



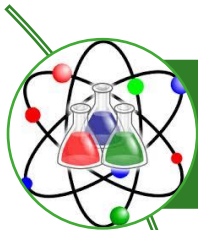
Bridging the Quality of Education through Digital Technologies using the Flipped Classroom Approach

Science Technology and Innovation
Division

Cooperation and Capacity Development
Department



Contents



IsDB Synthesis Report on ICT and Remote Learning 2023



Challenges in Bridging Quality of Education in Rural Areas



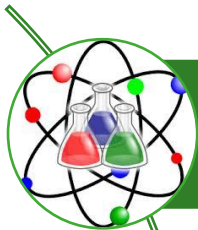
Flipped Classroom Learning Theory of Change



Designing a Data-Driven Flipped Classroom Program in the CAREC Region



Contents



IsDB Synthesis Report on ICT and Remote Learning 2023



Challenges in Bridging Quality of Education in Rural Areas



Flipped Classroom Learning Theory of Change



Designing a Data-Driven Flipped Classroom Program in the CAREC Region



IsDB البنك الإسلامي للتنمية
Islamic Development Bank

AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE
DE DEVELOPPEMENT

JAPANGOV
THE GOVERNMENT OF JAPAN

SYNTHESIS REPORT

**STUDY ON THE USE OF ICT IN EDUCATION
AND REMOTE LEARNING DURING CRISES AND
THE REQUIRED INVESTMENT IN DIGITAL
TRANSFORMATION FOR AFRICAN COUNTRIES**

2023

Study Objectives (34 countries in Africa)

Review Preparedness in ICT Use



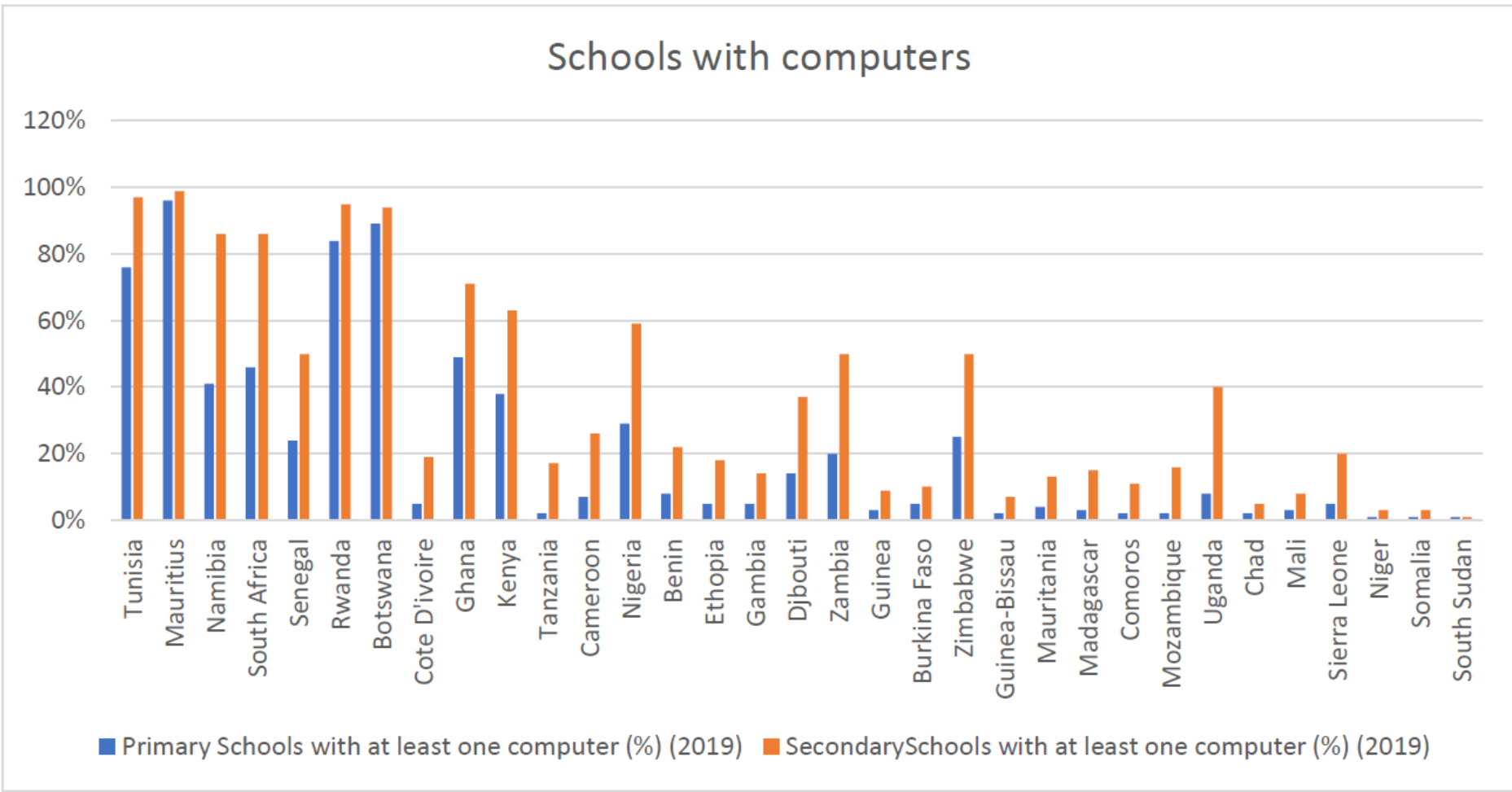
Understand Existing Barriers

Determine gaps in policies, practices and infrastructure

Determine the level of investment



Interesting Statistics



Interesting Statistics

Table 1: Policy mapping for countries

Country	Education	ICT	ICT in Education
Botswana ⁹ , Comoros, Côte d'Ivoire, Djibouti, Ethiopia, The Gambia, Guinea Bissau, Guinea, Kenya, Mauritius, Namibia, Niger, Nigeria, Rwanda, Senegal, Tanzania, Uganda, Benin, Burkina Faso, Ghana, Zambia, Mali, Zimbabwe, Tunisia, South Africa	√	√	√
Cameroon, Madagascar, Mauritania, Sierra Leone, South Sudan	√	√	×
Chad, Mozambique	√	√	! ¹⁰
Somalia	√	×	×

- Many countries do not have specific policies on the use of ICT in Education. However, this component is covered to certain extent in either their Education or ICT policy or both.
- Despite the existence of the policies, in general, countries were not able to engage in a smooth transition to inclusive digital learning for all stakeholders during the COVID-19 pandemic. This ability to adapt to emergencies to ensure continuity of learning is a litmus test for a resilient education system. For instance, in Mauritius, students at primary and secondary level had to repeat a year post-pandemic.

Interesting Example

A success story unique to Burkina Faso

An alternative option is to turn to ICTs that do not require an internet connection and use nano-servers to access digital content offline, for instance. The EDbox in Burkina Faso (below) allow computers/ tablets/ smartphones to be connected to digital content on local storage, without internet access. ICT and inclusive education programs must be developed coherently to ensure that everything required to access educational content is provided by the programme (or is already available in the schools).



Figure 1: EDbox nano server in Burkina Faso

Source: https://www.hi.org/sn_uploads/document/Inclusive-ICT-report_1.pdf

Interesting Example

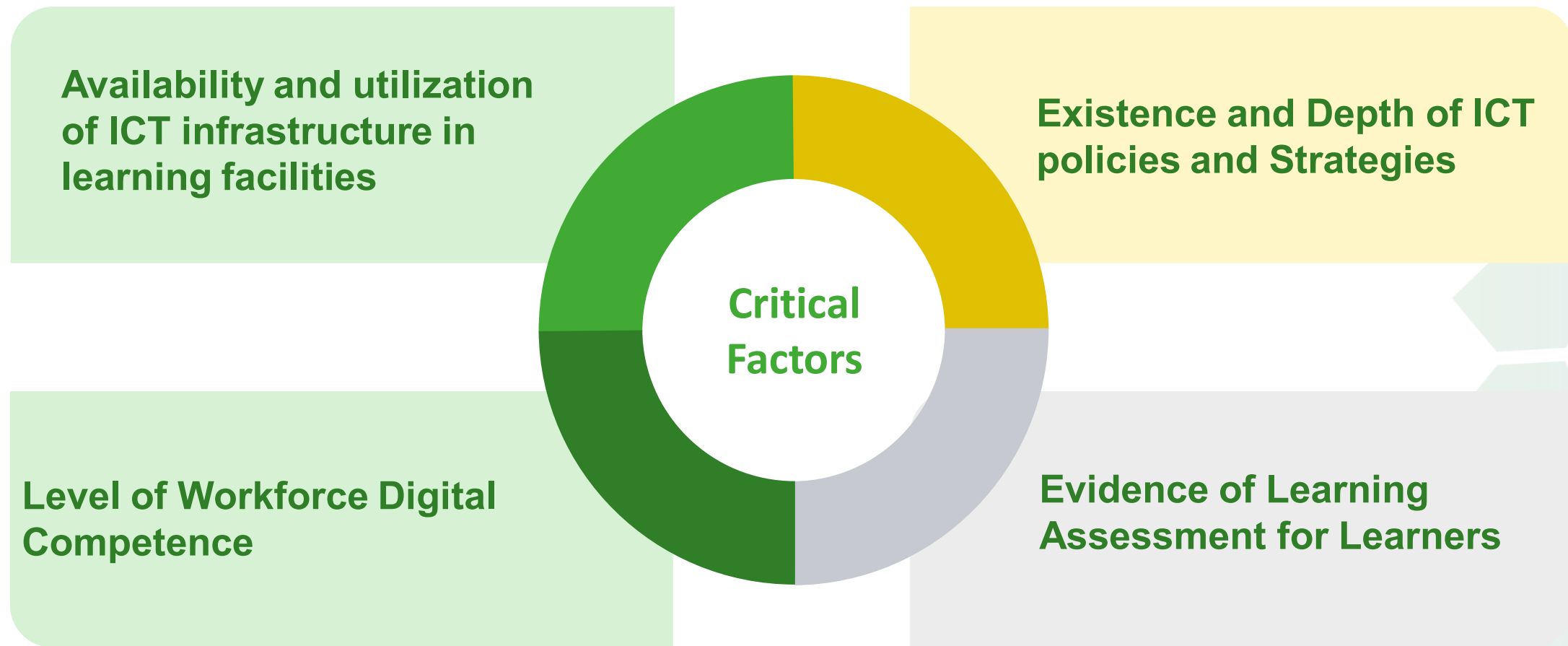
So Kalan – Mali's first e-Learning platform

"So Kalan" is the first e-learning platform designed and implemented in Mali. In partnership with a school in Bamako, Ada Ouologuem and her team created 20-minute didactic modules on exam subjects. Through these short videos, So Kalan gradually gives access to an increasing range of learning opportunities: courses in mathematics, French, physics & chemistry, biology, history, and geography.

The emergence of COVID-19 and its consequences on students' learning needs prompted the young enterprise to refine and strengthen its educational programme. So Kalan took advantage of this opportunity to make young people aware of protective measures against COVID-19. The "video capsules" are broadcasted on its own online platform and on the Africable TV channel. "So Kalan" also introduces video conferencing software, facilitating interactive communication between students and teachers. In other words, students can ask questions and teachers get a chance to question their students.

In just a few months, more than 500 students have logged in and are taking the courses online. Beyond Mali, the broadcasting of these video clips on the television channel Africable allows students from Senegal, Côte d'Ivoire, and Niger to tune in.

Key Findings



Contents



IsDB Synthesis Report on ICT and Remote Learning 2023



Challenges in Bridging Quality of Education in Rural Areas

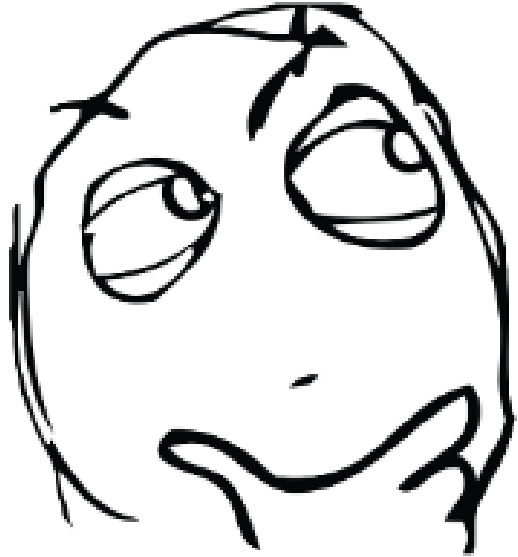


Flipped Classroom Learning Theory of Change



Designing a Data-Driven Flipped Classroom Program in the CAREC Region

Question



- 1) Is the purpose of ICT in Education to ensure continuity of Education or can it be used to improve access to quality Education?
- 2) Why are some schools better than others in educating children?



Teachers Matter



Teachers Matter

ATTRACTING, DEVELOPING AND
RETAINING EFFECTIVE TEACHERS

Overview



Document link:

Chrome-

extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.oecd.org/education/school/34990905.pdf



Study Conclusions

Student learning is influenced by many factors: students skills, expectations, motivations, family resources, peer group, curriculum structure and content, teacher skills knowledge attitude and practices, schools classrooms, dynamic environments, digital literacy, ICT infrastructure etc. Three main factors were highlighted:

1. Student's background and what they bring to school (resources, family environment etc). Difficult for policymakers to influence, especially in the short run.
2. Broad consensus is that "Teacher quality" is the most important variable influencing on student learning and achievement.
3. "Teacher quality" does not necessarily equate to teacher qualifications. It is a difficult thing to measure (e.g. ability to convey ideas in clear and convincing ways; create effective learning environment for different types of students; foster productive teacher- student relationships, enthusiastic and creative, working effectively with colleagues and parents etc.)

Contents



IsDB Synthesis Report on ICT and Remote Learning 2023



Challenges in Bridging Quality of Education in Rural Areas



Flipped Classroom Learning Theory of Change



Designing a Data-Driven Flipped Classroom Program in the CAREC Region

Flipped Classroom Pedagogy

Flipped Classroom is an approach to a type of blended learning where students are introduced to content (videos) taught by master lecturers. This is the reverse of the more common practice of teachers introducing new content in school and then assigning homework.

	Traditional Classroom	Flipped Classroom
Teachers Role	Teachers prepare on how to teach new content	Teachers focus on coaching and providing guidance to students
Separation between Lecture and tutorial	No separation. Teachers are the lecturers and tutors.	Teachers focus on being good tutors. They improve their knowledge by learning from good video lecturers.
Standard method of teaching content	The content delivery differs depending on quality of teaching	Content delivery is standardized and of high quality delivered by master lecturers
Material can be rewatched	Students that miss the content lecture often miss out.	Students can rewatch the content (if they have access to the online material)




Flipped Classroom Application

In a full-fledged Flipped Classroom Application, students have access to online material. They independently watch and learn the video at home before class. They apply what they have learned at home by doing exercises that would otherwise be their “homework” under the traditional classroom model. Since most students do not have the needed internet or IT devices in rural areas, a few modifications need to be made. This is often referred to as the Flex Flipped Classroom model.

Application considerations include:

- 1) Lecture videos may be played in class so that the teacher and the student will learn together
- 2) Each classroom should be equipped to enable content delivery (computer, projector, electrical supply)
- 3) Capacity of teacher operating the IT equipment
- 4) Maintenance of the IT equipment
- 5) Need internet? Need printer to print exercises?
- 6) Can we include IT usage lessons?

Contents

	IsDB Synthesis Report on ICT and Remote Learning 2023
	Challenges in Bridging Quality of Education in Rural Areas
	Flipped Classroom Learning Theory of Change



Designing a Data-Driven Flipped Classroom Program in the CAREC Region

IsDB-CAREC Institute Data Driven Flipped Classroom Program Study Objectives

The overall objective of this study is to develop a blended/flipped classroom model for widening access to quality education and learning in the CAREC region by integrating affordable digital technologies.

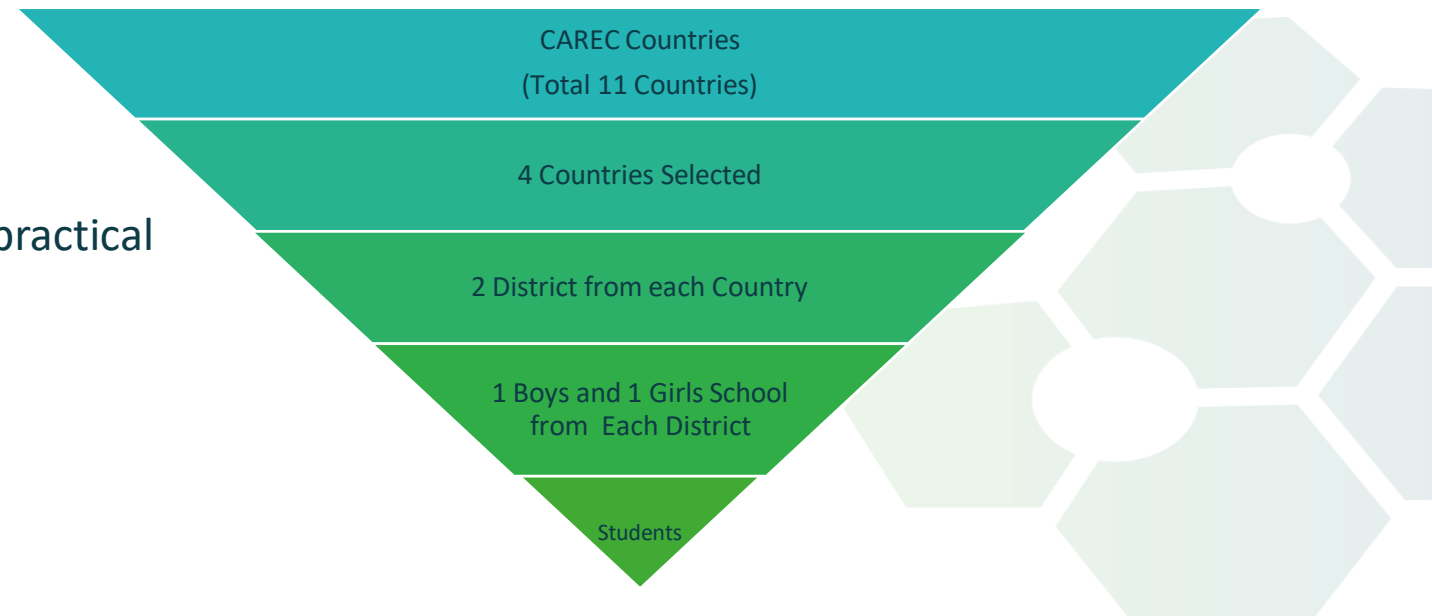
Scope of Study

- i) To conduct a comprehensive desk review of the evidence on blended learning practices and their impact on the learning levels of students in the developed world
- ii) To collect evidence on the blended learning practices and their impact on the learning levels of students in the developing world
- iii) To determine the feasibility and potential (Performance) of different blended learning/flipped classroom modalities
- iv) To determine the factors required for the deployment of different blended learning/flipped classroom modalities
- v) To determine the adaptability and constraints in the adoption of different blended learning/flipped classroom modalities
- vi) To recommend a sound set of policies for integrating Education technology for learning in the CAREC region
- vii) To propose a feasible blended/flipped classroom program for the CAREC region to enhance learning levels and quality of education based on study recommendations

IsDB-CAREC Institute Data Driven Flipped Classroom Program Study Methodology

- i) Desktop Research
- ii) Questionnaires for students, teachers and school admin
- iii) Focus Group discussions with key stakeholders including policy makers, and school principals.
- iv) Policy Dialogues with at least 4 CAREC countries to discuss the proposed flipped classroom program

Output: Flipped Classroom regional program that is practical and implementable in at least 4 CAREC countries



Join Us in Changing the way we Support the Education Sector

	Traditional	Flipped Classroom
Investment Focus	Building of schools	Ensuring all schools are IT enabled
Teacher Training	Once-off teacher training (certify) if any	Constant learning through master lecturers
Monitoring of Results	Lack of monitoring progress of teaching	Ability to track usage of material and results
Standardization of quality of teaching	Teaching material dependent on teacher's skills	Teaching material dependent on master lecturer skills- can be updated when required.
Provide continuous support to teachers	Teachers left on their own and are guided by books and curriculum	Teachers have access to videos, exercises and tests. They can also seek online support.



Thank You

