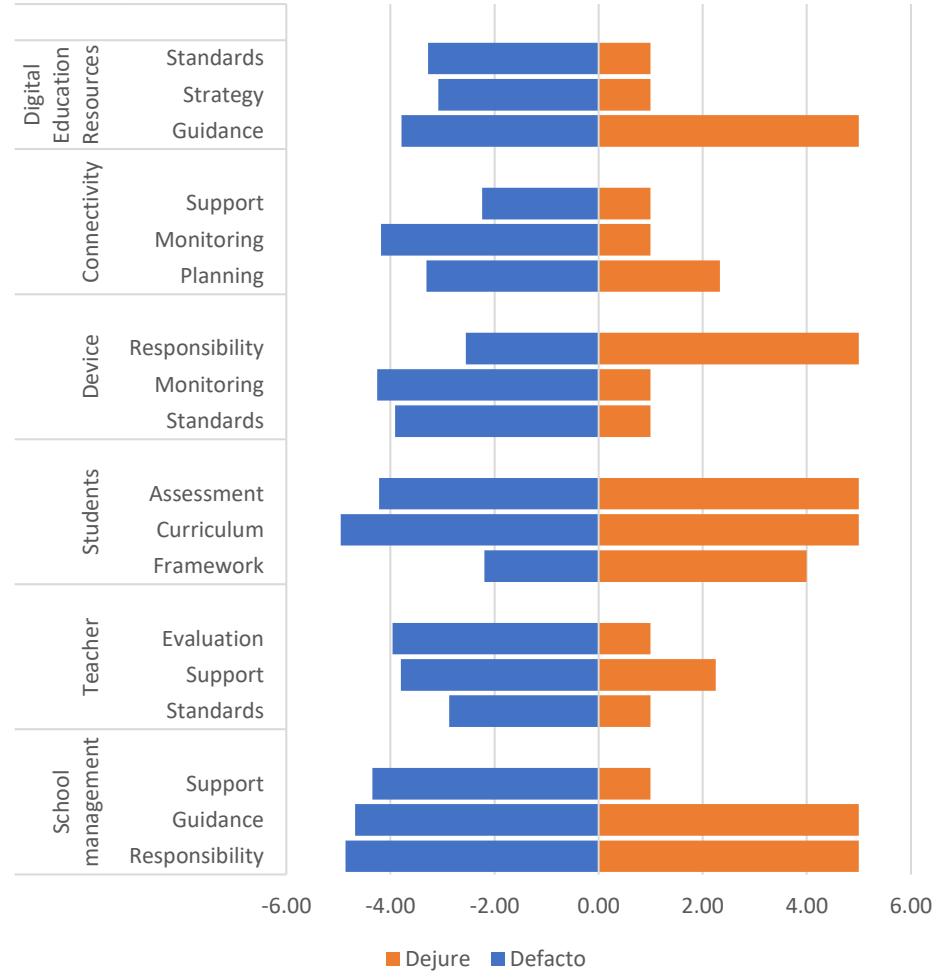


De facto and de jure policies will be compared

Using Radar Plot (e.g. Selected Policy Levers)



De Jure and De Facto



- *In most pillars, principals and teachers know of and use policies/plans/standards even when they don't formally exist.*
 - *De facto and de jure policies are most aligned under the Students pillar*
 - *De jure policies lacking more importantly in:*
 - *Connectivity (support and monitoring)*
 - *Teachers (standards and evaluation)*
- Followed by*
- *DERs (standards and strategy)*
 - *Devices (monitoring and standards)*

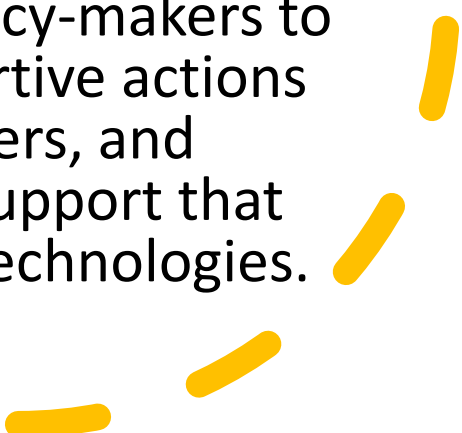
8 Key Messages and Recommendations

1. Improve coherence and quality assurance of Edtech strategy

It is important to design strategies to ensure the alignment between the policy and its implementation (practice).

Instead of adopting a single action or methodology, it is advised to deploy a comprehensive system of regular monitoring strategies and assessment tools. This will equip policy-makers with instruments that inform the education community in real-time (or as regularly as possible).

Effective monitoring could enable the needed adaptations, depending on the context and needs. This system would also allow policy-makers to make the necessary corrective or supportive actions to ensure that schools (principals, teachers, and students) receive the guidance and/or support that they need to benefit from information technologies.



2. Put teachers and students at the center of the Edtech strategy

Teachers: The results indicate the importance of planning remedial and supportive mechanisms to guide the role of teachers to use technology in teaching (as opposed to planning or administrative functions, etc.)

The results also indicate the need for more advanced capacities among teachers (in areas such as planning, evaluation or self-efficacy). At the policy level, teachers require solid guidance documents for the effective incorporation of educational technologies. Standards could guide what digital competencies, training and practices are expected from teachers.

Students: Though devices are available at the school, it is noted that insufficient student access to devices and very limited use of digital resources, particularly within (and to a lesser extent outside) schools, will necessitate strategic actions from the education system. Results also show poor availability of guiding documents (e.g., digital competencies).

Alignment between de jure policies and de facto policies is weak for both teachers. That could translate into a more effective monitoring of connectivity, integration of devices or digital resources.

3. Prioritize acquisition, distribution and effective use of digital devices in schools

The results indicate several challenges that need to be addressed. Even though most devices to students are reported to be operational/working, the number of devices is insufficient for instruction (also reflected in poor student access to devices).

The use of devices for learning is moderate. Only 54% of teachers indicate that devices at school were used in class at least once or twice a week. Access to digital devices adapted for students with disability is almost non-existent.

Better alignment between *de jure* policies and *de facto* practices is required. Authorities could provide clearer definitions of roles and responsibilities to ensure the impactful use of learning technologies.

4. Improve the effective use of digital resources

Although access to digital education resources (DERs) is sufficient, a suboptimal use of DERs is registered. The findings emphasize the need for higher quality standards to guide the use and adoption of DERs.

Strategies, guidance and standards are needed to improve the access to, and quality of, digital resources. Traditional platforms and software (e.g. word processors or presentation software) are widely used. However, collaborative software or graphing and drawing software is rarely used.

There is also room for improvement in adapting DERs to the national curriculum, the local context and students with disabilities.

5. Use connectivity as an opportunity (if the quality is addressed)

The results show that the perception of connectivity (availability and student access to connectivity/ Internet) in the schools is considered good. The quality of connectivity is also considered sufficient. These are positive factors.

The education system requires improvements, like a better strategy/plan to provide connectivity to all schools. However, a strong support system to mitigate problems with connectivity is needed.

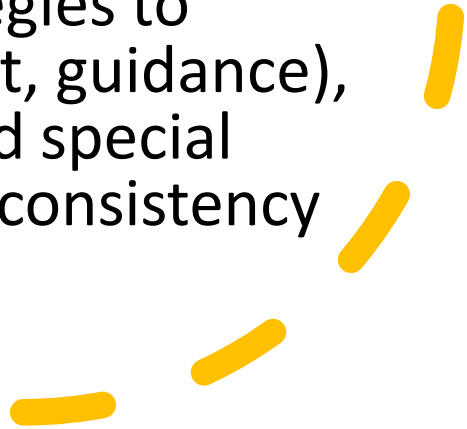
Schools need extra measures from the government to improve dimensions such as the quality of connectivity – particularly when using digital resources. A better alignment between de jure policies and de facto practices is needed.

6. Pay special attention to the earlier grades to improve consistency

Incremental improvement: When comparing results by grade level, the higher the grade, the better the principal's perception of EdTech policy implementation. With each grade, the teacher's confidence in the students' ability to use ICT grows.

Devices in the classrooms are a constant challenge: Use of computers inside the classroom remains the weakest among the three indicators at all levels.

Alignment and consistency: More critical (poorly scored) dimensions are registered in the lower grade (Grade 5). When planning strategies to support EdTech (e.g., technical support, guidance), the earlier years of education will need special attention to ensure better coherence/consistency across all the grades.



7. Leverage the School Management Strengths

Considering that the policies related to School Management (School strategy, Responsibility, Guidance, and Support) scored higher than the rest of dimensions, we advise using that as a *backbone* to implement regular planning and monitoring of the Edtech policies and their future implementation/adaptations. School management could support the existing and future education and technology strategies.

Most school principals report having a digital strategy or plan to incorporate ICT into teaching and administration at their school. The perception is particularly positive from the policy point of view (even though these plans aren't necessarily adopted in practice).

8. Keep working toward bridging the urban and rural divide

Interestingly, minor differences are documented when comparing EdTech policies and practices between urban and rural/peri-urban areas. This is a positive result in terms of integration and coherence.

Future actions that can be considered:

Connectivity, Training, and Digital Resources: More principals at urban schools believe there is a strategy for connectivity and digital resources at their school and report having participated in training.

Confidence and Guidance: Teachers in rural/peri-urban schools have lower confidence in the ability of students to perform ICT-related activities without assistance (e.g. revisiting websites, information validation) suggests that guidance and capacity-building are required.

Summary of recommendations

1) **EDTECH STRATEGY:** To plan, revise and improve the coherence and quality assurance in the Edtech strategy.

2) **HUMAN CAPACITIES:** To place teachers and students at the center of the Edtech strategy (building capacities, providing guidance, and support).

3) **DEVICES:** To include and prioritize in the Edtech strategy the acquisition, distribution, and effective use of digital devices in the schools.

4) **DER:** Actions to secure effective use and adaptation of digital resources are (still) needed.

5) **INTERNET:** Connectivity can be considered as an opportunity (if the quality is secured).

6) **CONSISTENCY:** To assign special attention to the earlier grades of education.

7) **MANAGEMENT:** To build on the existing school management to support the planning, implementation, and monitoring of the EdTech policies.

8) **DIVIDE:** To keep working toward bridging the urban and rural divide.

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