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REPUBLIC OF RWANDA



MINISTRY OF EDUCATION



User Guide for CBC Training Phase III



Reflections on Teaching Practice and Focus on Assessment

February 2018

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FOREWORD

On behalf of the Ministry of Education and Rwanda Education Board, I am greatly honoured and privileged to witness release of the Teacher Training Manual that will support reflection on teaching practice and focus on assessment of the Competence-Based Curriculum.

To date, we have developed two training manuals in the first two phases: “Roll out of the Competence-Based Curriculum” and “The Implementation of the Competence-Based Curriculum in Schools”. We shall continue to support the teaching and learning process of the Competence Based Curriculum in all schools. We acknowledge that proper implementation of the Competence Based Curriculum demands a variety of interventions, and training of teachers will be one of them. Rwanda Education Board working with its Development Partners and other organizations pledge support to this endeavour to the end.

This Manual is intended for facilitators of the Phase III training of Competence Based Curriculum, and supplements an audio-visual training material which was developed together. It provides rich information on current classroom practice which attributes to teachers’ and school administrators’ effort, and reflects on learner-centred teaching methods and approaches. It also provides practical guidelines for implementation of assessment. Teachers and school administrators are encouraged to enhancing teaching and learning through School-based In-service training and continuous professional development of teachers. Finally, this document is written at the dawn of a new era and marks a crucial milestone in the development of education in Rwanda.

I wish to sincerely extend my appreciation to the people who contributed towards the development of this document, particularly REB and its staff who organized the whole process from its inception. Special appreciation goes to the Development Partners who supported the exercise throughout. Any comment or contribution would be welcome for the improvement of this training manual.



Dr. NDAYAMBAJE Irenée
Director General
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ACKNOWLEDGEMENTS

Rwanda Education Board (REB) expresses its gratitude to all individuals, institutions and organizations that pledged their technical or financial contributions to the development of this Teacher Training Manual.

We are especially indebted to UNICEF for their financial support and to UNICEF and JICA for their technical input into the development of this manual.

We are also grateful to REB's Staff and schools and teachers who were involved in the process of material development that culminated into the production of this manual.

We also value the contribution of other education partner organizations such as IEE, Educate!, Save the Children, VSO, Wellspring Foundation, EDC/Akazi Kanoze, Peace Corps, UNESCO, British Council, COSTA, Right To Play, SOS, WDA, AEGIS TRUST, VVOB, UR-CE, REMA, Teach Rwanda, RSB, Access Finance Rwanda (AFR) and Local and International consultants.

Their respective initiative, cooperation and support were basically responsible for the successful production of this manual.

NZITABAKUZE Claudien

Head of Department

Teacher Education Management and Professionalization

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GENERAL INTRODUCTION

The Ministry of Education (MINEDUC), through Rwanda Education Board (REB), has embarked on reviewing its curriculum to align it with national aspirations and to ensure that the knowledge, skills, attitudes and values acquired by Rwandans in schools meet the challenges of the 21st century.

The designed curriculum was launched in April 2015 and is competence-based, aiming to increase students' skills and learning outcomes by:

- making learning in Rwanda more centered around mastering of key competences,
- making learning more learner centered,
- ensuring that there is greater harmony between curriculum, assessment, teaching and learning processes, quality assurance processes and teaching learning materials; and
- equipping learners with the knowledge, skills, attitudes and values needed for a knowledge-based economy that can propel Rwanda to compete on the global market.

Implementing the new curriculum and assessment program requires large-scale efforts to rapidly prepare the education system to deliver the new approach and to reform many of MINEDUC's policies, systems and processes. To bring all these pieces together, REB developed an initial plan that identified nine broad areas of work:

1. Curriculum implementation management system.
2. Communication of the curriculum.
3. Orientation on the curriculum for all education stakeholders.
4. Developing teacher capacity.
5. Teaching and learning materials and resources.
6. National Assessment Framework.
7. Examinations.
8. Development of pre-primary and lower primary assessments of literacy and numeracy.
9. Quality assurance and use of results.

GLOSSARY

CBC	Competence Based Curriculum
CPD	Continuous Professional Development
DCC	District Continuous Professional Development Committee
DDE	District Director of Education
DEO	District Education Officer
DOS	Director Of Studies
HT	Head Teacher
MINEDUC	Ministry of Education
NT	National Trainer
REB	Rwanda Education Board
SBI	School Based In-service training
SBM	School Based Mentor
SBT	Sector Based Trainer
SCC	Sector Continuous Professional Development Committee
SEO	Sector Education Officer
SSL	School Subject Leader
TMIS	Teacher Management Information System

TRAINING OVERVIEW

CBC induction training consists of 3 phases. The three phases of CBC training have different focuses. The First phase which was implemented in the course of 2015 aimed at introducing the conceptual understanding of CBC and SBI, as a platform to increase the proficiency of CBC at the school level. The second phase was conducted from 2016 up to July 2017 and focused on enhancing practical understanding of CBC to deepen teachers' competency on planning and delivering lessons. The third and last phase of CBC training is focusing on review of the inputs of previous two phases and observation of the current classroom situation through video materials, and assessment to prepare teachers for the first competence-based national examination in October-November 2018.

Teachers are the most important actors in implementing the new curriculum. Therefore, it is essential that teachers are well prepared and supported throughout implementation of the new curriculum. The goals and objectives of the training program are shown below.

- Super Goal** : Students are equipped with necessary knowledge, skills, competences, attitudes and values by learning from new curriculum.
- Overall Goal** : Teachers are able to facilitate students' learning using the new curriculum.
- Project Purpose** : All teachers are trained to teach according to the new curriculum.
- Target Group** : Teachers in pre-primary, primary and secondary schools (public, government-aided, private)
- Target Area** : Nationwide
- Implementation Agency** : REB
In cooperation with development partners which provide technical and financial assistance
- Output 1** : Organizational structure for dissemination and monitoring of new curriculum is established.
- Output 2** : Management Training is conducted to ensure capacity development for initial and continuing training, at national, district, sector and school level.
- Output 3** : Technical training is conducted at national, district, sector and school level.
- Output 4** : Monitoring and Evaluation are conducted to ensure consistent and effective delivery of training and address concerns in implementation process.

FRAMEWORK OF THE PHASE III TRAINING

a. Training Structure

CBC training has two streams; administrative stream and technical stream. The administrative stream provides an organizational leadership training for DEOs, SEOs and HT/DOSs and it aims at introducing the concept of the new curriculum and the monitoring mechanism to all education stakeholders. On the other hand, the technical stream aims at providing technical contents to all teachers.

In order to equip all in-service teachers, the technical stream applies a combination of cascade training and Continuous Professional Development (CPD) as shown in the diagram below. REB develops training contents and train National Trainers (NTs). NTs train Sector-Based Trainers (SBTs), who will train teachers in a series of Sector-based CPD sessions. Sector/School-based CPD will serve as a platform to continuously explore the best approaches to the learners in the sector. This continuous cycle of professional development at the last phase of CBC training is expected to contribute to improving teachers' mastery in CBC and self-sustaining development of teachers and schools.

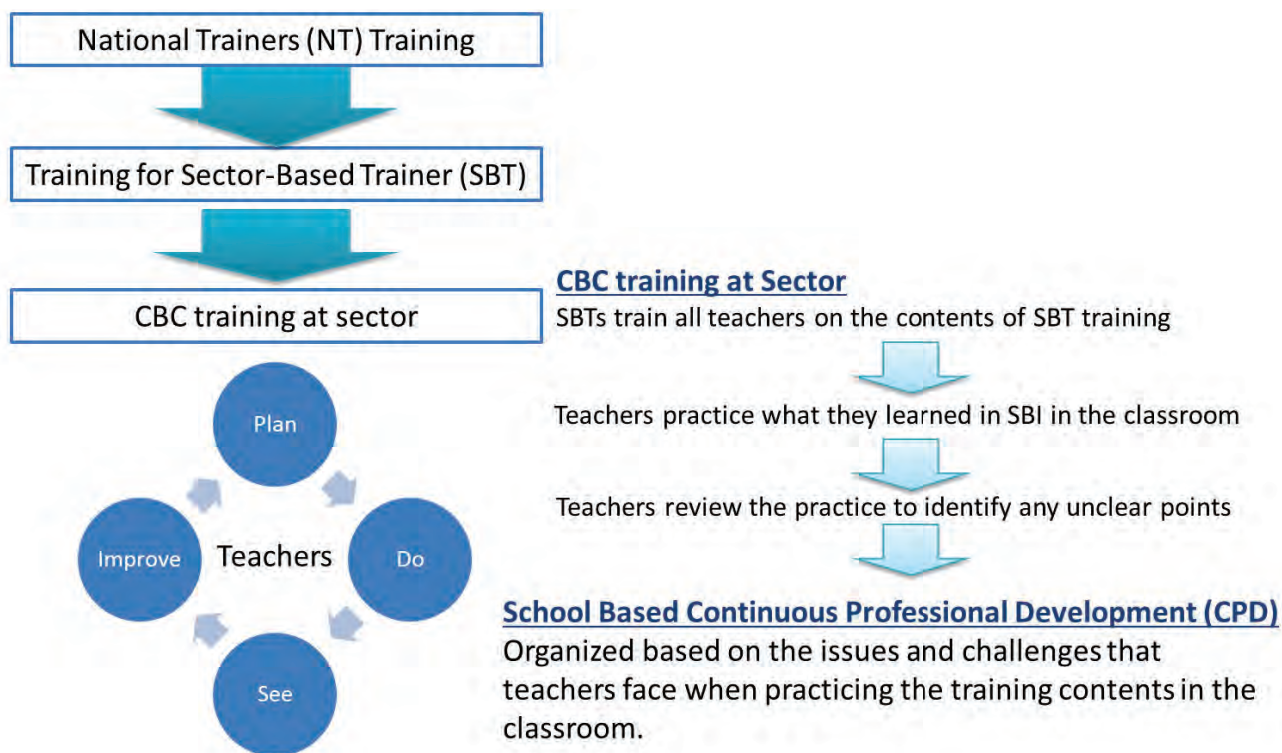


Figure 1 Cascade structure of the Technical Stream for Phase III CBC Training

b. Timeframe

The training for NTs was conducted in November 2017. The training for SBTs was conducted for 8 days in January 2018, before the beginning of the new academic year. The training for DDEs/DEOs/SEOs are to be conducted in March. Then the training for all teachers are expected to happen afterwards.

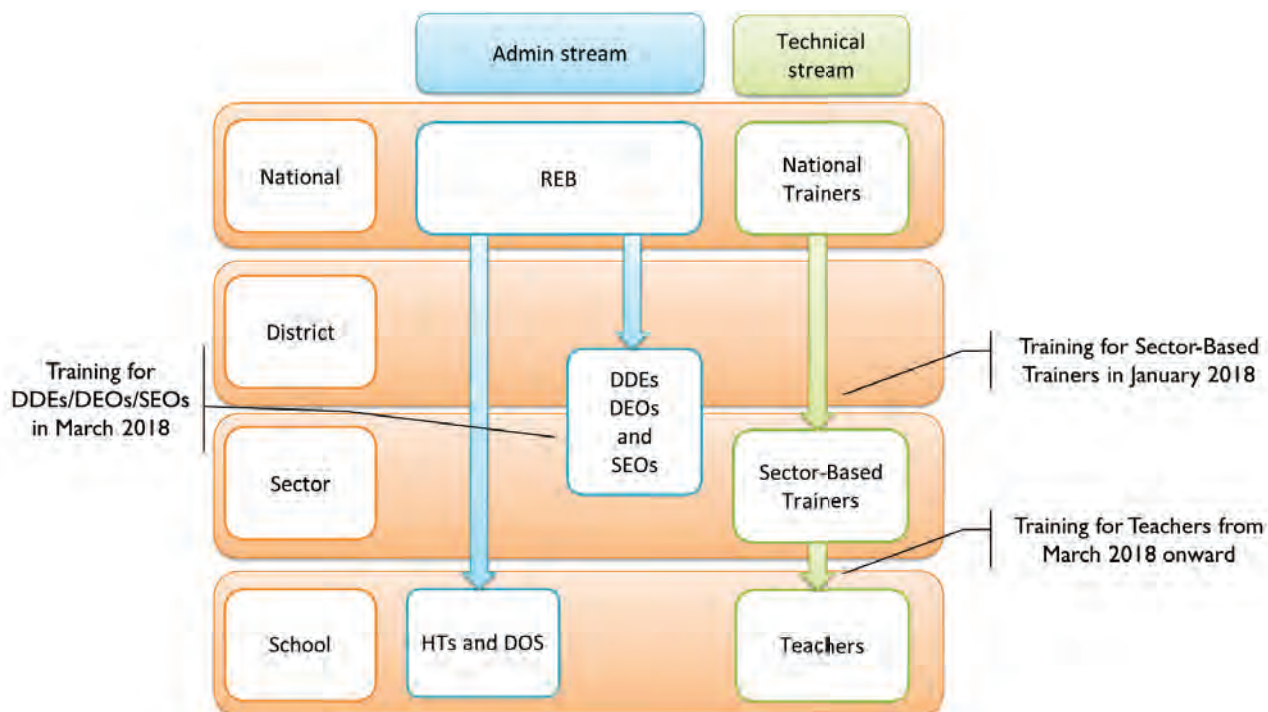


Figure 2 Cascade structure and Timeframe

The training contents are shown with approximate time of audio and tasks for each session in the table below. Extra discussion/explanation time that the trainer may add is not included. Trainers are expected to plan sessions accordingly.

Table 1 Training Contents

	Contents	Duration
INTRODUCTORY VIDEO	Introduction to Lesson Study	20 mins
AUDIO-VISUAL MATERIAL (review of the inputs of previous two phases and observation of the current classroom situation)	Opening Session	2 mins
	Session 0: 3 Pillars of CBC (Intended CBC, Implemented CBC, and Attained CBC)	50 mins
	Session 1: Success and Challenges in CBC implementation at Schools Part 1	55 mins
	Session 2: Success and Challenges in CBC implementation at Schools Part 2	45 mins
	Session 3: Intended CBC Lesson (Lesson observation by Think, Write, Pair & Share approach)	55 mins
	Session 4: Lesson Planning - Preparation	50 mins
	Session 5: Lesson Planning/Observation – Development (Group Work, Conducive Environment)	40 mins

Contents		Duration
	Session 6: Lesson Planning/Observation – Conclusion & Integration of CCI & Generic Competencies	30 mins
	Session 7: Simple Formative Assessment 1	105 mins
	Session 8: Simple Formative Assessment 2	50 mins
	Session 9: Complex Formative Assessment	105 mins
	Session 10: Assessment Tasks	30 mins
	Session 11: Integration of ICT in Teaching and Learning	45 mins
	Session 12: Changes to harness the power of ICT to improve learning	90 mins
WORKSHOP	Assessment Task and Question Development	4 days
AUDIO-VISUAL MATERIAL	Special Session: Overview on Teacher Management Information System	30 mins

c. Materials

Trainers need to make sure that necessary materials are ready when the training starts so that participants can make the most of the training. Examples of materials are shown below, if not all.

- Audio-visual DVD (training material data)
- Computer which Adobe Acrobat and Adobe flash player were installed in (you may download them for free)
- Projector
- Flip charts (Manila paper)
- Markers
- Notebooks (participants can bring their own)
- Pens (participants can bring their own)
- Handouts for some sessions (see respective session in 1.5 for more information)
- Syllabi and textbooks of the subjects that participants teach for assessment task and question development

d. Roles and Responsibilities in Technical Stream

Table below shows the demarcation of the stakeholders in the technical stream. REB is responsible in developing contents and training SBTs while Districts and Sectors make sure that all teachers are trained at the sector level and supervise their continuous improvement cycle based on different situation and environment in their locality.

Table 2 Overall Demarcation in the Phase III CBC Training

REB	<ul style="list-style-type: none"> ✓ Develop a training system which is able to disseminate contents to all teachers ✓ Develop training materials ✓ Train NTs who train SBTs ✓ Develop a monitoring system that enables REB/District/Sectors to provide solutions to address challenges for the teachers
District (DCC/DDE/DEO)	<ul style="list-style-type: none"> ✓ Make sure that in-service teachers in the district are trained through CBC training at sector ✓ Monitor and evaluate CBC training at sectors conducted in the district and take actions accordingly.
Sector (SCC/SEO)	<ul style="list-style-type: none"> ✓ Make sure that teachers in the sector are trained through the Sector-based CPD ✓ Monitor and evaluate Sector-based CPD and take actions accordingly
Development Partners	<ul style="list-style-type: none"> ✓ Support CBC training in a technical, managerial and financial manner ✓ Provide materials and expertise to NTs / SBTs

The table below describes the organizers, facilitators and participants of trainings at each level. Training for NTs was organized and facilitated by REB. Training for SBTs was organized by REB too, and facilitated by NTs. CBC trainings at sector level will be organized by SEOs, facilitated by SBTs, with support from other resource persons such as Mentor Trainers (MTs) and participated by all teachers in the sector. SBI will be organized by HT/DOS and SBI Group Leader, facilitated by SSLs and SBMs and participated by teachers in the SBI Group.

Table 3 Organizers, Facilitators and Participants of Trainings

	Organizers	Facilitators	Participants
NT training	REB	REB	NT
SBT training	REB	NT	SBT
CBC training at sector level	SEO	SBT	All teachers in the sector
School-Based CPD	HT/DOS/CPD Group Leader	SBM/SSL	Teachers

Specific and comprehensive roles and responsibilities associated with phase III of CBC training are described in the following table. SBTs will play a central role in assuring the quality of CBC trainings at sector level. SEOs are expected to manage the CBC training at sector level. SSLs who were appointed in the phase I of CBC training will be a resource persons or facilitators in the CBC training at sector level and SBI to provide subject specific expertise. DCC through DDE/DEO oversees the situation of implementation of CBC trainings at sector level in the district based on the reports from SEOs. In regard to the DCC, please also refer to the communication by REB to the all mayors on the Establishment and Rollout of District CPD Committees dated 29/07/2016 (ref: 1793/REB/TDM/2016).

Table 4 Roles and Responsibilities of Stakeholders

Stakeholder	Roles and responsibilities
Teachers	<ul style="list-style-type: none"> ✓ Make sure that they are part of the Sector CPD Group that they are supposed to join ✓ Check the schedule of CBC training at sector level and report any difficulties in attending them if any ✓ Actively take part in CBC training at sector level ✓ Report their attendance to HT/DOS ✓ Share challenges and good practices with HT/DOS and SBTs
HT/DOS	<ul style="list-style-type: none"> ✓ Make sure that teachers in their school are involved in the CBC trainings at sector level ✓ Coordinate with SEOs and SBTs in developing schedule of CBC trainings at sector level ✓ Assist SEOs and SBTs in planning and implementing CBC trainings at sector level by hosting some sessions and providing refreshment / materials if fund is available ✓ Report teachers' attendance to SEO/SBTs ✓ Share challenges and good practices with SEO/SBTs
SBT	<ul style="list-style-type: none"> ✓ Be responsible in delivering the contents of the training that they attended at the training center to the teachers in the Sector CPD Group that SBTs are leading ✓ Follow up the CBC trainings at sector level by organizing a review meeting to act on the challenges that teachers are facing and to ensure that all teachers in the Sector-CPD Group attain the required competencies
SBM	<ul style="list-style-type: none"> ✓ Coordinate SBI and other school-based CPD activities ✓ Share materials that they have with other teachers if appropriate ✓ Follow up the CBC trainings at sector level by sharing challenges and good practices observed at the school level with SBTs
SEO	<ul style="list-style-type: none"> ✓ Make sure that teachers in the sector are trained in the CBC trainings at sector level based on thorough planning and supervision ✓ Recommend 10 teachers as SBTs to the district ✓ Compile action plans developed by each Sector CPD Group, make the Action Plan for the Sector and submit to the DCC through DDE/DEO ✓ Act on challenges that are reported by the SBTs, HT/DOS and teachers and then report any unsolved challenges to DCC through DDE/DEO
SSL	<ul style="list-style-type: none"> ✓ Play a role of resource person, especially in a subject area, by providing useful resources and facilitating CPD activities at sector and school level
DCC/DDE/DEO	<ul style="list-style-type: none"> ✓ Compile action plans submitted by the Sectors and develop an action plan for the district, consistent with the District Performance Contract. ✓ Nominate SBTs and other resource persons for the CBC trainings at sector level ✓ Monitor and evaluate CBC trainings at sector level conducted in the district. ✓ Evaluate SBTs and other resource persons for the CBC trainings at sector level. ✓ Report any challenges that cannot be solved at the district level to REB

TRAINING CONTENTS

1. Practical Know-How for Teachers

1.1. Introduction

Phase III teacher training is designed to consolidate what was learnt within phase I and II. The two previous phases were more of theory and current one focuses on classroom practice/ situations. This audio-visual material is designed to equip teachers with practices and thus it is called practical know how for teachers to facilitate them to deliver quality CBC lessons. It is made up of 12 different sessions, introductory video of lesson study and a special session about Teacher Management Information System (TMIS). It is a kind of documentary video which shows what is currently taking place in schools as far as competence based curriculum implementation is concerned. Therefore, there are narration and video clips that reflect what is to be done, and tasks to watch videos and assess for improvement.

1.2. How to Operate Audio-Visual Material

Before the Training

The audio-visual material will be distributed in the form of DVDs. Once facilitators get the DVD, they must be familiarized with the operation and the contents so that they can facilitate the training effectively and efficiently. The training organizers are required to ensure the following in advance;

- The training venue is well equipped.
- Necessary equipment and instruments (laptop, projector, extension, handouts, markers, flip charts etc.) are available.

On the Day of Training

(1) Preparation

The organizers and facilitators are required to come to the venue early to prepare materials and the room by arranging tables and chairs and checking the volume of video so that everyone can watch well.

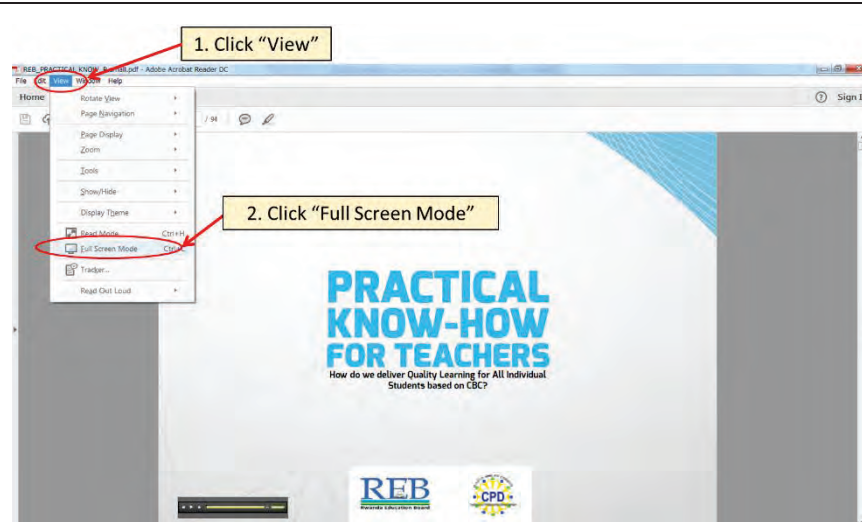
(2) General Introduction to the Participants

The organizer or facilitator should explain the following;

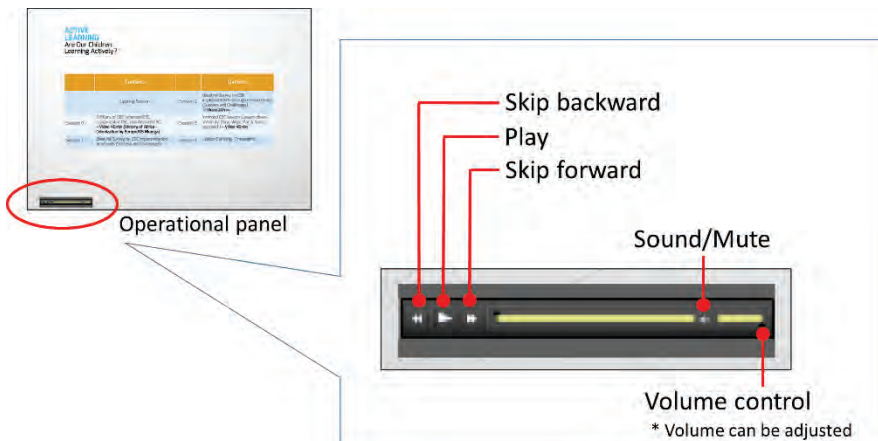
- This material is for reflecting on the theories that they learned in the phase I CBC training and the practices they did in the phase II CBC training.
- This material also includes findings from actual lessons.

(3) Operation of the Material

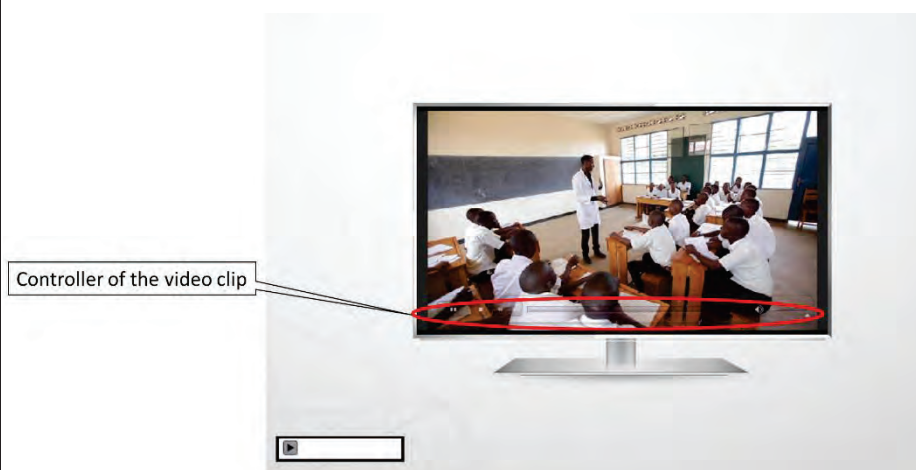
How to change to full screen mode




How to control sound



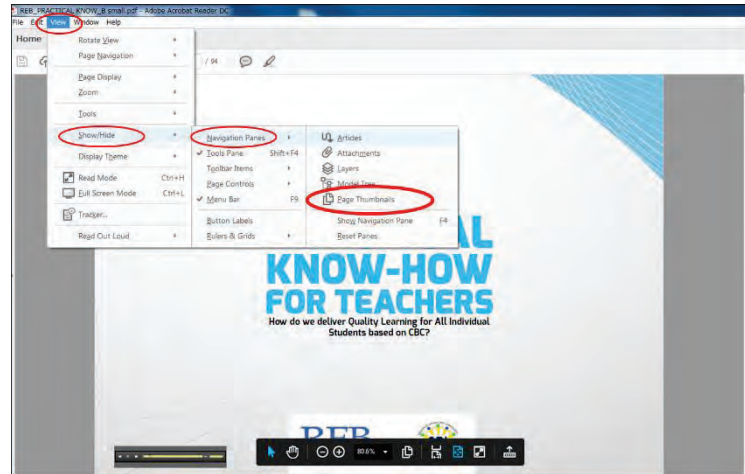
How to operate video clips



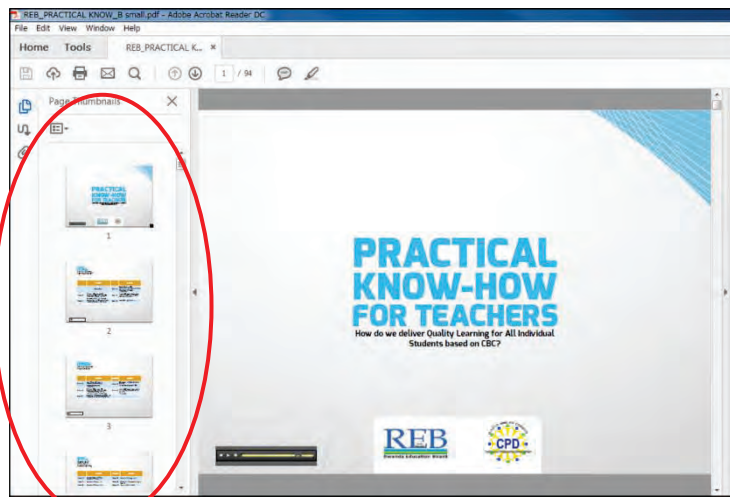
Do not forget to click the allow  after watching the video.
The narration will start and the controller will appear.



How to move some slides back or forward easily



Click View → Show/Hide → Navigation Panes → Page Thumbnails



Page thumbnails appear.

(4) Facilitation and Time Management

The narrator gives a task as indicated below.

10Min

Think Pair Share;
What is the purpose of questions?
What kind of questions are there?
What are the characteristics of effective questions?

Figure 3 Task Example

Then, you pause the narration and time as required.

When time is up or the participants are ready, you start the discussion and manage time.

1.3. Guidelines for Facilitators

(1) What is Facilitation and Why is It Important?

Facilitation is a way of working *with* people. It is a method which creates a positive atmosphere to encourage people to share ideas, skills, resources, opinions and to think critically. Facilitation for continuous professional development (CPD) helps a group of people to work together to learn new skills from each other.

Trainers need facilitation skills in order to do deliver the Phase III CBC training. The facilitator does not teach everything directly, but uses skills to allow the group to share their ideas and to teach each other. A facilitator is not a lecturer; an effective facilitator must know when to take a leadership role, and when to be neutral and ‘step back’. This is difficult to balance! A facilitator acts as a guide, not as a boss!

A facilitator focuses on how the group is working together, rather than on pushing his/her opinions onto others. He/she encourages all participants to participate actively, and helps a group to work together to gather information and share ideas. He/she helps a group reach agreements by summarising information and making sure that all participants get a chance to speak (without forcefully adding his/her own ideas).

A facilitator is not expected to know all the answers – he/she is not expected to be an expert. A facilitator is there to help the group share ideas and learn from each other. If an answer can’t be found, the facilitator notes the question and helps the group decide how it will be answered later.

To be capable in the role a facilitator must plan carefully and prepare well before starting sessions.

(2) What Makes a Good Facilitator?

To be good facilitators we need a variety of techniques and skills for facilitation; we will continue to add to these skills over time. There are certain behaviours which are appropriate for facilitators, and others which are not. The table below shows some of them.

Table 5 Good Facilitator and Bad Facilitator

A good facilitator	A bad facilitator
Speaks loudly and clearly, using respectful language.	Interrupts or challenges the person who is talking.
Gives clear instructions and is prepared to clarify when people don’t understand.	Does things that distract participants. For example, talking loudly on the phone whilst participants are working.
Is confident. Signs of confidence include: - Being flexible - Accepting to have their ideas and opinions challenged without feeling upset	Doesn’t keep time.
Respects the ideas, opinions and values of all participants.	Allows one or two people to dominate the group. Allows some people to bully others.
Respects confidentiality of all participants.	Tells stories and jokes that distract participants from the focus of the activity.
Encourages comments, ideas and questions from participants when appropriate.	Takes sides with one section of the group.
Engages with participants when they are not active.	Doesn’t use interactive activities and just reads from notes.
Listens to participants and responds to their needs.	Uses repetition/rote learning.
Makes sure that participants understand the objectives of the session.	Is disorganized.

A good facilitator	A bad facilitator
Creates an inclusive atmosphere. Doesn't humiliate participants in any way.	Spends a lot of time talking instead of allowing group members time to talk
Uses a variety of teaching methods to keep participants active.	Is very strict and controlling.
Uses humour, stories and examples that directly relate to the session and are culturally appropriate	Talks badly/spreads rumours about participants when they are not around
Makes learning fun.	Makes learning tiresome and annoying

(3) Preparation and Planning

One of the most important skills that trainers will need to deliver the Phase III CPD training is the ability to break large sessions into smaller steps.

Often, we meet unexpected challenges during training sessions (things very rarely go exactly as we plan). Planning and being well-prepared helps us manage these unexpected challenges. Planning sessions well is extremely important– getting everything ready the night before if possible will help us as facilitators to feel organized, professional and confident. The following checklist allows facilitators to prepare effectively:

Table 6 Facilitators' Checklist

1. I have read the facilitators' guide very well. <i>(This helps us understand how the session fits with the other sessions.)</i>	
2. I have read the whole session plan to fully understand it. <i>(This helps us understand what will happen in the session. We are able to think about any problems that could happen. We can have confidence when facilitating sessions. We can prepare resources.)</i>	
3. I understand the purpose and objectives of this CPD session. <i>(If we don't understand, we can ask others to help us before we start training.)</i>	
4. I have thought about the needs of the participants in my group and changed the session plan accordingly: <ul style="list-style-type: none"> - I have changed times when necessary - I have changed activities when necessary <i>(Doing activities that are not suited to participants will frustrate everyone. It is better to be creative and adapt the sessions for the needs of your participants.)</i>	
5. I have thought about the potential problems that could happen during the CPD session and taken steps to avoid/solve them. <i>(This helps us prepare for unexpected situations that could happen during training. When we think through possible problems, we can think of possible solutions. We can't think of every single problem which may happen, but being prepared can help us feel more in control and more confident)</i>	
6. I have prepared all materials and teaching aids I need for this session. <i>(Being prepared before the session means that we will not have to leave the session to find materials. This saves time. It will also make us feel more prepared, organized and confident.)</i>	
7. I have visited the room in advance and decided how it will be arranged. <i>(Visiting the room helps us to check that it is suitable for the training and the needs of our participants).</i>	
8. I have created an attendance register. <i>(This helps us monitor who is present, and what they have been learning. It is useful in reporting.)</i>	
9. I have arrived early on the day of CPD session to arrange and organize everything in good time. <i>(This is an important part of time management. Being prepared before our participants arrive is good practice. It helps the CPD session start at the correct time. It can help you feel more organized, and presents a professional impression to participants.)</i>	

<p>10. I have written the learning objectives on the blackboard. <i>(Participants can clearly understand what the purpose of the session is. This can help them to learn better. It is also a way of modelling good practice which can be used in class).</i></p>	
<p>11. I have set ground rules with the group. <i>(Setting ground rules ensures that our groups can work together respectfully and in harmony. When everyone knows the expected behaviour in the group, it can help us manage any difficult situations which may happen).</i></p>	
<p>12. After the CPD session, I think about what went well and what I can do better next time. <i>(It is important to continuously reflect on our practice as mentors and make sure that we improve our facilitation skills).</i></p>	

(4) Introduction to Facilitation skills

Establishing a positive and collaborative working environment

It is important to create a positive collaborative atmosphere from the first session. We are going to be learning from each other as a group, so it is important that everyone can work together peacefully and respectfully. Methods for encouraging positive collaboration include: making everyone in the group feel welcome, agreeing on clear ground rules to help sessions run smoothly, setting clear expectations so everyone will know what will be included in the session and what will not. At the start of a session, we should explain any administrative arrangements, such as how long training will last, what participants will be learning, signing of attendance registers, etc. After this, it is always important to establish rules for the group.

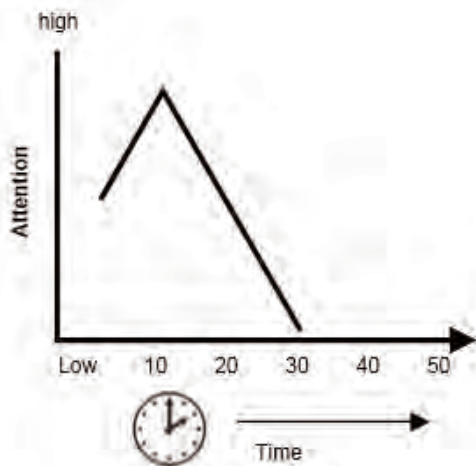
Agree session rules:

Ask members to think of rules which will help them work together and create a supportive atmosphere in the group. Write these rules on a chart and display it each time you do a training session together.

Suggestions:

- *Listen to the person who is talking (no extra conversations).*
- *Switch phones to silent.*
- *Respect time.*
- *Respect other peoples' opinions (even if they are different to yours).*
- *Speak clearly so the group can hear you well.*
- *Participate actively.*
- *Help people if they don't know something/make a mistake (don't laugh at others!).*
- *Learn from each other and work together.*
- *Enjoy and have fun!*

Making sessions interesting



One of the most important things about being a facilitator is that we do not lecture a group – we allow the group to share ideas. We need to think carefully about the parts of the session we will be talking for, and plan what we are going to say so that we can say it in a short and clear way. As we can see in the chart of attention graph, about 10-15 minutes listening is the maximum amount of time that people can listen carefully for – after that their thoughts will drift to other things.

Even if we talk for a long time, participants are not fully listening– so we are wasting their time, and our voices! We must use more interactive methods.

Eliciting

As facilitators, it is not our role to simply lecture participants to give them information. Facilitators must pull out information from the group. This is known as eliciting; it is a way of using the prior knowledge of the group. You can ask questions to find out what participants know already, before sharing new information. Very often, someone in the group will know something about what you are going to learn together. So, it is always good to find that knowledge. You can also see if participants have misunderstandings which you can correct during the session.

But what happens when we ask a question and no-one gives the correct answer, or participants give answers which are not related to the topic? Sometimes, if no one in the group knows anything about the topic, then you need to give the answers. If participants give answers which are not related to what you want to discuss in this session, you need to guide your group back to the correct ideas.

Brainstorming

Brainstorming is a technique that can quickly elicit ideas from a group. A brainstorm should be quick and only take around 5 minutes. It should not take up the whole session!

During a brainstorm, we ask for ideas or answers to a question. We need to encourage the participants to give as many different answers as possible in a short time. Then we write the answers on the blackboard or a chart. Because time is short, we don't waste time on explanations or corrections; the focus is to gather ideas. We can clarify or find more information after the brainstorm is finished. Participants should also listen carefully to the group and avoid repeating what has already been said by others.

(5) Introduction to Organizing Group Work

Do you ever use group work in your teaching, or do you avoid it because it can be too noisy, too disorganized, takes too much time etc.?

Did you know that group work can be organized to avoid some of those problems? Group work is often used for facilitation so it is important to know some techniques to manage groups well.

Stop Signals

A stop signal can be used to get the group's attention after participants have been working independently in groups. It can also be used for getting attention when participants are being noisy. It can save your voice so you don't need to shout, 'Stop! Be quiet!'. Stop signals help a facilitator to manage the time that the group spends on different activities.

How to teach a stop signal to your group:

1. Clap your hands 4 times. When you have finished, ask participants to copy you (clap 4 times), then remain quiet.
2. Some participants will make mistakes and clap at the wrong time, or continue talking at the end of the signal. Practice until everyone does it correctly and participants stop at the correct time.
3. Note: You should always teach a stop signal to a group **before** you start doing something that needs stopping! (This is so that all participants understand the signal).

There are several kinds of stop signal. You can try any of these:

Things you can say:

- *counting down "5, 4, 3, 2, 1"*
- *Teacher: "1, 2, 3. Eyes on me." Learners: "1, 2. Eyes on you!"*
- *Teacher: "Are you ready?" Learners: "Yes I am!"*

Things you can do:

- *Clap a rhythm which the class must complete.*
- *Create a shaker (i.e. Small stones in a bottle and move around the room shaking it). Put a hand in the air – when the learners see it, they need to stand up silently.*

Whatever stop signals you decide to use, the important thing is to practice so everyone knows to stop at the same time.

Common Problems with Group Work and Their Solutions

The list below shows common problems that often arise when organizing group work:

- a) Groups take a lot of time to get started and waste session time.
- b) Some people don't participate well in groups.
- c) Groups take a long time to stop working.
- d) Getting feedback from groups takes a long time.

But there are specific techniques that we can use to manage these problems.

a) Groups take a lot of time to get started and waste session time.

- **Give a time limit:** when you ask participants to form groups, you can say 'can we take 1 min to make groups?' Then, if participants take a long time, you can start moving people around and telling them where to sit.
- **Give examples:** groups often take a long time to start because they don't understand the task well. Always ask for one or two examples from participants before you start a group activity.
- **Share the time allocation:** as you start, it's a good idea to tell groups how much time they have to work? You can say 'we are going to work on this for 10 minutes.'

b) Some people don't participate well in groups.

- **Give roles:** if you see that some people are not participating well in groups, you can walk around the room and give people roles. For example, ask someone to write/ be group leader/ be ready to summarize the main points for whole group feedback later.
- **Encourage participation:** you can encourage people to participate by saying that all ideas are welcome/important. When working with adults, it is not a good idea to be rude- even if you are frustrated that they are not participating!
- **Talk to people privately:** if someone is really not participating well or being disruptive, it is a good idea to ask the person to come and talk to you privately. You can ask him/her what the problem is, and what you can do to solve it together.
- **Helping groups:** you can walk around the room and give help to groups as needed. Usually, you should only spend around 5 minutes helping before you move on to others. This will help you move around the room and help many participants. If someone is really stuck, ask a peer to help.
- **Moving people to help others:** when you are facilitating, there will always be some people who understand more quickly than others. You can ask fast participants to help their peers.

c) Groups take a long time to stop working.

- **Don't wait until everyone has finished everything!** You can walk around the room to see how groups are working. When most of the groups are near the end, you can stop. Don't feel like every person in the group needs to complete every activity. You can stop groups before they complete the tasks. You can reassure participants, 'Don't worry if you haven't finished, we are going to share together with everyone now'.
- **'We have around ... minutes left'** Tell groups when it is nearly time to stop. This can help them make sure they have covered the main points and can encourage them to work faster.
- **Stop signal:** when time is over, use a stop signal to get participants' attention. This will save you from shouting over people's voices if they are deep in discussion.

d) Getting feedback from groups takes a long time

- **Select people to summarize for their group.** The group representative can share what has been discussed.
- **You do not need to hear from every group.** Very often, groups will think of the same things! It's better to ask 3 groups to share, then ask if there are any other important comments that should be added.
- **Remind participants not to repeat what has already been said.** A lot of time can be wasted when participants repeat comments already made by others. Before they start to give feedback, encourage participants to listen to what has been said before and only share something new - that will save a lot of time.
- **List ideas/questions to come back to.** Sometimes feedback can take too long and you want to move on to the next part of the session. Tell participants that 'these are good points and we should think about them more, but we need to move on now. We can write them down to remind us to discuss them another time'.

Other common problems and their solutions:

The task is too easy- *finish quickly and move on to something else. / Add extra challenges to make the task more difficult.*

The task is too difficult – *focus on completing only one part of the task and come back to it another time. Or break the task into smaller steps and take more time. But this means you will not complete something else on your plan. You will have to decide what to cut.*

Participants are bored/tired/ - *use an energizer to wake people up. Move on to another more interesting activity, and plan to come back to the task another time.*

Participants are hungry/thirsty – *if possible allow short breaks and allow participants to get food/a drink.*

As facilitators, we should keep looking around the group and seeing who is participating. If group members are not participating, we should think about why.

(6) Managing Difficult Situations in Group Discussions

Sometimes when we are facilitating group discussions, certain difficult situations can arise but there are some things we can do to help.

One person is dominating the group which is discouraging others, what can you do as a facilitator?

Do not ask him/ her any more. Mention that you need people who have not spoken so far. You can say something like this: Thank you for your comments, can we hear from someone who hasn't spoken/shared their ideas yet?

Sometimes you need to interrupt a person in order to keep time. You can say something like 'I'm sorry to interrupt you, but thank you so much for your suggestions. Can someone else in the group add to these ideas?'

A group member says something that you disagree strongly with. What should you do as a facilitator?

A facilitator's role is not to argue or debate with someone. To encourage discussion, you need to treat all viewpoints with respect, even if you don't agree with them. You can ask questions like 'does everyone agree? And 'What about...?' to present another side of the argument.

People have been talking for too long, what can you do as a facilitator?

You can stop the group and help them move onto something else by saying something like 'thanks for your ideas, and it seems like there is more to discuss, but let's move on to...'

Someone is being rude/disrespectful, what can you do as a facilitator?

Remind the group of the rules you set to respect each other and all opinions. Emphasise that we are all learning from each other. Focus on the continuing development of trust, commitment and co-operation within the group. Build on the support and positive feelings within the group.

Talk to a member outside the group setting in cases where a personal difficulty is causing problems in the group, or where a person has consistently ignored other methods to handle the difficulty.

Someone has been talking for a long time about something that is not related to the session, what can you do as a facilitator?

Thank the person for their comments and move the group on. You can say something like this 'Thank you for your comments. It is an interesting point, but let's go back to the main purpose of our discussion which is Maybe we can discuss that later, or during break.'

People are laughing and joking, what should you do as a facilitator?

Some laughter is good, when all participants are enjoying themselves together. However, if it is directed at someone and making them feel uncomfortable, it is important to stop it. Remind participants of the rules to respect each other, and how we are all working together as a team. We are all learning new things together so we should support each other.

The group starts discussing items which are off topic, what can you do as a facilitator?

Make a note of the topic to discuss later, or encourage participants to discuss it in their free time.

The group makes suggestions which are idealistic and not realistic, what can you do as a facilitator?

Thank the group for their ideas, but remind them of key factors, such as budget, time constraints, space, number of people etc.; ask them to think of ideas which incorporate reality.

How do you deal with latecomers as a facilitator?

To create a welcoming atmosphere in your group, you don't want to stop and chastise someone for being late. Welcome latecomers to the group but speak to them privately about coming late to your sessions and the effect it has on the work of the group. See if there are any problems which are causing participants to come late, and work together to solve them.

People want you to 'be the boss' and make decisions on their behalf.

Clarify the facilitator's role; ask what members can realistically expect of the facilitator and set the facilitator's limits. The facilitator must be clear in responding to requests from the group.

Participants are shy

Encourage everyone to speak. If a participant is not active, ask them a question directly. Model being open, honest and risk-taking. The risk in being honest and direct is that a person can feel will be isolated, ridiculed or ignored. This is very real for people, and you help others to take this risk by modelling it. When members recognize these characteristics in you, they will be encouraged to behave similarly.

You can also use 'everybody speaks' when using group work. Ask a simple question like 'why do you like being a teacher' and everyone in the group should answer. (The longer a person doesn't speak in during group work, the less likely they are to speak at all. This method encourages everyone to speak from the start, which should encourage them to speak during the group activity).

(7) What is Constructive Feedback and Why should We Use It?

Feedback means giving a person information about the results of his/her actions to tells a person whether he/she is working well. A person's strengths are discussed as well as their weaknesses. Without effective feedback, you may not be able to adjust your work and reach your goals.

Think back to a time when you made a mistake. How did it feel? When we make mistakes we often feel embarrassed, feel like we are failing, could have done better, wish we had done something differently, etc. Now think about how it feels if your mistake is shared with everyone? (Maybe embarrassing, shameful, bad impact on your reputation and, in extreme cases, ability to do your work etc). Feedback is important for professional learning and growth. But the way in which we give feedback is very important; it can be given in a negative or positive way. Positive, constructive feedback can help teachers grow professionally. Negative feedback can demotivate and demoralize teachers and prevent them from improving their teaching practice.

We need to encourage teachers to give each other constructive feedback. This means giving feedback in a positive way. It encourages a teacher to think about how he/she works, guiding him/her away from bad practices and towards good ones. Constructive feedback focuses on a person's strengths and is given in an encouraging way. Weaknesses are called 'areas for improvement' to be more encouraging, and are shared in a supportive way. (Remember that the word 'construct' means to build. Constructive feedback aims to build others up). Giving feedback appropriately helps to develop another individual's skills and build his/her confidence. By providing constructive feedback, you can provide areas for improvement and set goals, without discouraging or devaluing the person. Think of a time when you received positive feedback and think of a time when you received negative feedback. Which did you prefer?

For feedback to be useful, it needs to be specific. Statements such as, 'your lesson was really wonderful' are not clear enough. The person receiving the feedback does not know what he/she did well. We need to be much more specific. We need to think about which parts are good and why. We have to choose our language carefully.

The following table shows the difference between specific and unclear feedback.

Table 7 Specific and Unclear Feedback

<i>Specific Feedback</i>	<i>Unclear Feedback</i>
<i>You remembered to use the names of the learners and you asked lots of different learners to answer questions.</i>	<i>I liked your lesson.</i>
<i>You used a game to make the lesson fun for the learners</i>	<i>You are a good teacher.</i>
<i>The lesson was learner-centred because the learners were active and engaged in the lesson.</i>	<i>The lesson was good.</i>
<i>I liked your lesson because you used group work well to make the lesson learner-centred.</i>	<i>The lesson was bad.</i>
<i>Next time try to use group work to get the learners to discuss their ideas.</i>	<i>Try to teach better.</i>
<i>Try to learn the names of the learners.</i>	<i>You are working hard! Keep it up!</i>
<i>I liked the visual aid you used because it helped the learners to understand.</i>	<i>You need to improve your teaching.</i>
<i>You organized the classroom well so all the learners could see the blackboard clearly.</i>	<i>This lesson shows that you are implementing the CBC</i>
<i>You praise the learners when they do well or try hard.</i>	
<i>The learners used didactic materials to help them to count. This was very good.</i>	
<i>Next time make a visual aid to help the learners to understand.</i>	

Giving constructive feedback

The difficult part is when we need to give negative comments, though they are very valuable to improve the teaching and learning process. We should choose our words carefully. For example, instead of saying ‘weaknesses’, we should say ‘areas to improve’. Giving feedback is not for “criticising others”, but it is for helping others to grow. Positive feedback can be a tool for creating trust between teachers as they improve their teaching practice.

Ideas for giving constructive feedback

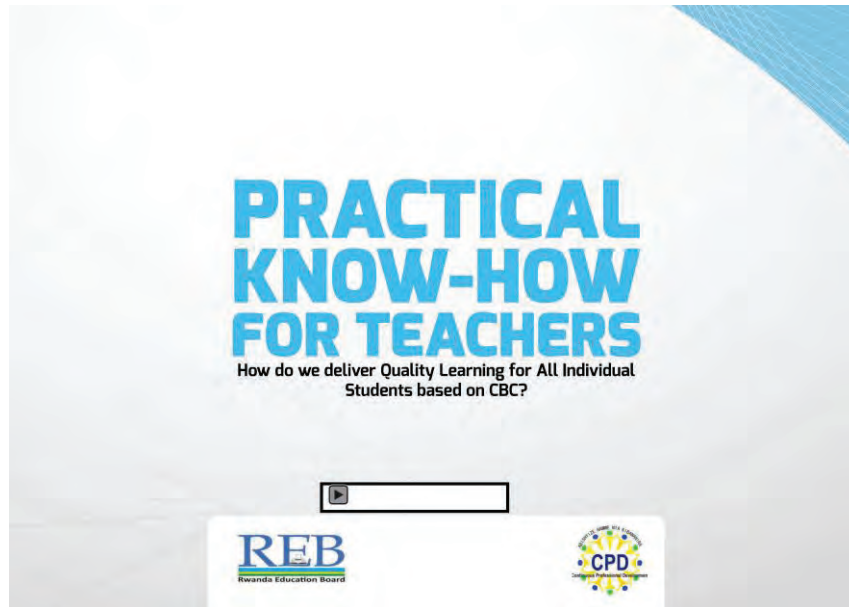
- a) Remember that you are peers and colleagues (you are giving **friendly advice**, not supervision).
- b) Think carefully about what you are going to say before you give feedback. (You can take a short time to plan).
- c) Be specific.
- d) Be honest (but in a polite and respectful way!)
- e) Reflect on what to do differently and how to improve.
- f) Show empathy and don’t be judgemental; appreciate how the person you are helping thinks, feels and behaves.
- g) When there is an area for improvement, focus on the problem, not the person.
- h) Don’t expect to have all the answers.

1.4. Introductory Video of Lesson Study

This 20 minute-long video was developed from actual practices of lesson study as a form of CPD at different schools throughout Rwanda. It is intended for teachers and school leaders. It may serve well if participants watch it before session 0 as an orientation of this training. It is a catalyst to encourage them to practice lesson study rather than a material to give them pedagogical skills. Lesson study is an effective method of applying techniques of active learning and assessment to lessons.

1.5. Audio-Visual Material Slides

Opening Session



Welcome to this CBC training phase and thank you for watching this video. In this training course, we are talking about Practical know-how for Teachers in Rwanda, so that more and more teachers can deliver quality learning for all students in this country, based on Competence Based Curriculum, CBC.



ACTIVE LEARNING Are Our Children Learning Actively?

	Contents		Contents
	Opening Session	Session 3	Intended CBC Lesson (Lesson observation by Think, Write, Pair & Share approach) – Video 40min (SET/P4)
Session 0	3 Pillars of CBC (Intended CBC, Implemented CBC, and Attained CBC) – Video 40min (History/52)	Session 4	Lesson Planning - Preparation
Session 1	Success and Challenges in CBC implementation at Schools Part 1	Session 5	Lesson Planning/Observation – Development (Group Work, Conducive Environment) – Video 20min (History/54)
Session 2	Success and Challenges in CBC implementation at Schools Part 2 – Video 20min (Math/P4, Physics/51, History/54)	Session 6	Lesson Planning/Observation – Conclusion and Integration of CCI& Generic Competencies – Video 20min (English/54, Entrepreneurship/55)

3

In this course, we will talk about active learning in six sessions, which will demonstrate how CBC is implemented in schools, and the successes and challenges met by teachers and learners. We will have time to watch videos of selected lesson. Your comments will help us and everyone to improve.

ASSESSMENT/ICT/TMIS Formative Assessment/ Integration of ICT to Enrich Subject Learning

	Contents	Contents	Contents
Session 7	Simple Formative Assessment Part1	Session 11	Integration of ICT in Teaching and Learning – Video 20min (Math/54)
Session 8	Simple Formative Assessment Part2	Session 12	Changes to harness the power of ICT to improve learning Video 20min (ICT)
Session 9	Complex Formative Assessment	Special Session	Overview on Teacher Management Information System
Session 10	Assessment Tasks		

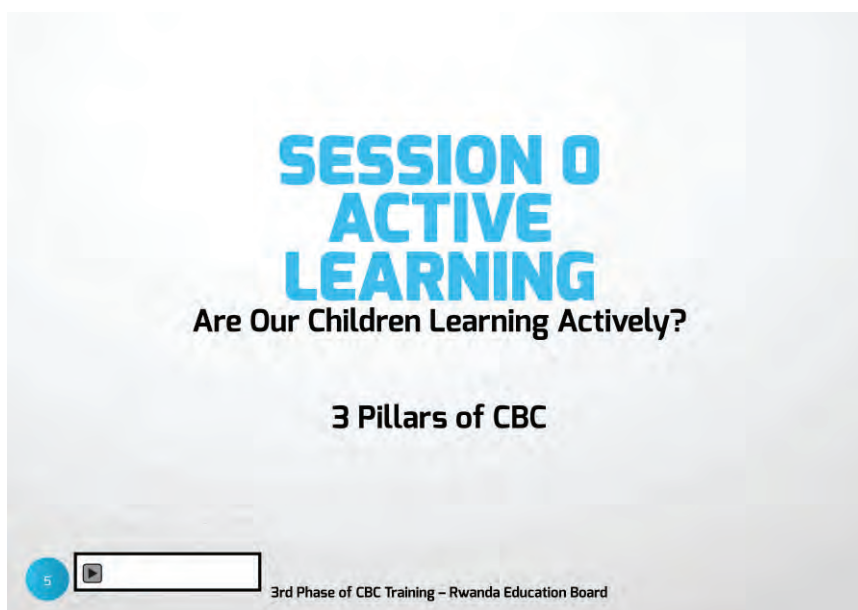
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The next four sessions will be related to assessment. Assessment can be carried out throughout the lesson, from the introduction to the conclusion, We will see how.

From session 11 to 12, we will see how ICT can be integrated into a lesson. ICT should be used as a tool to improve teaching and learning.

In the last session, we will take a look on teachers' registration system using teacher management information system TMIS.

Session 0: 3 Pillars of CBC (Intended CBC, Implemented CBC, and Attained CBC)



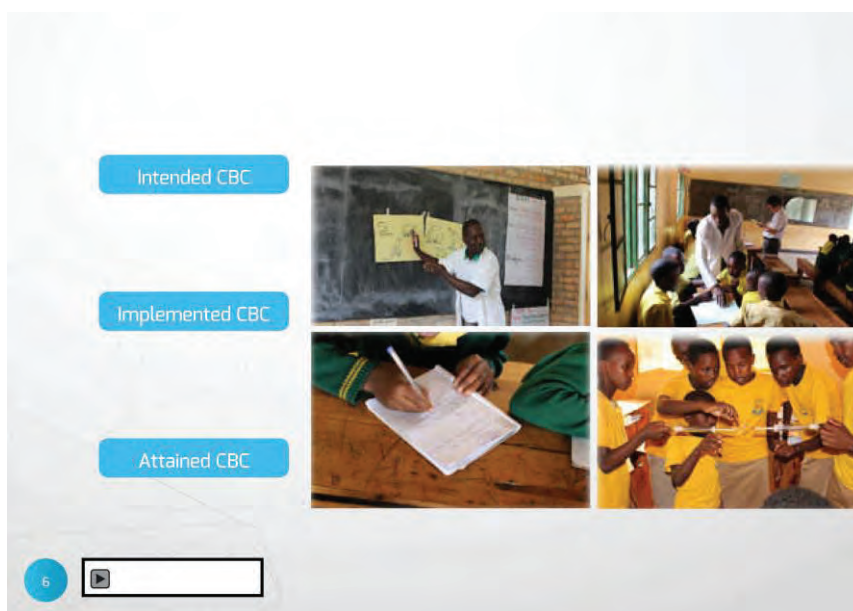
Welcome to the 3rd Phase of the CBC Training.

Our country has introduced new education curriculum, called Competence-based curriculum, in short, CBC, in our schools in 2016.

Then consequently, REB has conducted the 1st phase of CBC training and the 2nd phase, in the past.

So, we have already learnt a lot about basic knowledge and concept of CBC, so far.

However, we are aware that delivery of quality lesson based on the new curriculum requires some times, it can't be done just within a short time like one year or two years.

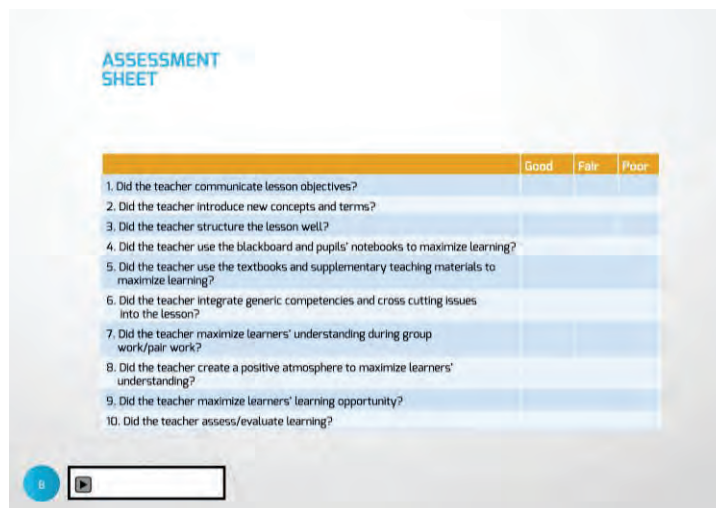


Therefore, we may need to go back to what we have learnt during the 1st and 2nd phases, and we will identify the gap between the “**Intended CBC**” which is described in our curriculum and syllabus, the “**Implemented CBC**” which is currently practiced by teachers, and the “**Attained CBC**” which has been obtained by our learners. Actually, we have observed some gaps during various school visits.

Therefore, in this 3rd phase of the CBC training, we will learn and discuss practical know-how for teachers to deliver CBC lesson, so that we can narrow the gap



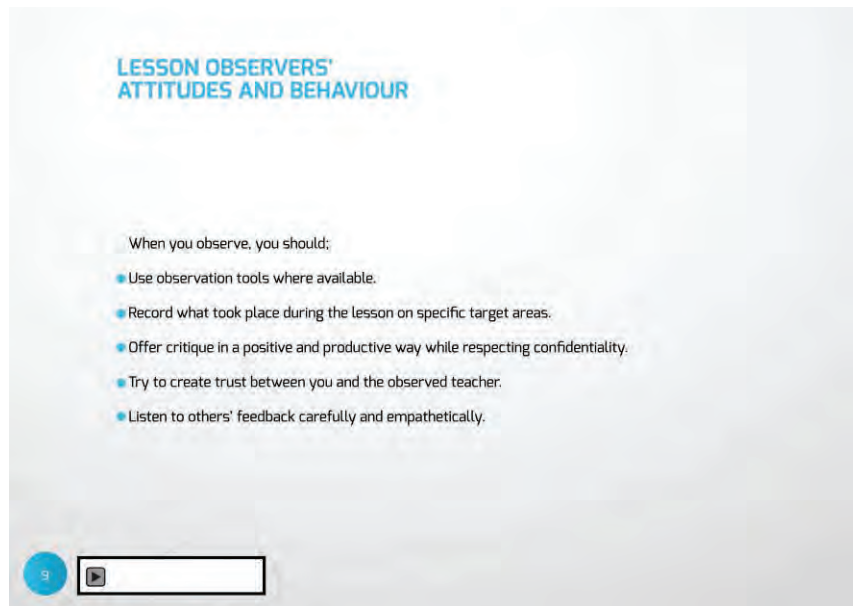
among **Intended CBC**, **Implemented CBC** and **Attained CBC**.



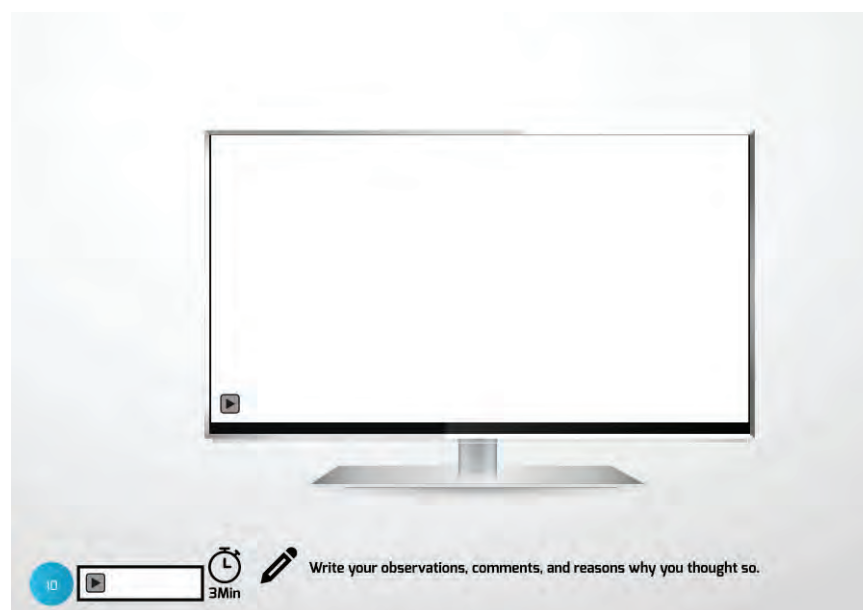
Distribute an assessment sheet to each participant (Appendix 1). From next time, participants are requested to copy the form in their notebooks.

Now before starting training program, let us watch a video clip carefully.

While watching the video, all of you are expected to write down your comments, views, evaluations of the lesson on your notebook and evaluation sheet (assessment sheet). Some advices for the teacher to make his/her lesson into a better lesson are also appreciated. You are also expected not to chat with your friends, not to go out from the room, not to be engaged in any other activities like being busy to send or receive WhatsApp message which is not relevant to this training. I'm saying this, because quality facilitation by trainer and active serious participation will determine achievement of this training. Serious time management by organizers, trainers and participants are also needed.



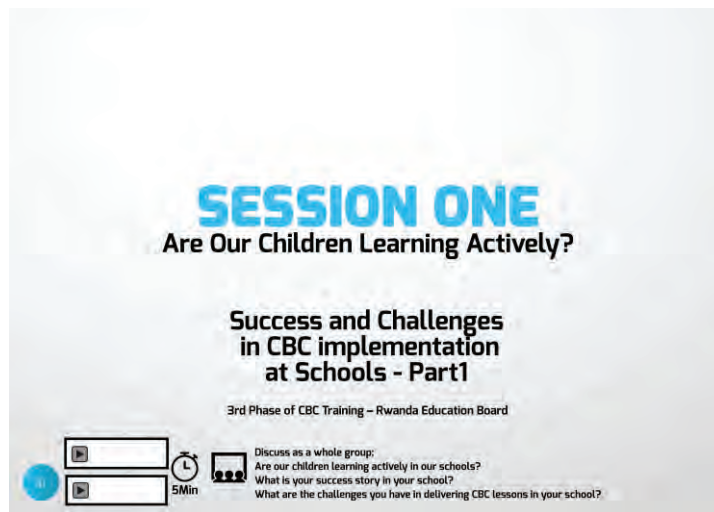
When you observe, you should;
-use observation tools where available.
-record what took place during the lesson on specific target areas.
-offer critique in a positive and productive way while respecting confidentiality.
-try to create trust between you and the observed teacher.
-listen to others' feedback carefully and empathetically.



VIDEO

Now that you have watched the movie, let's see together these questions.
How was that? Did she/he perform well? Did you find learners participating actively in the lesson?
Have you finished recording your comments on your notebook or assessment sheet?
Not yet? Then, let me give you some more time, to complete your task – writing assessment on the assessment sheet, with your observations, comments, and reasons why you thought so.
I will give you 3 minutes.
This is individual work, please do this without any consultation or discussion.
This is the end of the session. Let me collect all of your assessment sheets.

Session 1: Success and Challenges in CBC implementation at Schools Part 1



Welcome to session 1 of this training. As you know, newly developed curriculum, CBC, has been introduced to our primary and secondary schools since 2016.

Rwanda Education Board has been delivering new syllabus and textbooks to all public schools, and CBC induction trainings have been conducted twice so that teachers can start to deliver CBC lesson, then our students can benefit from new education curriculum.

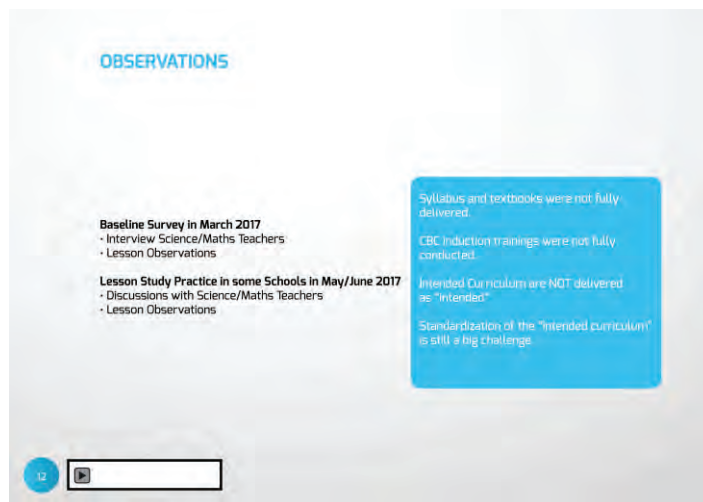
To begin with this training session, let me ask these questions to all of you.

Are our children learning actively in our schools?

What is your success story in your school?

What are your challenges to deliver CBC lessons in your school?

I will give you 5 minutes, and then we will share our opinions.



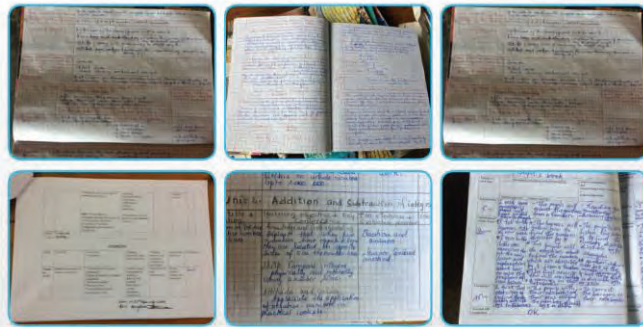
Okay, we have heard different success stories and challenges on the CBC lesson implementation.

The SIIQS Project, for Supporting Institutionalizing and Improving the Quality of SBI, conducted a baseline survey in March 2017, and based on the result of the survey as well as lesson study practice conducted in May and June 2017, we observed that teachers have learned about basic knowledge relating to CBC, and they have started implementing the lessons in their classrooms.

However, it looks like our teachers still have challenges to deliver quality learning for students based on CBC.

So first of all, before we talk about practical know-how to improve your CBC lessons, let us know the current situation, by picking up some information from baseline survey of the SIIQS Project.

**EVERY TEACHER IS
PREPARING UNIT PLANS
AND LESSON PLANS.**



13



One: Every teacher is preparing unit plans and lesson plans, which is good.

**EVERY TEACHER IS ENCOURAGING
AND MOTIVATING LEARNERS TO WORK
COLLABORATIVELY IN GROUPS.**



52 Biology Class



P4 Mathematics Class

14



Two: Every teacher is encouraging and motivating learners to work in groups.

TEACHERS ARE RECOGNIZING EFFORTS OF STUDENTS BY CLAPPING, GESTURES AND SINGING. THEY ARE FRIENDLY AND SUPPORTIVE.

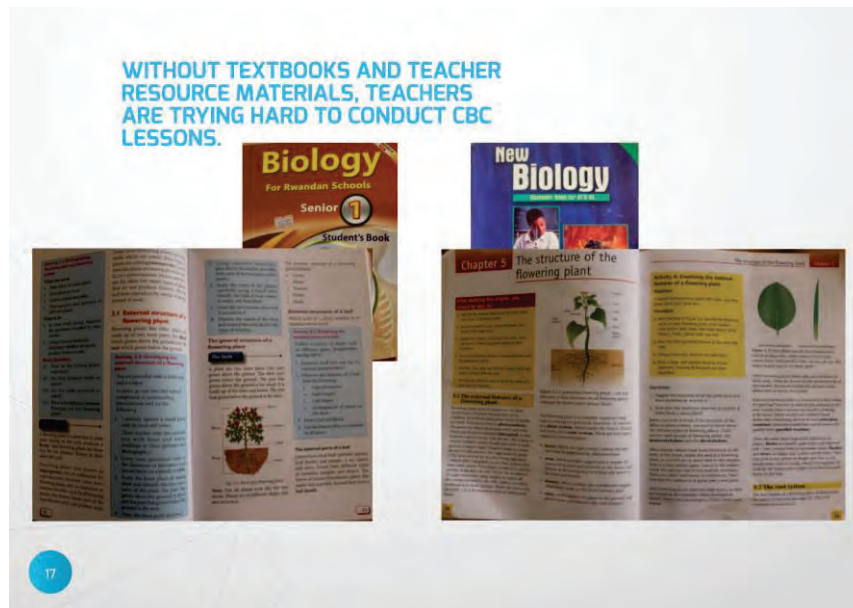


Three: Teachers are recognizing efforts of students by clapping, singing, and waiving hands. They are friendly and supportive.

SOME TEACHERS PREPARE THEIR OWN TEACHING AID



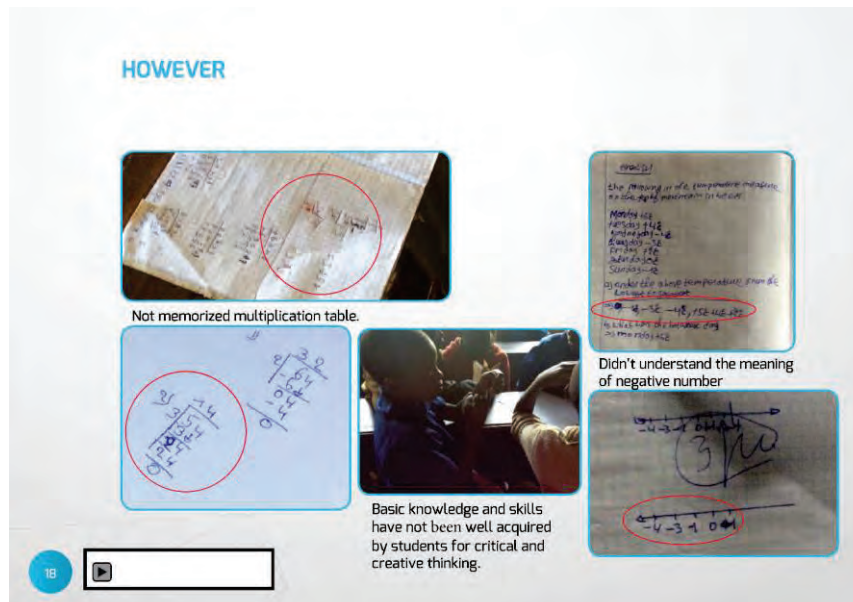
Four: Some teachers prepare their own teaching aids.



Although, new syllabus and new textbooks were not fully delivered to our schools, teachers are trying hard to conduct CBC lessons.

Supplementary Information

The so called old textbooks may be used since the content is still the same. The example of “Biology for Rwandan Schools” on the left is a textbook based on CBC for senior 1. “New Biology” on the right is a previously used textbook for senior 1. They contain the same contents. So, teachers can refer to old textbooks until CBC textbooks are delivered to their school.




However, if we pay attention to how learners are learning, we could find little change. Here are some pictures of their notebooks, where their learning process is recorded. Many P4 learners have not memorized multiplication table. Most of them don't understand the meaning of negative numbers. The majority of learners have not well acquired basic knowledge and skills, which are an important foundation of critical and creative thinking.

Intended CBC

Implemented CBC

Attained CBC



Little meaningful/substantial learning is taking place in CBC classrooms, especially in primary level.

19


So we have to say this.

Although, teachers are trying hard to conduct CBC lessons, meaningful and substantial learning is NOT yet taking place in our classrooms, especially in primary level.

We observed some changes in Teachers' teaching, however, students' learning are still left behind.

In other words, there are still a big gap among intended CBC, implemented CBC and attained CBC, on which we need to pay more attention.

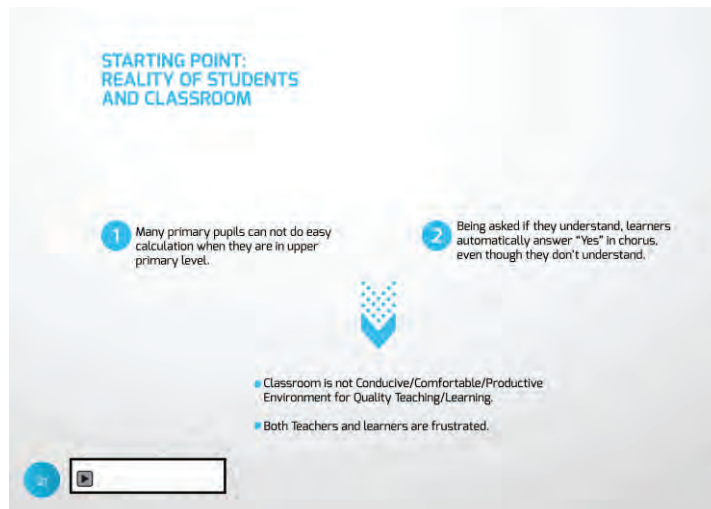
**PROBLEM ANALYSIS:
WHAT ARE THE PROBLEMS?
WHY?**



20

Then, what could possibly be the problems?

Why CBC has not yet benefitted students, while teachers are trying hard to conduct CBC lessons?



We start this analysis from “Reality of students and Classrooms” as per our observations during the survey.

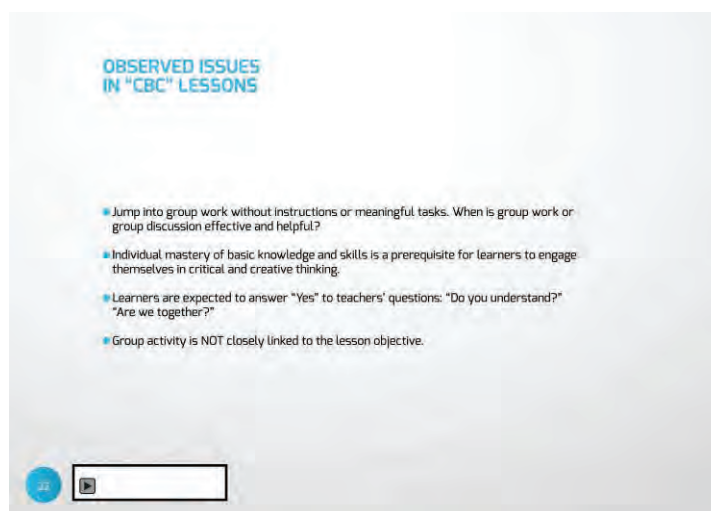
1. Many primary students cannot do easy calculations when they are in upper primary level.
2. The Teacher asks students if they understand or not, then learners automatically answer YES in chorus, even though they don't understand.

Therefore, the classroom is not a comfortable place for both teachers and students, which means not yet a conducive/productive environment for Quality teaching and learning.

Why? Teachers are not happy with slow learners, because they may delay the progress of the lesson. With this kind of mind-set of teachers, learners, in particular slow learners, might be influenced accordingly, and start pretending as if they have understood.

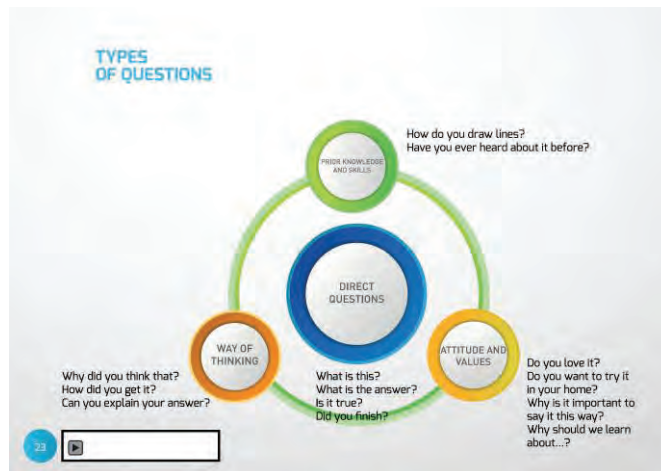
But of course, with this kind of practice, the gap between teacher assessment on learners’ understanding and actual learner-achievement is getting wider every day.

We noticed this, by checking learners’ notebook, and by watching and listening to their body language carefully when they were asked questions from teachers.



Here is a list of our observations relating to CBC lessons.

1. In most CBC lessons, teachers jump into group work without proper instructions, relevant information or meaningful tasks. Let us discuss on this important issue later, ***When is Group work or group discussion effective and helpful?***
2. Individual mastery of basic knowledge and skills is a prerequisite for students to engage themselves in critical and creative thinking.
3. Students are expected to answer “Yes” to teachers’ questions: “Do you understand?” “Are we together?” But there is no option for learners to say NO. Therefore, this form of assessment is not working effectively.
4. Group activity is NOT closely linked to the lesson objective.



In March, lesson observations were carried out in schools and analyzed the type of questions that teachers actually used in classrooms.

In this analysis, questions are categorized into four types as shown in the diagram.

“Direct questions” indicated at the center are the questions which directly confirm answers or progress of tasks given to learners.

“What is this?”, “What is the answer?”, “Is it true” and “Did you finish?” are the typical examples of the direct questions.

Besides, we have other types of questions which don’t directly ask about the answers or the progress of the task. They are used to develop skills, attitude and generic competences, or to scaffold learners to help their problem solving.

“How do you draw lines?”, “Have you ever heard about it before?” are the examples to confirm learner’s prior knowledge and skills for achieving tasks.

“Why did you think so?”, “How did you get it?” and “Can you explain your answer?” are the examples to ask the way of thinking.

These questions assess to what extent learners think critically or creatively.

Lastly, “Do you love it?” and “Do you want to try it in your home?” are the questions that encourage learners to acquire ideal “Attitude and Values.”

ANALYSIS OF QUESTION TYPES OBSERVED IN MATHS LESSONS IN FIVE SAMPLE SCHOOLS

One teacher was observed in each school.
Teachers mostly used “direct questions” only.

Question Category	School A		School B		School C		School D		School E	
	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)
Direct question	97	100	42	100	84	91.3	39	97.5	173	100
Prior knowledge and skills	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Way of thinking	0	0.0	0	0.0	4	4.3	0	0.0	0	0.0
Attitude and Values	0	0.0	0	0.0	4	4.3	1	2.5	0	0.0
Total Number of questions	97		42		92		40		173	

Source: Baseline Survey, SIQS project (2017)

24 15Min Discuss what you think about this data and why you thought so in pairs and as a whole group.

Now we are going to look at the types of questions that teachers actually use. The table shows the result of the analysis in five math lessons observed in different schools. They are labeled A, B, C, D and E.

The table shows the number of questions and percentage of each question.

It clearly indicates that teachers mostly use “direct questions” only. What do you think about this data? Is it a problem? Why or why not?

Let us discuss in pairs for 5 minutes.

Then, share your ideas as a whole group for 10 minutes.

RECOMMENDATIONS: LEARNING-CENTERED, NOT LEARNER-CENTERED

- Don't over-emphasize "group work", or "group discussion".
No foundations (basic knowledge and skills), no competency.
- Development of competency takes some time. Plan over a unit how to develop competency.
- Find out the difficulty learners are experiencing by careful observation and assessment (body language, answers to questions, etc.)
- Ask how they get their answers especially when they get them wrong.
- Set a clear objective for a lesson and design the steps for the learners to engage in meaningful subject learning activities in classroom.



Write any questions or comments, write down in your notebook.

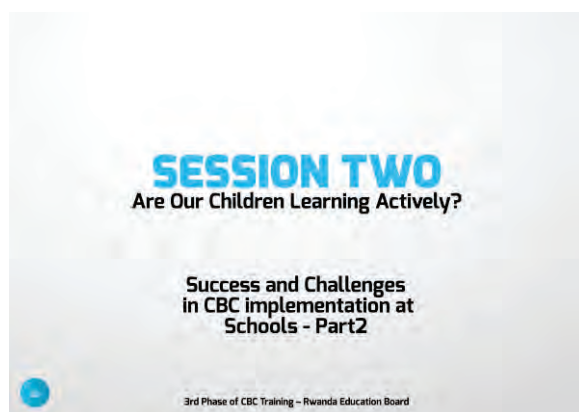
With those observations, here is a list of recommendations.

1. Don't be a slave of "group work", or "group discussion". If there are no proper instructions, relevant information or meaningful task, then they have no foundation (basic knowledge and skills) and no competency.
2. Development of competency takes some time. Don't expect to achieve it in one lesson. Plan over a unit how to develop it.
3. Instead of asking "Do you understand?" or "Are you together?", find out the difficulties students are facing by careful observation and assessment (face expression, answers to questions, exercises, etc.)
4. Ask how they get their answers especially when they get wrong. Provide proper measures to correct their misunderstanding, which must be a golden opportunity for teachers to explain more for slow learners, and they can keep motivation for learning.
5. Set a clear objective of a lesson and design the steps for the students to engage in meaningful subject learning activities in classroom.

Now, here is your first task. If you have any questions, comments, opinions, on this presentation, please feel free to write them down in your notebook.

This is the end of the 1st session.

Session 2: Success and Challenges in CBC implementation at Schools Part 2



Welcome to the 2nd session.

In the 1st session, we have heard that teachers have started to practice CBC lesson, however, there are more rooms for improvement. Observations and recommendations coming from Baseline survey of SIIQS Project were shared.

Then, in this 2nd session, let us again know the current situation, by picking up some information from Lesson Study Practice of SIIQS Project, where mathematics and science teachers were talking about challenges to deliver CBC in their schools. These are;

- Too much content in curriculum
- Lack of teaching materials/textbooks
- Lack of students' basic knowledge
- Poor communication in English (in particular for primary level)
- Assessing learners progress and providing constructive feedback
- Lack of parents' support
- Incorporating cross-cutting issues and generic competencies into lesson
- Lesson structure
- Ineffective group work activities

Now, we will give you two tasks.

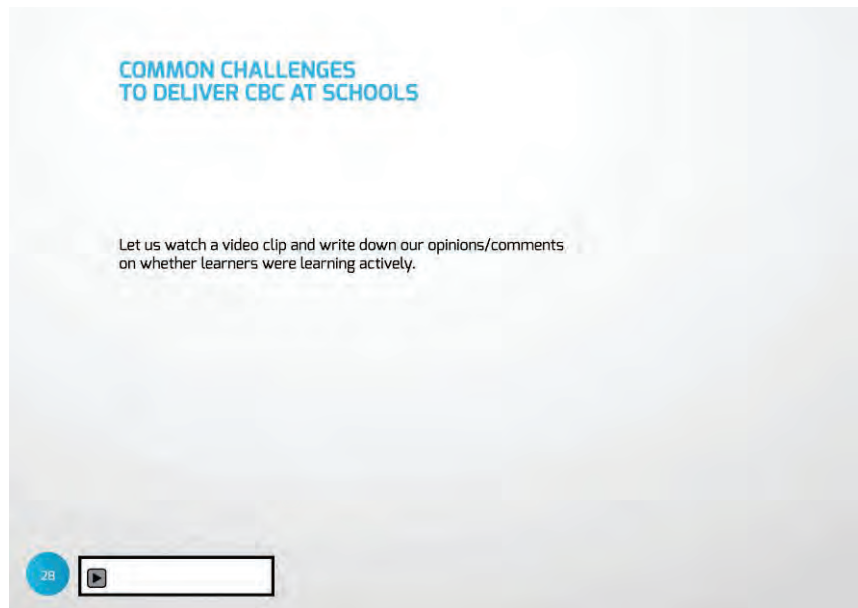
Let us discuss how to overcome those challenges.

Write down your opinions first, for 5 minutes, and then compare them with your friends, for another 5 minutes.

Supplementary Information



Though it is important to develop learners' communication skills in English by interacting with them in English, it is more important to build competences. Therefore, teachers may partly use Kinyarwanda to make learners understand the lesson.



Participants copy an assessment sheet in their notebooks ([Appendix 1](#))

Next task is: Let us watch a video clip and write down your opinions/comments if students were learning actively.



Attention!

This is a math lesson, though the video mentions math, physics and history.



Write down your opinions first for five minutes and then again compare them with your friends, for another 5 minutes.

After comparing your opinions with your friends, let us look at challenges observed by SIIQS Project.

COMMON CHALLENGES IN DELIVERING CBC AT SCHOOLS

Challenges observed by SIQS Project

- Teachers are busy, but learners are inactive/passive
- Teachers are reluctant to assess learners' understanding
- Learners need many more "individual learning" exercises



Teachers are busy, but learners are inactive/passive.

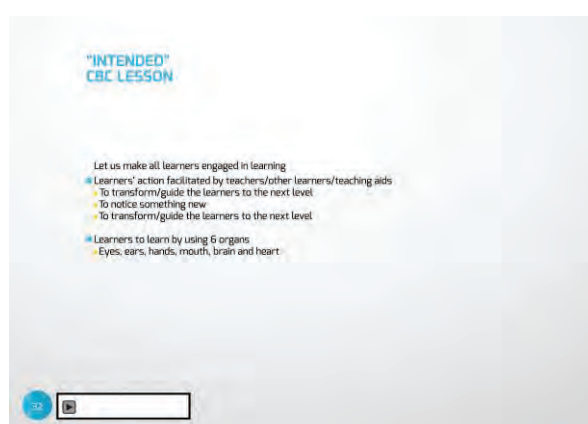
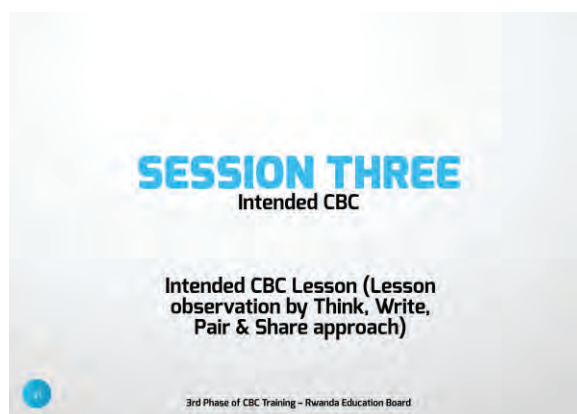
Teachers are reluctant to assess learners' understanding.

Learners need many more "individual learning" exercises, especially by using their own hands.

We will explain why we thought so, in the later session.

This is the end of the 2nd session.

Session 3: Intended CBC Lesson (Lesson observation by Think, Write, Pair & Share approach)



Welcome to the 3rd session.

In the 1st session, we have heard that teachers have started to practice CBC lesson, however, there are more rooms for improvement.

In the 2nd session, we have heard teachers' opinions about their challenges to deliver CBC lesson.

Then, in this 3rd session, let us remember the intention of CBC again.

In CBC, we need to assure equal opportunity to all learners in the classroom, fast learner and slow learner, to be engaged in the learning process actively.

Learning process is learners' action "to notice something new" and "to change and guide them to the next level", facilitated by interaction between teacher and learners or among learners, or assisted by teaching aids, or by themselves.

Needless to say, learning processes take place at their brains which are busy receiving and analyzing new information and keep them in their memories.

For this input process, learners get information/knowledge through eyes, by watching some visuals like blackboard, photo, video, demonstration, textbook and so on. They also get information/knowledge through ears, by listening to teacher's verbal explanations.

However, effective learning process cannot be completed by those input processes only.

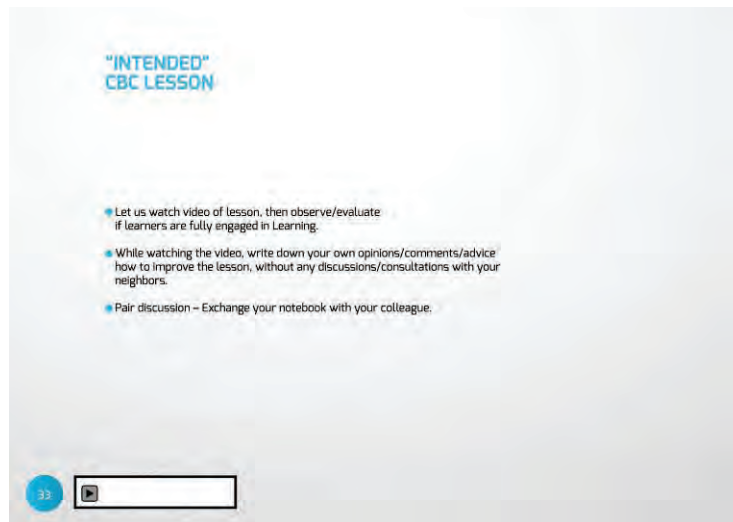
It must be well combined with and assisted by output processes;

By using hands, they write down important words or sentences on notebooks, or doing hands-on activities during mathematics and science lessons.

And by using mouths, they talk to the teacher, they express their views/opinions/observations in the classroom, exchange opinions with other learners, and make presentations in the classroom.

When a teacher talks to learners in a gentle and friendly manner, learners are also motivated to learn comfortably without fearing teacher, and encouraged to express what they have learnt.

So, I can say learners are also learning by hearts.



Participants copy an assessment sheet in their notebooks (Appendix 1)

Now, let us watch video clip of a lesson, then please observe and evaluate if students are fully engaged in the learning process.

After watching the video clip, please write down your own opinions, comments, and advice on how to improve the lesson, without any discussions/consultations with your neighbors. Then finally let us have a pair discussion. Exchange your notebook with your friends and discuss on how you can advise the teacher to deliver quality CBC lessons involving more learners and maximizing learning opportunity for them.



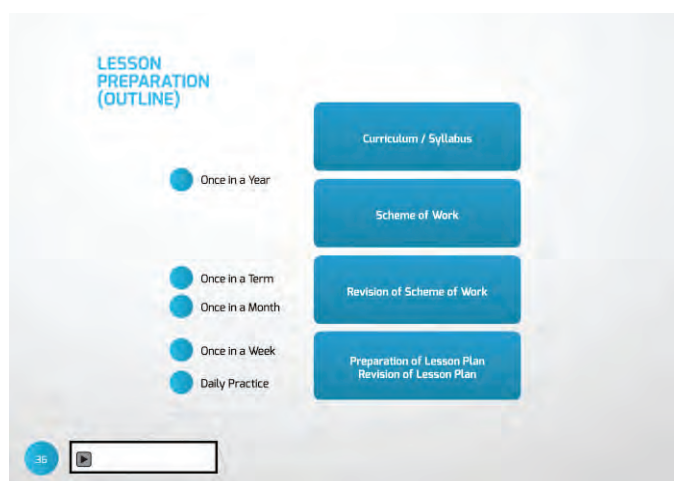
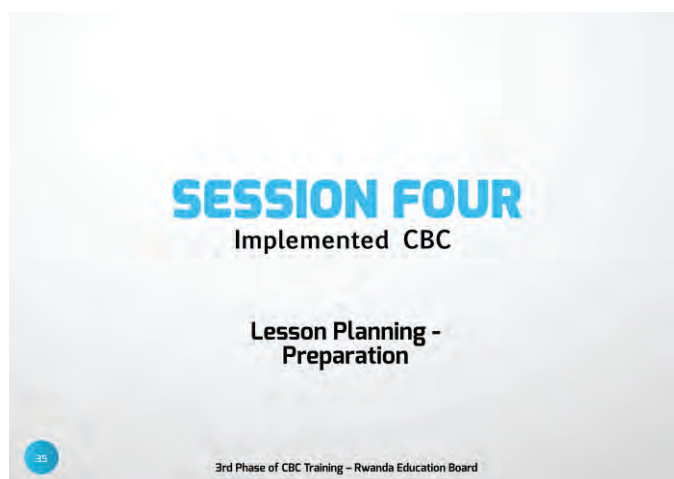
How was that? Did he or she perform well?

Then please write down your assessment on your assessment sheet with your observation, comments, reasons of why you thought so. I will give you three more minutes, then just write down your opinion without any consultation.

If we have some more time remaining, let us have a pair discussion – Exchange your notebook with your friend, and discuss on how you can advise the teacher to deliver quality CBC lessons involving more learners and maximizing learning opportunity for them. Five more minutes.

This is the end of 3rd session.

Session 4: Lesson Planning – Preparation



Welcome to the 4th session.

In the past 3 sessions, you have heard the comments and advice about how teachers can deliver CBC lessons, which are picked from SIIQS project's baseline survey and lesson study practice.

You have also watched some video clips and discussed how to improve CBC lesson delivery.

So from now, let us share some practical advice and ideas to improve lesson delivery in your classroom.

In the 4th session, we will focus on **Preparation stage**.

Quality lesson delivery of CBC starts from quality preparation.

Though some parts of the process of lesson preparation should be done once in a year, some others should be done termly, monthly, weekly, or even daily.

The first part must be preparation of a **Scheme of Work**, at the beginning of a school year, perhaps in or before January.

Preparation of a Scheme of Work should be well guided by our **Syllabus**, and we may be able to borrow some ideas from Scheme of Work of the previous year, which must be kept within the school.

After that, once in a term or once in a month, we might revise the Scheme of Work according to the progress of classroom activities. For this purpose, formative assessment by the teacher is very important.

Then, finally, once a week or as a daily activity, teachers are expected to prepare **Lesson Plans** based on **Curriculum**, Syllabus, Scheme of Work, textbook, class size, learners achievement and so forth. But even after preparing lesson plans, you can revise lesson plans according to your observation/assessment of your learners' responses/achievement.

Now, we will look into more detail at what we should do during this preparation stage.

TASK

Draft a Lesson Plan of your respective subject

37

30Min

Draft a lesson plan for your respective subjects. Pair and share with your colleague. Present it in plenary.

Provided with a lesson plan format, individually, draft a lesson plan for your respective subjects in 15 minutes. After lesson planning, pair and share with your colleague in 5 minutes. Let us present in plenary, you have 10 minutes.



Distribute a lesson plan format to each participant or let him/her use the format that is used in his/her school (Appendix 2)



Supplementary Information

Writing a lesson plan may need more than 15 minutes. It may also be fine to allocate more time and do it in groups, or make it homework at the end of Session 3 instead.

LESSON PREPARATION (BEFORE PLANNING...1)

A teacher should have a clear picture of what a lesson should be like practically.

Features of a good lesson

- Learners are in a friendly and conducive learning atmosphere and environment
- All learners are given equal chance to share ideas and experiences
- Learners are given opportunities to reach their highest potential
- Clear and relevant tasks are given to learners and completed in time
- Learners work cooperatively to solve problems and are provided with positive feedback

38

When a teacher is about to teach a lesson, she/he has a clear picture of what a lesson should be like practically. It must be a good lesson.

- Learners are in a friendly and conducive learning atmosphere and environment
- All learners are given an equal chance to share ideas and experiences
- Learners are given opportunities to reach their highest potential
- Clear and relevant tasks are given to learners and completed in time
- Learners work cooperatively to solve problems and are provided with positive feedback

LESSON PREPARATION (BEFORE PLANNING...2)

After getting a clear picture of a lesson, the teacher should ask himself/herself this question: "What do I need to teach and how will I teach it?"

- Know my learners (their number, level, disability and learning difficulties)
- Set instructional objectives
- Gather teaching and learning resources
- Decide on an appropriate approach to engage all learners
- Decide on best seating arrangement that promotes interactive learning amongst learners

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Lesson Plan

Once the teacher has got a clear picture of what she/he wants a lesson to be like, the teacher should ask himself/herself this question: "***What do I need to teach it and how will I teach it?***"

-Do I know my learners (their number, level, disability and learning difficulties etc.)

-How will I set instructional objectives

-How will I gather teaching and learning resources

-How will I decide on an appropriate approach to engage all learners

-How will I decide on best seating arrangement that promotes interactive learning amongst learners

That is why the teacher needs a lesson plan which include introduction, development and conclusion.

LESSON PREPARATION – INTRODUCTION (1)

Lesson introduction should take less time compared to other steps of a lesson (5-10 mins). The teacher may consider starting with some of the following techniques:

- Greeting and checking on the well-being of the learners
- Roll calling for learners (check whether every learner is present or absent and the reason for their absence)
- Warm up (songs and games should be related to what you want to teach)
- Reminding class rules, routine, instructions of preparing notebooks and pen on table
- Sharing learning objectives with the learners

40



This is the time for a teacher to organize and structure his/her 40 minutes lesson based on the prior gathered information.

For every stage of a lesson, the teachers ensures cooperative learning through setting different tasks that promote participatory learning.

Any lesson introduction should take less time compared to other steps of a lesson.

The teacher may consider some of the following points;

- greeting and checking on the well-being of the learners,
- roll calling for learners (check whether every learner is present or absent and the reason for their absence)
- warm up (songs and games should be related to what you want to teach)
- reminding class rules, routine, instructions of preparing notebooks and pen on table
- sharing learning objectives with the learners

Now, we are ready to watch more video clips, to talk about practical advice or technical know-how to improve lesson practice.

In those videos, we might notice some DOs and some DONTs. Of course, we want to learn a lot from good practice from the videos, however, we also know that we can learn a lot from any kind of practices if they are not good ones. So, let us start learning from watching DOs and DONTs, sharing our opinions, advices for those teachers, to improve those good lessons for better lessons.

Now, we will focus on “Introduction stage” of the lesson plan.

We will give you some advices, and some requirements which must be included in the introduction stage.

After that, we will watch a video clip, followed by discussions for your deep understanding.

LESSON PREPARATION – INTRODUCTION (2)

New Lesson - No linkage with the previous lesson
Teacher;

- Asks questions to activate prior knowledge/experience of the learners
- Makes learners interact with the teaching and learning materials
- Starts with a topic-related game/song/story/scenario/video clip/case study, etc. to let learners discover what is going to be learnt

New Lesson - Connected to the previous lesson
Teacher;

- Reviews the previous lesson
- Gives catch up tasks about the previously covered content

If the new lesson is not linked with the previous one, the teacher;

- Asks questions to activate prior knowledge/experience of the learners
- Makes learners interact with teaching and learning materials
- Starts with a topic related game/song/story/scenario/video clip/case study, etc. to let learners discover what is going to be learnt

If the new lesson is connected to the previous one, the teacher;

- reviews the previous lesson
- gives catch up tasks about the previously covered content

Term	Date	Subject	Class	Unit N°	Lesson N°	Duration	Class size
11	26.6.2017	SEF	5A	11	6	40mins	24
Type of Special Educational Needs to be catered for in this lesson and number of learners in each category:							
Unit title: Parts							
Key Unit Competence		To be able to demonstrate stages of germination and establish the relationship between parts of plants and their functions					
Title of the lesson		Parts of the plant ◀ Roots ▶ Stem ▶ Leaf ▶ Flower ▶ Fruit					
Instructional Objective		At the end of this lesson, students should be able to -Label different parts of the plant -Understand proper feeding of rabbit -Explain how to conserve or protect animals and plants as well as their socio-economic role					
Plan for this Class (location: in / outside)		Classroom					
Learning Materials (for all learners)		Charts, CARDS					
References							
Timing for each step	Description of teaching and learning activity						Generic competences and Cross cutting issues to be addressed = a short explanation
	Teacher activities		Learner activities				
Introduction	Who cartooned the class rules? Motivation by posting smile and bad faces charts ...Smile		Respect others, keep silent, ... Who can tell me what you eat at home Some foods are plants and others are animals, who can tell me plants from what you are coming to tell?				
	Beans, cabbages, rice, meat, pomidge, bread, carrots, ... Beans, bread, rice, cabbages, carrots						
Write down your own comments in your notebook and discuss in pairs: What is that the teacher has prepared well? What do you think he needs to improve on during his preparation? What advice can you give him to improve upon it?							



Distribute a lesson plan sample to each participant (Appendix 3)

Now let us observe a part of a lesson plan sample and discuss on how the teacher started his/her preparation. Your focus in this slide will be on: learners, instructional objectives of the lesson, materials gathered and organized activities in the introduction.

Observe the photo.

Write your comments in your notebook.

Pair with a partner and discuss.

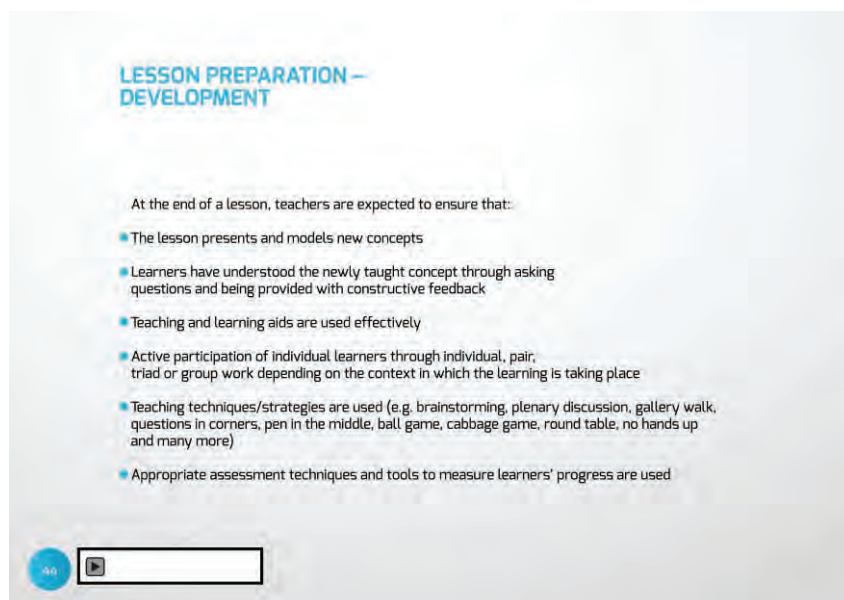
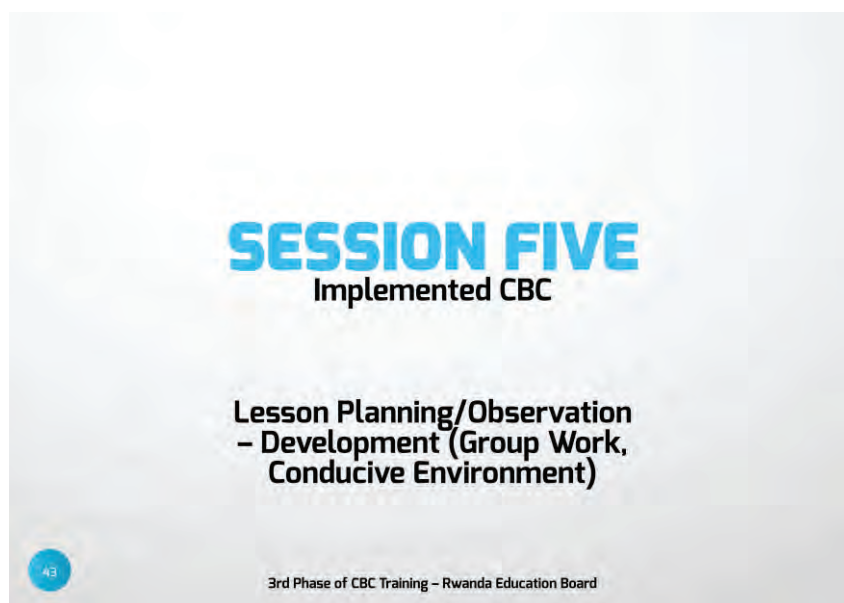
What is that the teacher has prepared well?

What do you think he needs to improve on during his preparation?

What advice can you give him to improve upon it?

This is the end of 4th session.

Session 5: Lesson Planning/Observation – Development (Group Work, Conducive Environment)



Welcome to the 5th session.

In lesson development, a teacher facilitates and supports learners to understand a new concept.

Learners are also given opportunity to discuss, experiment and challenge each other on the learnt content.

-Teachers are expected to ensure that:

-The lesson presents and models new concepts

-Learners have understood the newly taught concept through asking questions and being provided with constructive feedback

-Effectively use of teaching and learning aids stimulating learners' interests and needs

-Active participation of individual learners through individual, pair, triad or group work depending on the context in which the learning is taking place.

-Learners' potentials are maximally explored by using various teaching techniques and strategies: brainstorming, plenary discussion, gallery walk, questions in corners, pen in the middle, ball game, cabbage game, round table, no hands up and many more.

-The teacher uses appropriate assessment techniques and tools to measure learners' progress

GROUP WORK (1)


What is the best time to employ Group Work in a lesson?

Disadvantages of Group Work

- Time consuming
- Risk of reducing learning opportunity of majority of learners

Rationale to go for Group Work

- Expected to achieve competencies of higher level thinking skill, as output of Group Work

45 

As mentioned earlier, group work is quite popular practice among many of the teachers trying to practice CBC lessons.

However, in many cases, group work is not assisting learners effectively, due to various reasons.

Generally speaking, group work requires more time than individual work, and pair work.

Therefore, there is no justification for a teacher to go for group work, unless learners are expected to achieve competencies of higher level thinking skills.

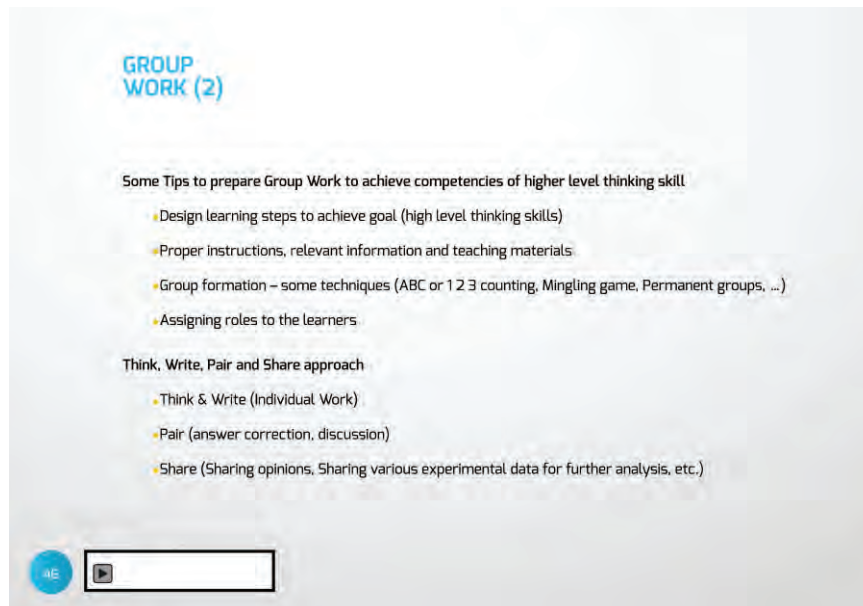
Additionally, in the worst case, group work might spoil learning opportunity for slow learners, as we have frequently observed that a few fast learners dominate learning activities in the group work.

In order to ensure enough learning opportunities for all learners in their classroom, consider **Think, Write, Pair and Share approach**.

Every learner's potential is explored and developed where she/he has got time for own thinking, develops writing skills, shares with a partner to peer assessment and decision-making, and thereafter presents their findings in plenary.

Supplementary Information

Group work is not always necessary in CBC lessons. Lecture-type lessons are also useful in building up learners' knowledge. Therefore, teachers must consider carefully about what activities would be appropriate when making a lesson plan.



Of course, group work is an important teaching technique to provide learning opportunity, in which learners are expected to gain higher level thinking skills. Therefore, a teacher needs to carefully plan group work - starting from designing learning steps to achieve lesson objectives, related to high level thinking skills.

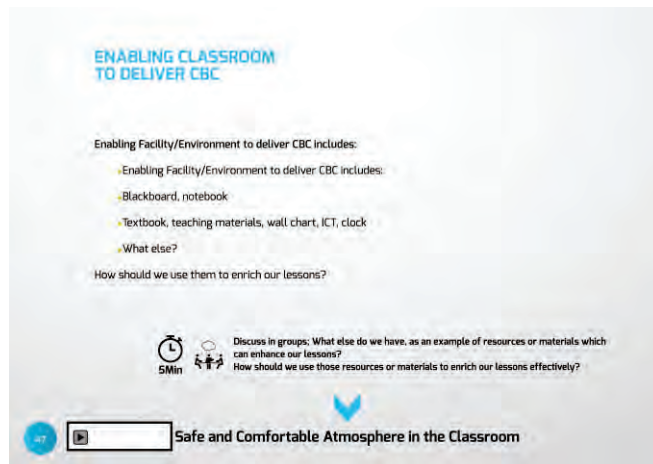
Then accordingly, after designing learning steps, proper instructions, relevant information and sufficient teaching materials should be provided for learners.

There are several techniques of forming groups and it depends on the teacher's purpose, the number of children in the classroom. However, the teacher chooses a techniques that will not take him/her much time.

Here are some examples of group formation techniques:

- ABC or 123 counting (those who counted the same letter of number will form one group)
- Mingling game (where the teacher says out a number and learners group themselves according to number instructed by the teacher)
- Permanent groups (where the teacher forms groups in which learners will be working every time she/he assigns them a task)


Assigning specific roles to the individual learners in the group might keep them focused on the given task and more it develops leadership skills into learners at their early age.



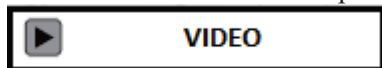
As one of the challenges to deliver CBC, teachers are feeling that textbooks are not sufficiently available. For example, I can say that we cannot miss blackboard as a part of the classroom, and it is a useful tool for teacher to provide knowledge for learners, and record learners' response, learners' discussions, and later to be shared by everybody. Notebooks for learners are also an important tool, so that learners can record all necessary contents taught during the lesson, including the structure of learning process. Textbooks, and any other supporting teaching materials, including wall chart, ICT, clock for time management, can also assist teachers and learners, obviously. What else do we have, as an example of facility or materials which can enhance our lessons? Then, how are we supposed to use those facility or materials to enrich our lessons effectively? To conclude this slide, we also would like to remember that a friendly atmosphere in the classroom is a basic condition for learners to express their views, exchange opinions, enjoy discussion, and say NO to teacher when they have not understood the lesson.



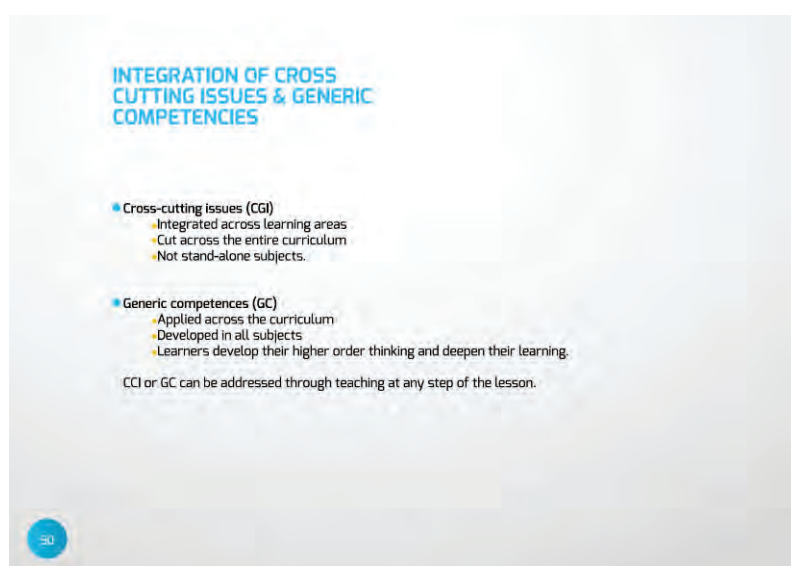
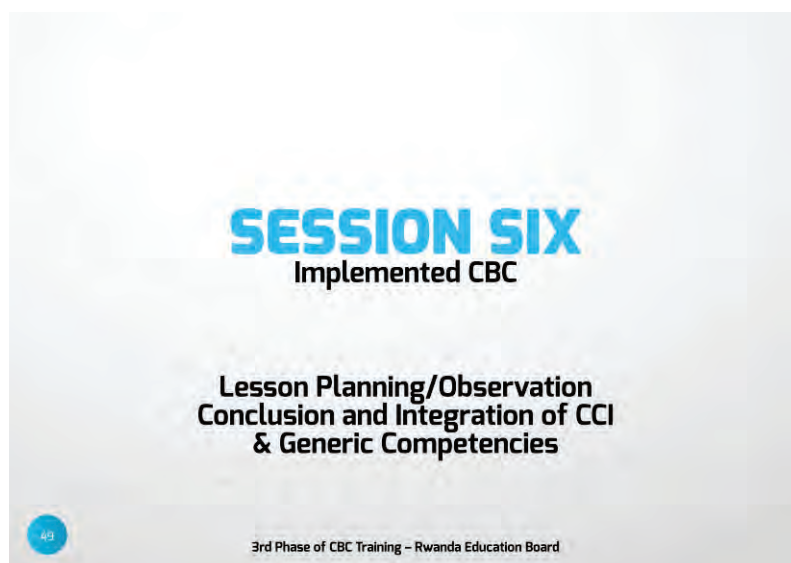
Attention!
The video is a history lesson in S2, though it displays HIST/S4.

 Participants copy an assessment sheet in their notebooks (Appendix 1)

Now, let us watch a video clip and assess the lesson, focusing on;
Group formation and utilization,
Effective use of resources (charts, textbooks, ...), and
Conducive classroom atmosphere.



Session 6: Lesson Planning/Observation – Conclusion & Integration of CCI & Generic Competencies



Welcome to the 6th session, which is wrapping up active learning.

Here, let us talk about integration of Cross Cutting Issues and Generic Competencies of learner's progress, and the conclusion.

There is a misconception among most of the teachers that to integrate cross-cutting issues or generic competences in a lesson, one needs to mention them in the middle of the lesson, yet any integrated cross-cutting issue or generic competence is covered through organized learning activities and questions a teacher sets for the learners.


Now, having in mind what we explained in this session, let us watch a video clip and assess how cross-cutting issues and Generic competences are integrated in the lesson.

While watching, please write down on the assessment sheet your observations, comments and reasons for your thoughts.



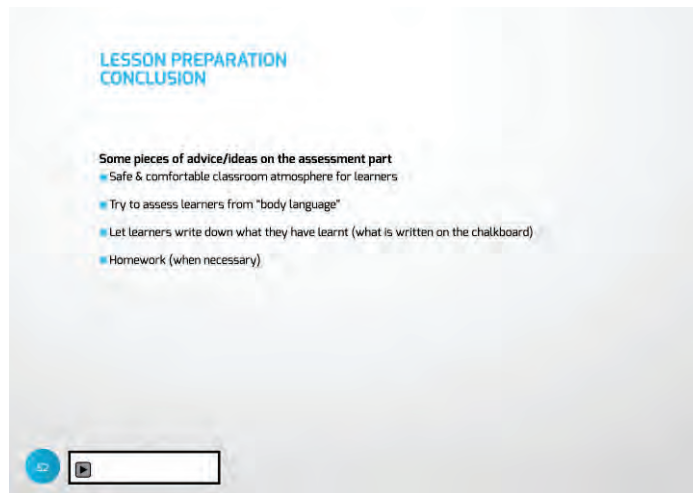
Participants copy an assessment sheet in their notebooks (Appendix 1)



 **VIDEO**

How was that? Did he perform well?

Let us have a pair discussion for 5 minutes – Exchange your notebook with your colleague, and discuss on how you can advise the teacher to deliver quality CBC lesson involving more learners and maximizing learning opportunity for them and how well to integrate cross-cutting issues and Generic competences in the lesson.



In order to grasp the degree of comprehension of children efficiently, it is necessary to have an atmosphere and trust relationship that allow children to freely express their own feelings. Let us make your classroom as a safe place where students can enjoy learning and say “No” when they don’t understand what you teach. Learners’ performance will be finally examined by national exam paper, then they need to write down their knowledge and ideas on papers. Let us give them enough opportunity to write down important words, sentences, and concepts relating to the objectives of the lesson in their notebooks. A conclusion is a summary of what has been taught. In an effective conclusion, the teacher sets questions or learning activities which prompt learners to share, either orally or in written form, the lesson learnt from the covered content.

As the teacher ends his/her lesson, the teacher may consider giving homework to the learners for further practice at home and afterwards thank learners for their participation and attendance.

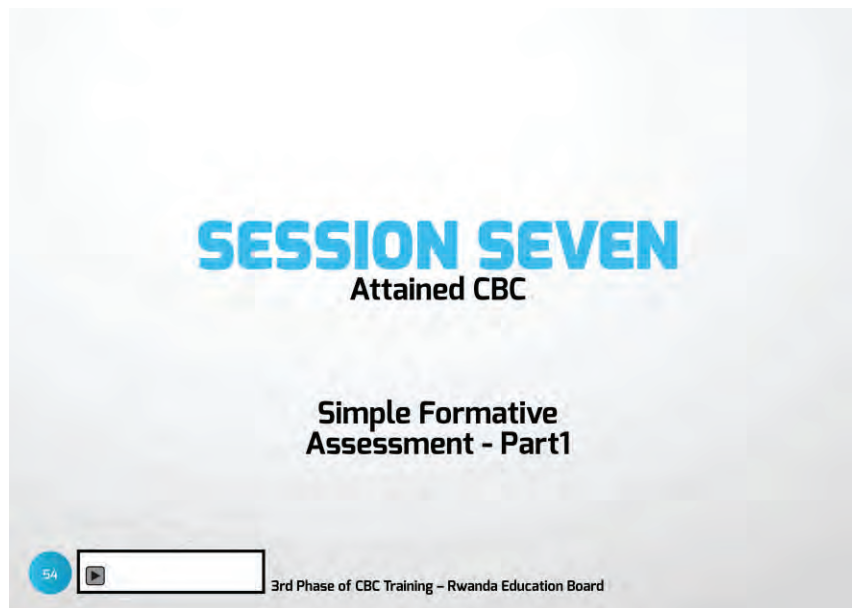


Participants copy an assessment sheet in their notebooks (Appendix 1)



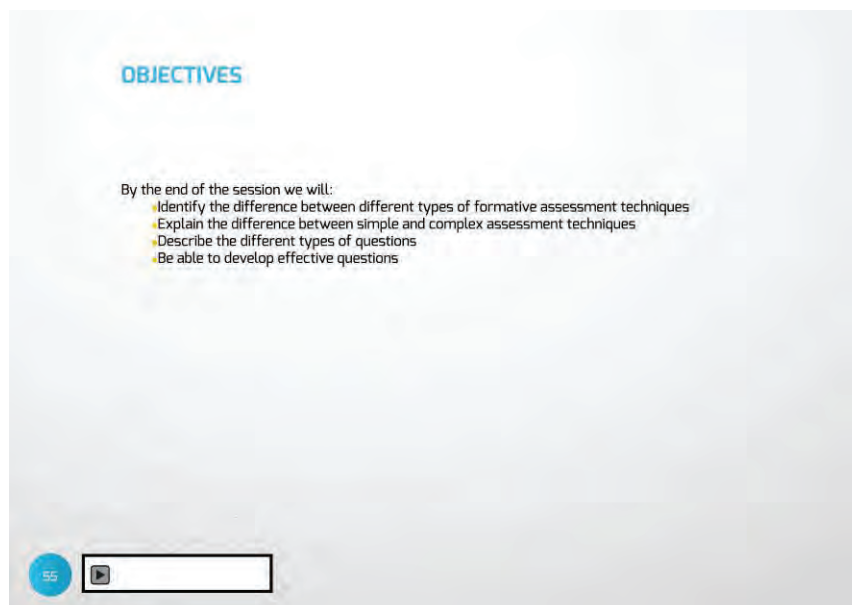
How was that? Did she perform well?
 Let us have a pair discussion for 5 minutes– Exchange your notebook with your colleague, and discuss how you can advise the teacher to deliver a quality CBC lesson by conducting a good lesson conclusion.
 This is the end of the 6th session.

Session 7: Simple Formative Assessment 1



From this session, we will talk about Formative Assessment, which is a continuous process for teachers to understand how learners are involved in the learning process in the classroom. The intention of formative assessment is not only to examine their academic performance, but to encourage teachers to carefully observe learners' behavior/responses. Consequently, teachers are expected to assure achievement by all learners, from fast learners to slow ones.

So regular and frequent formative assessment by the teacher is critically important for delivering CBC.



Welcome to session 7.

The objectives of this session are to identify the difference between different types of formative assessment techniques, to explain the difference between simple and complex assessment techniques, to describe the different types of questions and to be able to develop effective questions.

COMPETENCE-BASED ASSESSMENT



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Competence-based assessment is an assessment process in which a learner is confronted with a complex situation which is relevant to his/her everyday life and asked to look for a solution by applying what has been learned such as knowledge, skills, competences and attitudes.

The teacher then collects evidence of learning and uses it as the basis on which to make judgments concerning learners' progress against performance criteria.

Before any assessment is carried out, teachers should be clear about why they should assess, what to assess, when to assess and how to do the assessment. This will depend on whether assessment is formative or summative.

SUMMATIVE ASSESSMENT



57

Summative assessments are used to evaluate learner learning, skill acquisition, and academic achievement at the conclusion of an instructional period, such as the end of a project, unit, course, term, school year and cycle. Many teachers are familiar with this type of assessment.

Formative assessment is the daily monitoring of learning to provide ongoing feedback that teachers can use to improve their teaching and learners use to improve their acquisition of competences.

Formative or continuous assessment helps teachers to assess curriculum learning objectives at short intervals of time, and provide effective remedial instruction for slow learners, or enrichment activities for high achievers.

FORMATIVE ASSESSMENT



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SIMPLE FORMATIVE ASSESSMENT AND COMPLEX FORMATIVE ASSESSMENT



Simple formative assessment techniques

- Effective questioning
- Simple observation:
Faces, behavior, gesture (unhappy, confused, uncomfortable, etc.)
- Thumbs-up

Complex formative assessment techniques

- Class Work
- Group Work
- Quiz/Exercise
- Oral Presentation
- Debate
- Oral questioning

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In this session, we will focus on formative assessment. As you can see from this chart, some kinds of formative assessment can be simple to use in class, while others are more complex. Complex assessment tasks are used to assess the comprehensive performance or generic competences of learners.

We will firstly look at simple formative assessment techniques in this session and session 8. Then we will look at complex formative assessment techniques in session 9 and we will learn about assessment tasks in session 10.

FORMATIVE ASSESSMENT TECHNIQUES

- What kinds of formative assessment do you currently use in class?
- Are you facing difficulties when you use the formative assessment?

50

10Min

Discuss in groups and share as a whole group:
The kinds of formative assessment that you currently use in class, and share difficulties you are facing, if any.

Work in groups and discuss the kinds of formative assessment that you currently use in class, and share difficulties you are facing, if any. Work together for 5 minutes.
After discussing, share together as a whole group for 5 minutes.

SIMPLE FORMATIVE ASSESSMENT TECHNIQUES

- Effective questioning
- Simple observation
 - Faces, behavior, gesture (unhappy, confused, uncomfortable, etc.)
- Thumbs-Up

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Some of the easiest forms of formative assessment are: effective questioning, simple observation, and “Thumbs-Up”.

QUESTIONING

- What is the purpose of questions?
- What different kinds of questions are there? Make a list.
- What are the characteristics of effective questions?

▶
▶

10Min

Think Pair Share:

What is the purpose of questions?
What kind of questions are there?
What are the characteristics of effective questions?

Use Think, Pair, Share to discuss the questions, “What is the purpose of questions?”, “What kind of questions are there?” and “What are the characteristics of effective questions?” for 10 minutes.

Asking questions is one of the most common activities that a teacher does. But did you know that there are different types of questions that a teacher can ask? As teachers, we are usually busy asking questions, but we often don’t analyse them. Most teachers ask simple questions which only require learners to recall knowledge or facts. But we need our questions to do more than this. By asking questions, we can encourage learners to discover, to apply their knowledge, and to develop critical thinking skills.

EFFECTIVE QUESTIONS

Characteristics	Description
Purposeful	They should be asked to achieve a specific purpose (e.g. knowledge, skills, competencies, attitudes and values, etc.).
Clear	Learners should understand what the questions mean. They should be straight-forward, no beating about the bush, etc.
Brief	Avoid verbosity. They should be stated in as few words as possible.
Natural	They should be stated simply, i.e. in simple language (avoid confusing bombastic words).
Thought-provoking	They should stimulate thinking and response.
Limited in scope	Only one or two points in chain of reasoning should be called for
Adapted to the level of the cohort/class	They should be tailored to the kinds of learners in the class.
contextualized	They should be in context, i.e. suited to the learners’ environment (social, economic, geographical, etc.).

▶
▶

This table shows what effective questions are like.

They are purposeful as they should be asked to achieve a specific purpose.

They are clear as learners should understand what the question means.

They are brief as they should be stated as few words as possible.

They are natural as they should be stated in simple language.

They are thought-provoking to stimulate thinking and response.

They are limited in scope as only one or two points in chain of reasoning should be called for.

They are adapted to the level of the cohort/class.

They are contextualized as they should be suited to the learners’ environment.

BASIC QUESTIONING RULES

Good way of questioning

- Give opportunity for quiet learners to answer
- Allow thinking time particular for slow learners
- Encourage learners to learn from their mistakes and wrong answers (giving feedback to learners)

Bad way of questioning

- Chorus questions
- Be unaware of how learners are working in class
- Choose the same learners to answer each time

64



8Min



Discuss in pairs and share as a whole group:
Is there anything we should add to this list?

We are now going to look at effective questioning.
There are some techniques which teachers are using in schools.
Is there anything we should add to this list?
Share ideas in pairs for 3 minute.
Take 5 minutes to share ideas with the whole group.

WHAT HELPS US TO KNOW IF QUESTIONS ARE OPEN OR CLOSED?

Closed and Open Questions

Closed Questions	Open Questions
<ul style="list-style-type: none">• Can you list three prime numbers?• What is the name of the Capital City of Rwanda...?• Where is the heart in this diagram?	<ul style="list-style-type: none">• Can you explain your answer?• Do you agree with the actions of the character in this story? Why? Why not?• Why was Africa colonized?• Find out ways of eradicating malaria.

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Let us look at the table.

There are questions that require several possible correct answers. We call them open questions. Those that need only one or two answers are called closed questions.

Some questions only test learners' memory. These are called lower-order questions. Some questions require learners to apply what they have learned and think very deeply. These are known as higher-order questions.

The easiest way to recognise different questions, is to think about the number of possible answers that it has. If there are many possible answers, they will often show you that it is an open question. If there are one or two, this will often show you that it is a closed question. But we should keep in mind that even if there are many possible answers, some are closed questions. These questions just require recalling prior knowledge or comprehending the situation, and can be answered by single words or short sentences. Another technique is to analyse key words or phrases in the question. Words such as *who, what, when, where, name, list etc....* are often used for closed questions.

Open questions are higher order questions which require learners to take additional steps in order to answer them. Learners have to use logic and reasoning, they have to apply what they have learned, or they have to use their own thinking in order to answer them. The keywords in these questions are words like *discuss, interpret, explain, evaluate, compare, if... etc.*

Some teachers avoid using higher-order questions in class because they generate many different answers. But actually, learners benefit a lot from these questions. When using higher-order questions in class, teachers can discuss all correct answers, and correct the incorrect ones. The more your learners use higher-order thinking skills, the more confident and competent your learners will become.

Closed questions have short, fixed answers. Open questions have more than one answer and can produce a lot of information.

QUESTION SORT

1. Give examples of multiples of 5.
2. List the features of the environment in Rwanda.
3. What do you think is the most important function of plants? Explain your answer.
4. What are our needs in the district?
5. Give examples of verbs in the present continuous.
6. What would happen if bees were extinct?
7. Give examples of vertebrates.
8. Look back at the problems you have solved today. Where were you successful? What approach did you take?"
9. A motor is more than just one part. If you are able to take apart a motor, what is each part's importance and role in making that motor able to do the task it is used for?

Closed Questions Open Questions

55 10Min Work in groups and decide which of these questions are open and which are closed. Explain how you decided.

To help us understand which questions are closed, and which are open, we are going to practice sorting these questions.
 You have 10 minutes. Work in groups and decide which of these questions are open and which are closed.
 Explain how you decided.

QUESTION SORT –ANSWER

Closed and Open Questions

Good way of questioning	Bad way of questioning
1 Give examples of multiples of 5 2 List the features of the environment in Rwanda 5 Give examples of verbs in the present continuous 7 Give examples of vertebrates.	3 What do you think is the most important function of plants? Explain your answer. 4 What are our needs in the district? 6 What would happen if bees were extinct? 8 Look back at the problems you have solved today. Where were you successful? What approach did you take?" 9 A motor is more than just one part. If you are able to take apart a motor, what is each part's importance and role in making that motor able to do the task it is used for?

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This is the answer. Were you able to distinguish the difference between closed and open questions?

Attention!

The heading of the table is not correct. Please tell participants that the left should be closed questions and the right should be open questions.

Supplementary Information

Some participants may have thought that No.2, 5 and 7 are open questions because there are many possible answers. You may remind them that even if there are many possible answers, these questions just require recalling prior knowledge or comprehending the situation, and can be answered by single words or short sentences. Open questions are higher order questions which require learners to take additional steps in order to answer them. Learners have to use logic and reasoning, they have to apply what they have learned, or they have to use their own thinking in order to answer them.

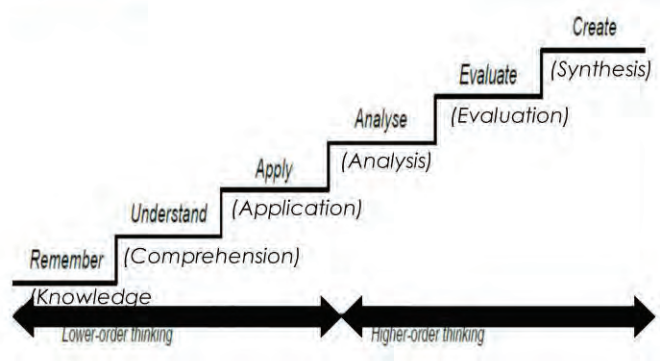
BLOOM'S TAXONOMY

- What is Bloom's Taxonomy?
- How can it help us as teachers?

68 10Min  Discuss in pairs and share as a whole group.

Work together in groups to discuss the questions. You have 5 minutes.

BLOOM'S TAXONOMY



69

Share your answers together as a whole group for 5 minutes.

Thinking critically is a competency that can be developed, and without critical thinking many aspects of learning cannot take place. For example, creativity, imagination, problem solving skills, innovation, and application all require critical thinking.

Questions can encourage Learners to discover and explore. Learners need to be involved in their learning, and a good way for teachers to promote this is by asking challenging questions to develop learners' critical thinking skills.

When asking different kinds of questions, it is important to move from simple to complex, as learners cannot answer very complex questions without first being able to answer simple questions. Bloom's Taxonomy can also help us to develop different levels of questions which require different levels of thinking.

LOW LEVEL THINKING SKILLS HIGH LEVEL THINKING SKILLS

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Key words: Classify, Describe, Explain, Identify, Label, List, Locate, Match, Memorize, Name, Recall, Recognize, Repeat, Select, Show, Understand, Use, Write	Key words: Compare, Contrast, Define, Distinguish, Explain, Illustrate, Interpret, Justify, Relate, Summarize, Support, Translate	Key words: Apply, Calculate, Classify, Compare, Construct, Demonstrate, Execute, Illustrate, Interpret, Justify, Relate, Summarize, Support, Translate	Key words: Analyze, Compare, Contrast, Differentiate, Examine, Investigate, Relate, Separate, Synthesize	Key words: Create, Design, Develop, Formulate, Generate, Plan, Produce, Propose, Reconstruct, Revise, Synthesize	Key words: Assess, Defend, Judge, Justify, Prioritize, Select, Support, Weigh
Actions: Classify, Describe, Explain, Identify, Label, List, Locate, Match, Memorize, Name, Recall, Recognize, Repeat, Select, Show, Understand, Use, Write	Outcomes: Compare, Contrast, Define, Distinguish, Explain, Illustrate, Interpret, Justify, Relate, Summarize, Support, Translate	Outcomes: Apply, Calculate, Classify, Compare, Construct, Demonstrate, Execute, Illustrate, Interpret, Justify, Relate, Summarize, Support, Translate	Outcomes: Analyze, Compare, Contrast, Differentiate, Examine, Investigate, Relate, Separate, Synthesize	Outcomes: Create, Design, Develop, Formulate, Generate, Plan, Produce, Propose, Reconstruct, Revise, Synthesize	Outcomes: Assess, Defend, Judge, Justify, Prioritize, Select, Support, Weigh
Questions: Can you recall...? Can you identify...? How do you...? What is...? Where is...? Why...?	Questions: Can you explain...? How would you...? What is the main idea...? Why do you...? What is the...?	Questions: How would you...? What approach would you...? What would you...? Can you make use of...? What factors would you...?	Questions: What are the...? How is...? What is the...? What would you...? How would you...? What is the...? Can you make a...? What is the...?	Questions: What changes would...? How would you...? Can you...? What would you...? Can you...? Can you...? Can you...?	Questions: Do you agree...? What is your...? Can you...? What would you...? Can you...? What would you...? Can you...?

Bloom's Taxonomy: Teacher Planning Kit

70 15Min Work in groups with other people who teach your subject. Look in textbooks for your subject to find questions for each level of Bloom's Taxonomy.

Distribute Bloom's Taxonomy to each group (Appendix 4)

When planning a lesson, it is helpful to check the levels of Bloom's Taxonomy to see what you are asking your learners to do, and what level of thinking is needed to achieve each task. This chart can help us plan the types of questions that we can ask in a lesson, or over the course of a unit. Work in groups with other people who teach your subject. Look in textbooks for your subject to find questions for each level of Bloom's Taxonomy. You have 15 minutes. You can organize the questions into a table which you can use to help you plan the questions you ask in class.

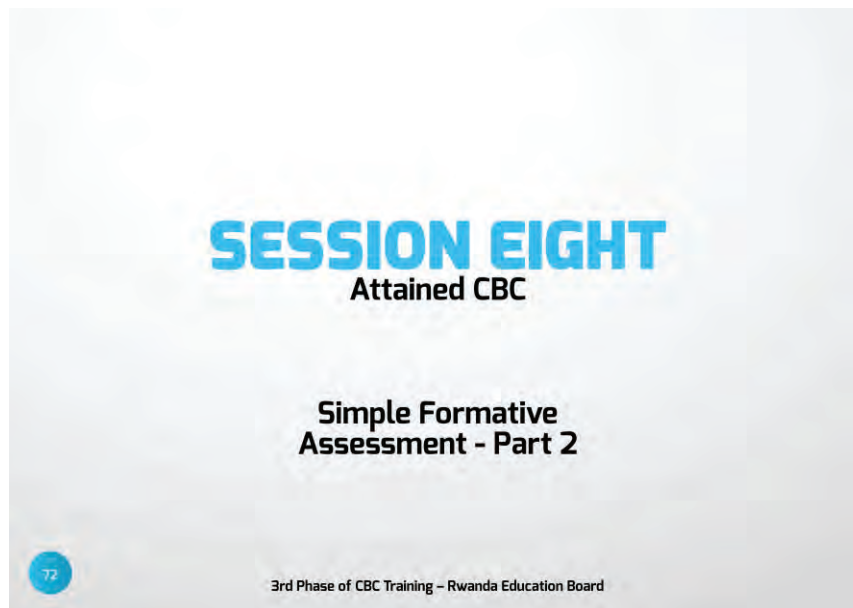
LET'S DEVELOP EFFECTIVE OPEN QUESTIONS ACCORDING TO BLOOM'S TAXONOMY.

- Open questioning practice
 1. Produce your questions in your subject group (brainstorm)
 - Develop as many questions as you can.
 - Do not stop to discuss, judge, or answer the questions.
 2. Improve your questions
 - Make sure that the questions are open-ended.
 3. Prioritize your questions
 - Choose your three most important questions.
 - Why did you choose these three as the most important?
 4. Think about how you are going to use your questions with learners

71 25Min Work in groups. Choose a unit and develop a range of different question types by following these steps. Develop one question for each level of Bloom's Taxonomy.

Now we are going to develop our own questions which will be useful for us to use for the units we teach. Choose a unit and develop a range of different question types by following these steps. Develop one question for each level of Bloom's Taxonomy. You can use the list to help. You have 15 minutes. Share your ideas in pairs for another 10 minutes. This is the end of the 7th session.

Session 8: Simple Formative Assessment 2



Welcome to the 8th session.
The objectives of this session are to describe simple formative assessment techniques and to understand how to use simple formative assessment techniques in the classroom.

SIMPLE FORMATIVE ASSESSMENT TECHNIQUES

- Effective questioning
- Simple observation
 - Faces, behavior, gesture (unhappy, confused, uncomfortable, etc.)
- Thumbs-Up

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Some of the easiest forms of simple formative assessment are: effective questioning, simple observation and “Thumbs-Up”.

SIMPLE OBSERVATION PRACTICE CASE STUDY DISCUSSIONS

<Case Study 1> Uwamahoro is repeating with the other learners in class, but when you look closely, you notice that she is not pronouncing the words correctly. She is making sounds that sound like what the others are saying but they are not actually words.

<Case Study 2> You notice that Yohana is always slow to answer or usually copies other learners next to him in class.

<Case Study 3> Uwimana has been paying attention well in the lesson, but you notice that her face shows a very confused expression. She doesn't look like she has understood.

<Case Study 4> Gakwandi: Looks very nervous when he is asked to answer a question. He stands frozen, without moving while the rest of the class waits for him.

75

20Min

Work in groups. Read the case studies and work together to discuss the questions. Share ideas as a whole group:
 What is the problem? Why is it a problem?
 How would you change your teaching according to the behaviour you notice in these learners?

Let's start with simple observation.
 Work in groups. Read the case studies and work together to discuss the question for 10 minutes
 Share ideas as a group for 10 minutes.
 These are common learners' behaviours that we can observe.

SIMPLE OBSERVATION TIPS

- Practice 'scanning' the room – allow your eyes to travel around and look at the faces of learners.
- When looking at learners consider, are they:
 - Happy/unhappy.
 - Confident/uncomfortable and nervous
 - Following the lesson/ confused
- Change your teaching techniques according to the behavior you observe in learners.

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Now, here are some simple observation tips.

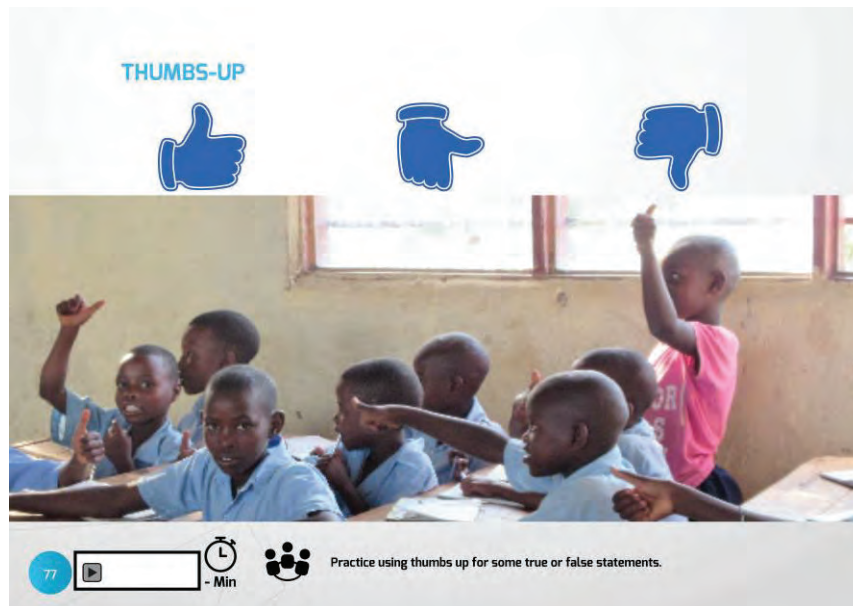
When you are in your classroom, allow your eyes to travel around and look at the faces of learners.

You may find various situations that learners encounter at the same time.

Do they look happy or unhappy? Are they confident or uncomfortable and nervous?

Do they seem to be following the lesson or do they seem confused?

Simple observation gives you a lot of information about learners. You may have to change your teaching techniques at any time you think it is necessary, according to the behavior you observe in them.



Now we are going to consider Thumbs-up.

Thumbs up is a very simple assessment technique that can be used to encourage all learners to think in class, and can also be used as a form of assessment. It can be used in all subjects.

You will need to practice this technique with learners to make sure they are all familiar with it. You need to explain to learners that you will say a sentence. If they agree with that sentence, (that means if it is true) they show you by putting their thumbs up. If they don't agree they show thumbs down. If they are not sure, they can hold their thumbs sideways.

You need to explain to learners, that it doesn't matter if they don't show the correct answer, because if they get the answer wrong, you will know what to teach them next.

We will now practice using thumbs up for some true or false statements:

- 20 divided by 2 is 10.
- 40 divided by 2 is 15.
- 30 times 3 is 100
- 20 times 5 is 100

As teachers, we need to observe how learners are responding to these questions. While learners are showing their answers, we can look around the room and see who is correct, who has not understood and who is not sure (We know this by seeing which learners are slow to show their thumbs, or are looking around at others before answering). This acts as a form of assessment.

Let's try again. with another subject:

- Water evaporates when it is cold
- Water changes into a gas when it is heated
- Condensation is when water is released from plants

Very good. Now we will develop questions for thumbs-up in subject groups.

LET'S DEVELOP EFFECTIVE CLOSED QUESTIONS FOR THUMBS-UP.

• Closed questioning practice

1. Produce your questions in your subject group.

- Develop as many questions as you can.
- Do not stop to discuss, judge, or answer the questions.
- Change any statement into a question.

2. Improve your questions

- Make sure that the question can be answered yes or no.

3. Think about how you are going to use your questions with learners.

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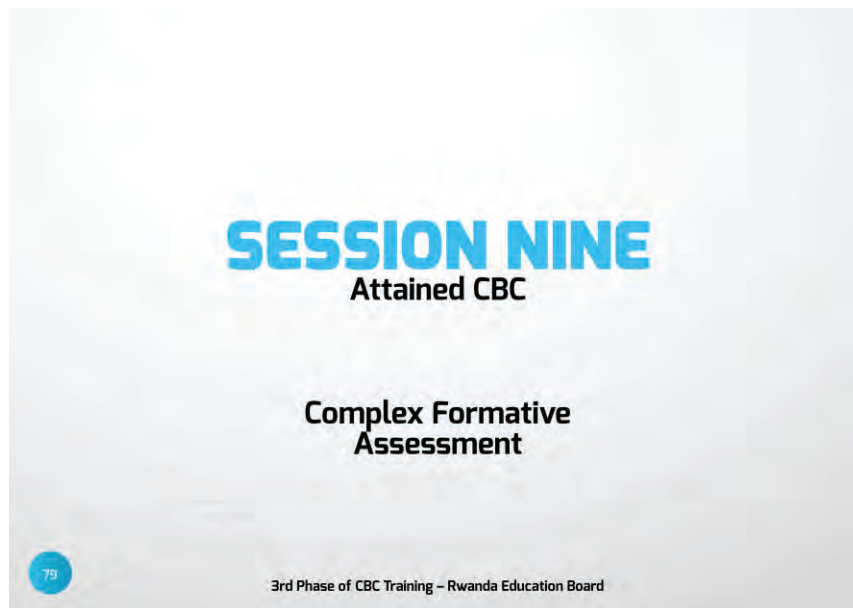
15Min



Work together in subject groups and share as a whole group;
Develop closed questions that can be used for the thumbs-up technique.
The questions need to have yes or no answers.

We will now work together in subject groups to develop closed questions that can be used for the thumbs-up technique. The questions need to have yes or no answers.
You have 10 minutes.
Share as a whole group for 5 minutes.
This is the end of the 8th session.

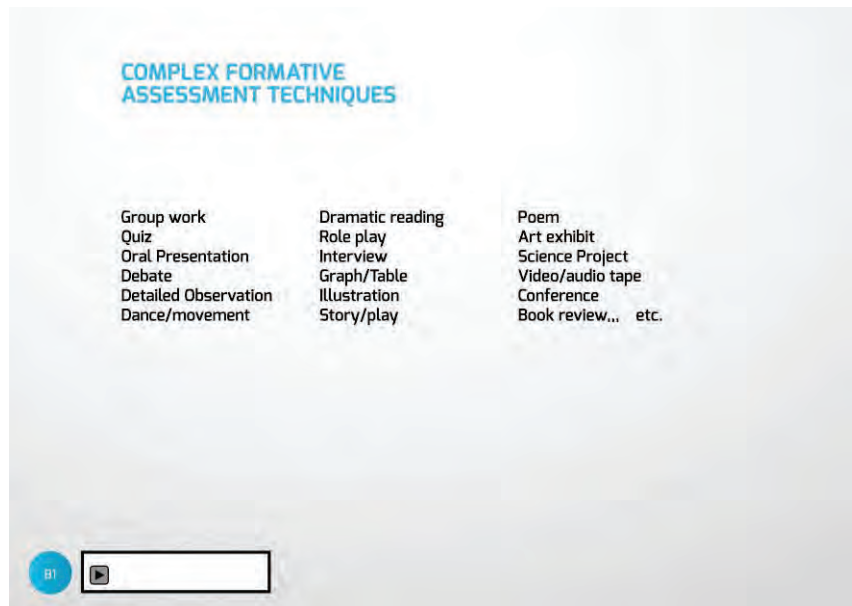
Session 9: Complex Formative Assessment



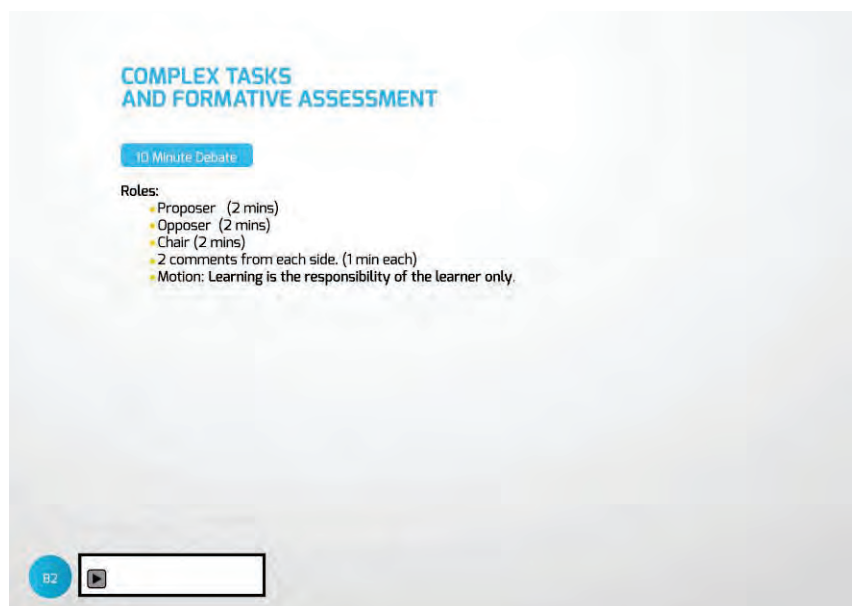
Welcome to the 9th session.

In this session we are going to focus on complex formative assessment in class.

The objectives of this session are to understand the difference between simple and complex assessment techniques, to describe complex formative assessment techniques, to describe the skills assessed in a complex assessment task, and to develop assessment rubrics.



The formative assessment techniques listed here were learnt in the 2nd phase CBC training. They require more skills in order to put them into practice, but they allow the teacher to measure several things at once. These complex techniques allow teachers to measure how learners can apply their learning, and how they have developed generic competences. But since teachers need to measure several things at once, a clear and fair guideline is required. Rubrics can be used for this to help teachers to clearly measure knowledge and skills.



We are going to organize a 10 minute debate as an example of a complex assessment task. Assign these roles to 7 participants. Each participant will talk for the times shown. The Proposer has 2 minutes to talk. The Opposer has 2 minutes to talk. The Chair will have 2 minutes to talk. Then 4 participants will have 1 minute each for comments.

Supplementary Information 

If you think that the participants are not very familiar with debate, you may do another complex assessment task such as presentation and role play.

COMPLEX TASKS AND FORMATIVE ASSESSMENT

Which knowledge and skills were used in this debate?

Is there a way to measure this?

B3



10Min



Brainstorm together as a whole group.

Brainstorm together as a whole group, which skills did the participants in this debate use?
How could we measure these skills?
You have 10 minutes.

USING RUBRICS FOR ASSESSMENT: WHAT IS A RUBRIC?

		Marking Rubric for Presentations (Single Learner/Group)				Marks
		4	3	2	1	
Content	There are no mistakes in the concepts used; the communication skills are integrated in the presentation.	There are a few errors in description of some concepts used; the information is not presented in a logical order while presenting.	There are various errors observed; visual in visuals which means that concepts are not well expressed.	There are several errors in description of concepts and how these are presented.		
	The visuals capture the attention of the audience.	Visuals are good.	Information is not well sequenced.	Writing/illustration is poor/low quality with small fonts used. The data presented not attractive.		
Knowledge	Shows extensive knowledge and understanding of the topic being applied.	The presenter/members show a moderate understanding of the unit/topic.	Shows inadequate understanding of a few sub-sections of the unit.	Presenter/members show no signs of understanding the content of the unit.		
	The member/presenter shows appropriate understanding of the task.	Able to provide solutions to the questions asked by the audience.		Wrong and inappropriate information provided by the presenter/members.		
Skills	Provided appropriate solutions to the questions asked.					
	The presenter/members show high level communication skills (used gestures/related the audience to stay focused/audience was engaged/ voice audible enough/eye contact at most times).	The presenter/members pay attention to the individuals in the audience/ use eye contact regularly/invoke the audience/speak at a fair volume/look some confidence while speaking/presenting/discussing.	Presenter/members used sporadic eye contact/the audience was not fully able to remain focused/ less involvement of audience/not audible enough/limited gestures used.	Minimal eye contact by the presenter/members focusing on a very small portion of the audience.		
Presentation	The presenter/members presented a concise summary of the unit.	Presenter/members presented a good summary of the unit.	Educational is presented information.	Inappropriate/unnecessary gestures (Body language).		
	All questions are adequately answered.	Most vital information is provided.	Many questions from the audience are not answered.	The presentation shows insufficient information.		
Preparation	Unit/topic adequately covered.	Little irrelevant information is presented.	Not all important points are given.	Significant points left out.		
	Relevant information is provided.		Much irrelevant information is presented.	Irrelevant points dominate the presentation.		
Teamwork	The presenter/members adequately know the unit content/information.	Dominated the discussion/light domination of one presenter.	The presenter /members spent much time trying to get information straight leaving the audience unattended to.	Presentation not well-balanced.		
	Participate actively.	If working in groups, members assisted each other.	Read the slides/hard copies of the presentation.	Too much seeking for assistance and clarity from the audience that asked questions/Complete lack of listening skills.		
Teamwork	Teamwork is evident (Where group work is used).	Adequately prepared.	Inadequately prepared.	Complete lack of preparation/theoretical.		
	Extremely well-prepared and planned for presentation.			Total dependency on hard copies or slides.		

B4



We can use Rubrics to assess using more complex forms of formative assessment such as presentations, debates or drama, and to collect evidence of learning.
Several different criteria can be assessed during the same activity.
Rubrics describe stages in the development of knowledge, understanding and skills. The best rubrics have no more than five descriptive levels.

DEVELOPING RUBRICS

When developing a rubric, we can ask ourselves 4 questions:

1. What are the specific learning objectives for this task?
2. What does excellent performance look like? How will excellent performance be different from other levels?
3. What does performance in other levels look like?
4. Is each description measurably different from the others? Are the different levels clear and understandable?

1. Develop criteria to describe the acceptable level.

2. Use Bloom's taxonomy to identify different criteria for excellent work.

3. Use Bloom's taxonomy to identify different criteria for unsatisfactory work.

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When developing a rubric, we can ask ourselves 4 questions:

1. What are the specific learning objectives for this task?
2. What does excellent performance look like? How will excellent performance be different from other levels?
3. What does performance in other levels look like?
4. Is each description measurably different from the others? Are the different levels clear and understandable?

WHAT SHOULD A RUBRIC DESCRIBE?

Different types of descriptions that are given for each level in a 4 level rubric.

Level 4: Standard of Excellence	Level 3 :Approaching Standard of Excellence	Level 2: Acceptable Standard	Level 1: Unacceptable Standard
<p>Descriptions show what excellent work looks like.</p> <p>Descriptions show how learners can show exemplary performance- higher than expectations for students at that grade level.</p>	<p>Descriptions show strong performance with some excellent points.</p>	<p>Descriptions show the minimum that learners are expected to demonstrate at that grade level.</p> <p>Performance is developing but there are some errors.</p>	<p>Descriptions show how learners do not yet meet acceptable standard. Examples show that there are serious errors, omissions or misconceptions.</p>

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This table shows the different types of descriptions that are given for each level in a 4 level rubric.

EXAMPLES OF RUBRICS:

		Excellent	Good	Satisfactory	Poor	Score
Relevance	Content					
	Organization					
	Teamwork					
	Persuasiveness					
	Support with Facts					

and areas assessed	Description	Substrate	Substrate	Substrate	Substrate	Comments
Content	Working in a team structure and collaborating with others.					
Organization	Organizing notes and related information in a logical and effective manner.					
Teamwork	Communicating and listening effectively and respectfully, and using verbal and non-verbal cues to enhance communication.					
Persuasiveness	Using evidence and logical reasoning to support claims and persuade an audience.					
Support with Facts	Using relevant and credible evidence to support claims and persuade an audience.					

Now we are going to look at different examples of Rubrics in order to think about how we can create our own.

Distribute three Rubric examples to each group (Appendix 5)

LEARNING FROM EXAMPLE RUBRICS

- ◆ What do you notice about the rubrics?
- ◆ How do you think you could use them to assess a presentation?
- ◆ Which challenges to expect when using rubrics?
- ◆ How could you overcome these challenges?

25Min

Work in groups to discuss the questions and share ideas as a whole group.

Look at the three example Rubrics. Work in groups to discuss the questions. You have 15 minutes. When you have finished your discussion, share ideas with the whole group for 20 minutes.

CAN WE DEVELOP OUR OWN RUBRICS?

	Level 1	Level 2	Level 3	Level 4
Knowledge				
Skill				
Attitude				

B9



45Min



Work together in subject group. Choose a unit to work on. Think about a presentation that learners could do for the topic. Develop an assessment rubric for your subject. Share ideas as a whole group.

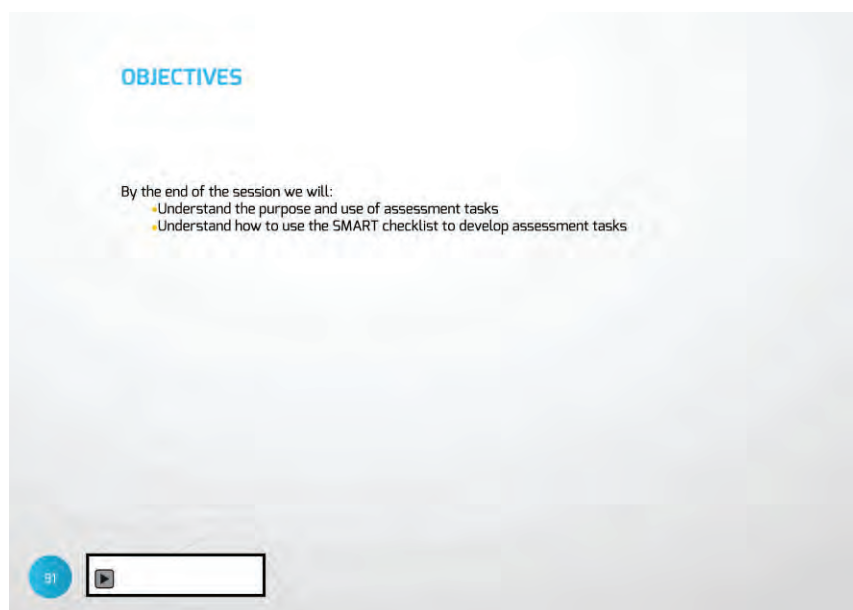
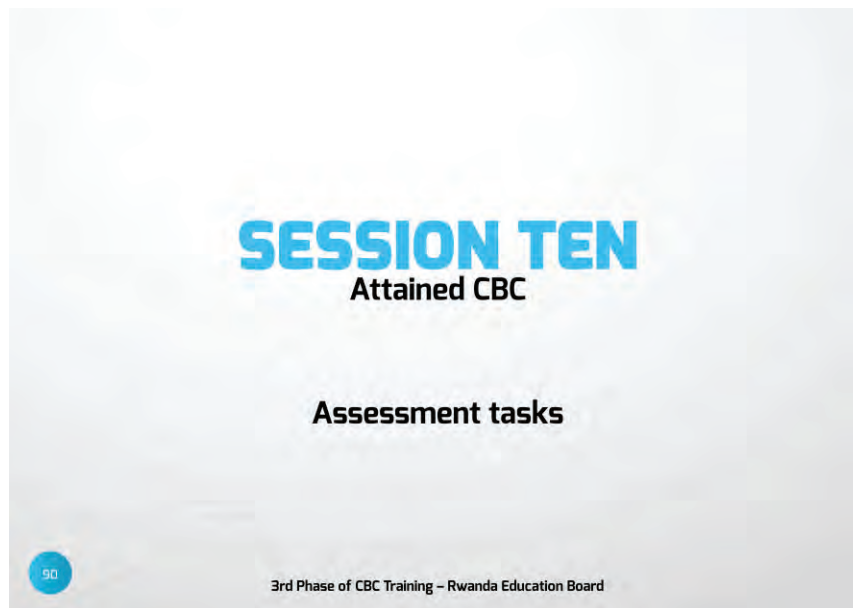
Work together in subject groups. Choose a unit to work on. Think about a presentation that learners could do for the topic.

Develop an assessment rubric for your subject. You have 30 minutes.

Share ideas together as a whole group for 15 minutes.

This is the end of the 9th session.

Session 10: Assessment Tasks



Welcome to the 10th session.

The objectives of this session are to understand the purpose and use of assessment tasks and to understand how to use the SMART checklist to develop assessment tasks.

WHAT ARE
ASSESSMENT
TASKS?

Assessment Task: S4 Geography

Topic Area: Physical Geography	Unit 4: Rocks and Minerals in Rwanda
---------------------------------------	---

ST5: Learners will be able to correctly classify different minerals and rock types in Rwanda and clearly describe their characteristics, distribution and economic importance.

Learning Objectives Assessed

Learners will be able to:

- Thoroughly analyze the classification and characteristics of rocks.
- Evaluate the value of rocks to the economic development of Rwanda.

Task: Collect samples of rocks from around the school and use them to complete the activities that follow.

Activities:

- In group, discuss the classification and characteristics of rocks the rocks collected.
- In pairs, describe the economic value of the rocks collected.
- Make a presentation that addressed this question: How can rocks be used to increase the economic development of your community.

Assessment Criteria: The learners are able to correctly classify different minerals and rocks in Rwanda and evaluate their economic importance.

Evidence for understanding the subject:

- Thoroughly analyze the classification and characteristics of rocks.
- Evaluate the value of rocks to the economic development of Rwanda.

Evidence for cooperation competence:

- Listen to others
- Ensure everyone contributes
- Work together to reach an agreement

As part of the CBC, teachers are expected to develop SMART assessment tasks. SMART Assessment tasks are used as a type of formative assessment to assess how learners are able to apply their knowledge and skills in a different context from how they were taught. They are based on the National Examination (Assessment) Standards and feature a generic competence. Tasks can be practical or written, but they must test what learners have learned. Teachers should develop assessment tasks at least three times per term or they can be developed at the end of each unit.

Supplementary Information

There are two kinds of tasks: one which only tests part of the standard, and the other one which tests the whole standard.

Tasks which only test part of the standard can be used as formative assessment by a teacher to know what he/she must teach next to enable learners to achieve the standard. These kinds of tasks should also include the specific learning objectives which are being assessed because they only refer to a smaller part of the standard.

The second kind of task tests the standard as a whole. This can be seen as a kind of summative assessment. These tasks include activities which test all of the learning that has taken place over the unit and checks whether the standard as a whole has been achieved.

SMART TASK CHECKLIST

K (Knowledge)	<ul style="list-style-type: none"> Does the assessment task clearly align with the standards and the unit taught? Is the task easy to understand for all readers in the same way? Does the task provide enough information for learners to complete it?
M (Measurable)	<ul style="list-style-type: none"> Does the task provide opportunities for learners to develop self-evaluation skills? Does the task include assessment criteria which shows evidence that learners have developed the required knowledge, skills, attitudes and values?
A (Achievable)	<ul style="list-style-type: none"> Is the level of the task appropriate for learners at this stage?
R (Relevant)	<ul style="list-style-type: none"> Does the task include a generic competence? Does the task test knowledge, skills, attitudes and values of learners? Does the task allow learners to apply what they have learned to solve a problem or apply what they know to a real-life situation? Is the task academically correct? Does the task use locally available materials? Does the evidence needed in the assessment criteria align with the task? Is it possible to prepare the task within manageable time?
T (Time-bound)	<ul style="list-style-type: none"> Does the task allow learners to complete within reasonable duration of time?

Attention!
The SMART checklist should start with an S (Specific). Trainers should correct it during facilitation.



Distribute SMART task checklist to each group (Appendix 6)

To help us develop assessment tasks, we should check that they are SMART; that is, Specific, Measurable, Achievable, Relevant and Time bound.

The questions in this chart help us consider whether or not a task we are developing is SMART. It is not necessary to include every point from this chart, but one from each section will make sure that the task is of good quality.

AN ASSESSMENT TASKS

An assessment task ✓	An assessment task is not: ✗
allows learners to apply their knowledge and skills	only for testing what learners have memorised
allows learners to use their competences	only a series of knowledge based questions
is usually based on a real-life situation or requires learners to solve a problem	only theoretical
uses pictures, teaching aids, presentation, research, role-play etc. when appropriate.	only writing based/ exercises from a text book
is used in ongoing teaching	a formal test
uses assessment criteria which show evidence of learning	designed to use assessment criteria which does not show evidence of learning


Sometimes teachers can design tasks that are a formal test, or that are only based on exercises from the text book, but this is not what a task should be. The table shows what an assessment task is, and what it is not.

EXAMPLE OF ASSESSMENT TASK

Assessment Task: S3 Geography

<p>Topic Area: Human and Economic Geography</p> <p>Unit 9: Urban Settlement in Africa</p> <p>ST9: Learners will be able to fully explore possibilities and consider consequences to accurately predict the impact of urban settlement on sustainable development in Africa</p> <p>Learning Objectives Assessed</p> <p>Learners will be able to:</p> <ul style="list-style-type: none"> • Locate the major urban centres in Africa. • Discuss the characteristics of urban centres in Africa. • Distinguish the functions of different urban centres in Africa. 	<p>Activities:</p> <ol style="list-style-type: none"> 1. Describe the nature of the settlement in this photograph. 2. Suggest where this photograph could have been taken in Africa. Support your answer with evidence from the photograph. 3. Answer the question: What challenges would you face, if you were staying in the area represented in the photograph. <p>Assessment Criteria: Learners are able to fully analyse the impact of urban settlement on development in Africa and other continents.</p> <p>Evidence for understanding the subject:</p> <ul style="list-style-type: none"> • Locate the major urban centres in Africa • Discuss the characteristics of urban centres in Africa • Distinguish the functions of different urban centres in Africa <p>Evidence for critical thinking competence:</p> <ul style="list-style-type: none"> • Compare ideas and information to reach full understanding • Evaluate evidence to draw conclusions
---	---

Task: Study the photograph below and complete the activities that follow.



95

▶

20Min

Discuss in groups and share as a whole group:
Which of the questions at the SMART task list have been covered?

This is an example of a good assessment task. Look at this assessment task and look at the SMART Task checklist.

Work in groups to discuss: Which of the questions have been covered? You have 10 minutes. Share your comments and ideas for another 10 minutes.

CREATE A SMART ASSESSMENT TASK

- Work in subject groups
- Use the SMART Task Checklist
- Create a task for a unit you will teach this term.

96

60Min

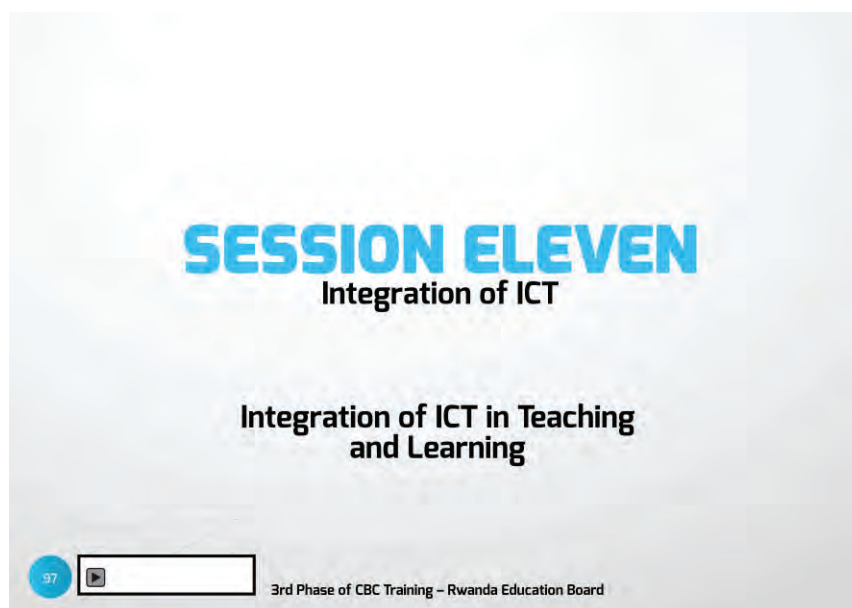
Work in subject groups and create a SMART assessment task for a unit you will teach this term, by using the SMART Task Checklist.

Now, let us work in subject groups and create a SMART assessment task for a unit you will teach this term, by using the SMART Task Checklist.

You have 60 minutes.

This is the end of the 10th session.

Session 11: Integration of ICT in Teaching and Learning

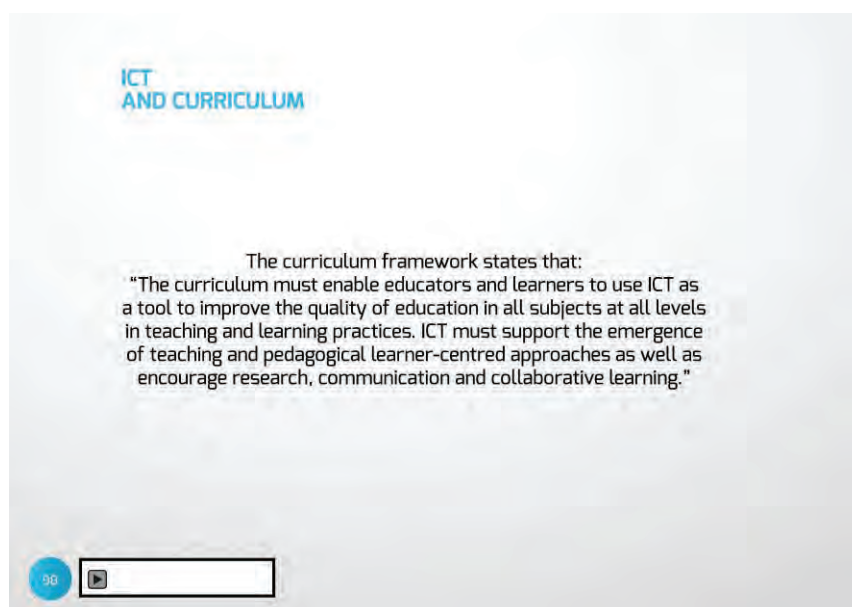


Welcome to 11th session of the CBC Training.

From this session, we will talk about ICT use in our schools.

We are aware that effective use of ICT at school can assist a lot in various ways, as we have already learnt about this topic during Phase 1 and Phase 2 of the CBC training.

Head teachers can be assisted by ICT to improve school management, such as precise and effective recording, keeping of school accounts, learners' academic records, smooth communication with SEOs, and so on.



It is stated in the curriculum framework that: *"The curriculum must enable educators and learners to use ICT as a tool to improve the quality of education in all subjects at all levels in teaching and learning practices. ICT must support the emergence of teaching and pedagogical learner-centred approaches as well as encourage research, communication and collaborative learning."*

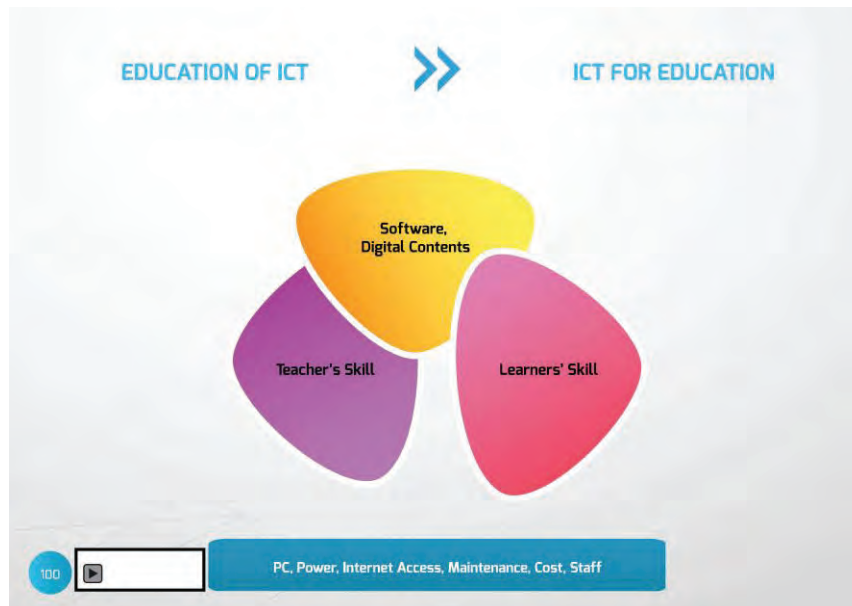


Teachers can be assisted by ICT to prepare lesson plan, showing useful teaching aids online. Even without internet some useful teaching materials can assist teachers to deliver quality lessons in the classroom.

Learners can also enjoy learning online, because digital teaching content can give them clear image of science concepts with animations and sounds. It can also enable learners to study whatever they want, at anytime, anywhere, so long as ICT is serving well for them. Can we rephrase? Do you mean internet? Do you mean devices?

ICT is just one of the useful teaching materials which can improve interaction among teacher and learners, and enhance delivery of quality CBC lessons. Of course, teachers can deliver lessons without textbooks, or without using ICT, but these effective teaching materials can assist teachers to deliver the curriculum effectively and assist learners to understand what is being explained by teacher.

Yes, those wonderful technologies are ready to benefit us, however, ICT infrastructure in our schools has still some challenges.



Let us ask ourselves.

Do we have enough computers for teachers? For students? For administration officers?

Do they know how to operate computers in the proper manner?

Are computers installed with relevant software? Are both hardware and software well maintained regularly?

Are computers connected to internet? Protected from viruses?

Is there anybody who can take care of all those technical issues in your school? Or do you outsource?

There are real issues and challenges when we start using ICT in our school.

According to a baseline survey the progress of ICT use in our schools varies from school to school. A questionnaire for secondary school students of some schools reveals that more than half of students use computer at school at least once a week.

So, we can say, learners' access to ICT has been well enhanced.

Teachers and learners have started using PCs, making documents like students list, browsing websites, viewing a digital dictionary, using SNS such as facebook, WhatsApp, and so on. In short, teachers and students have started learning how to operate PC.

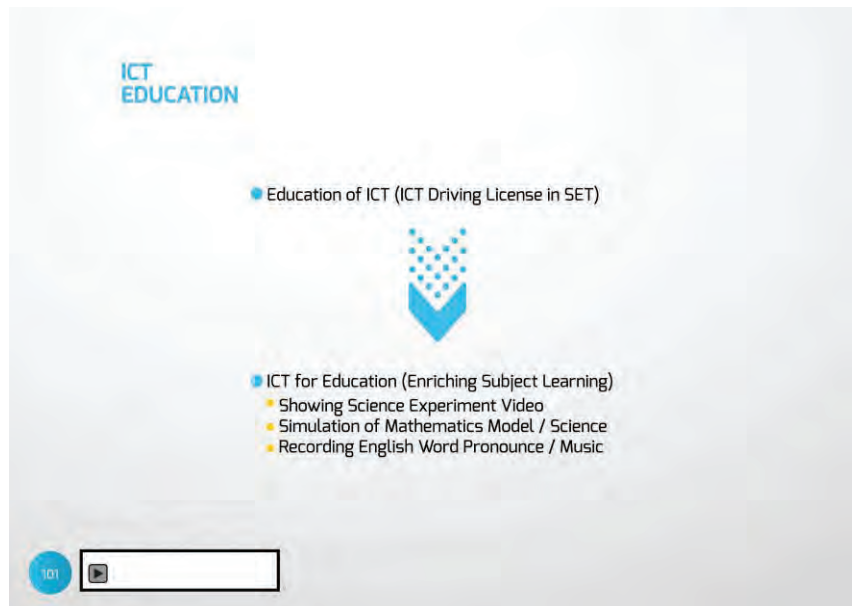
However, using ICT is not our goal. Our goal should be delivery of quality CBC, then our focus should be quality learning facilitated by teaching materials including ICT.

Of course, I am not saying "Education of ICT" is not useful, but we also need to start fully utilize ICT to enrich subject learning.

Let ICT assist teachers to teach mathematics, English, Kinyarwanda or any subjects for students.

Let ICT help learners to learn those subjects in a fun way.

Let ICT deliver better education, as we are learning how to use ICT.

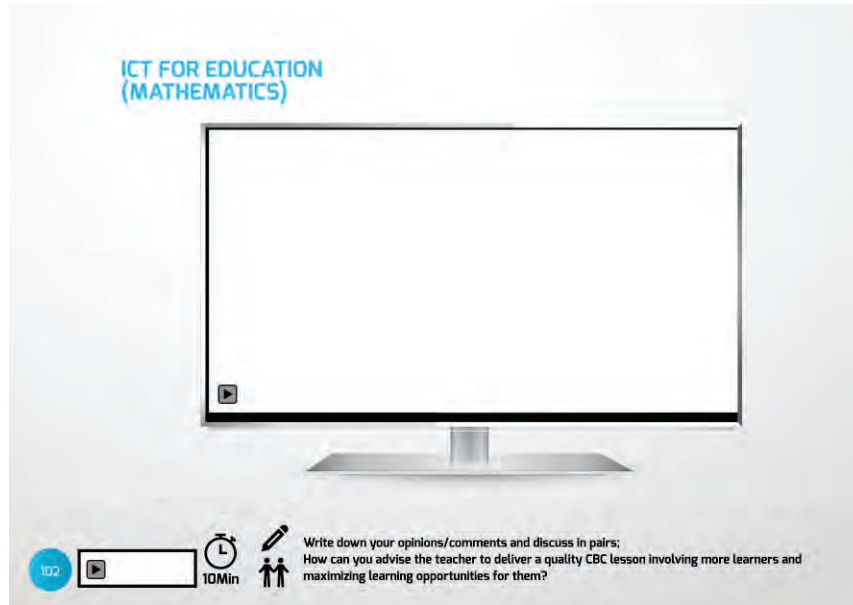


But as I mentioned earlier, ICT, as effective and innovative teaching material, has great potential to enrich subject education, such as English, Kinyarwanda, Mathematics, Science, Social Study, Music, Physical Education and others.

For example, we can show a science experiment digitally, available online. Of course the best practice is to give learners the opportunity to do experiments by themselves, but sometimes, due to lack of school facilities it may not be possible. Some types of science experiments may be dangerous but important. The Teacher explains that Hydrogen is very explosive, so we need to keep it away from flames. But such explanations, without showing actual experiments, are not convincing to learners. You can find a video clip online easily. Lab simulations which are interactive give opportunities to students to practice in virtual labs in exactly the same way as they should practice in real labs.

Again, ICT could assist us well, as an effective teaching aid for learning difficult concepts of mathematics, or science. These concepts are important but abstract, so learners may require effective assistance. ICT can allow teachers to teach with confidence, and learners to learn with joy.

ICT can assist us to improve English speaking and listening skills. We may record learners' pronunciation of English words and compare them with the same English words recorded by a native speaker, for example.



Participants copy an assessment sheet in their notebooks ([Appendix 1](#))

Now, let us watch a video clip and assess the lesson.

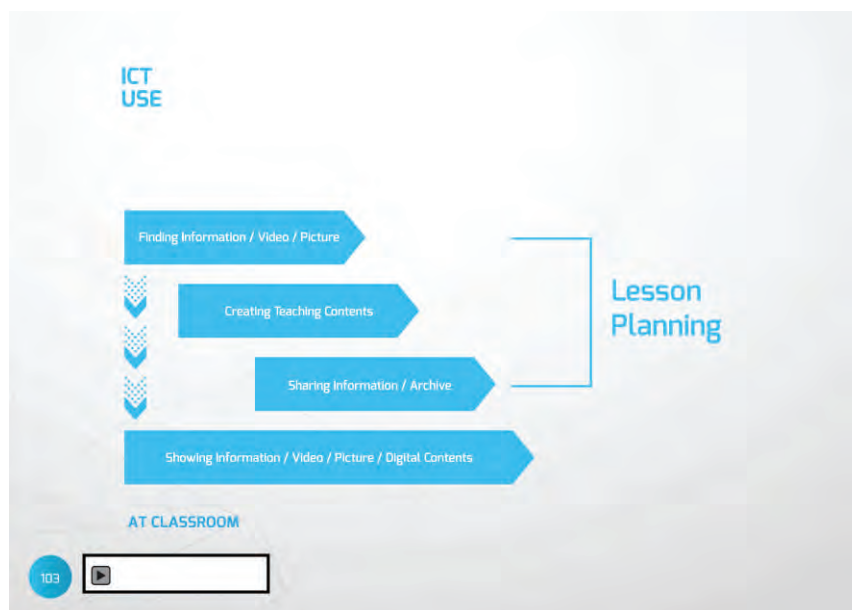


How was that? Did he perform well?

Then, please write down your assessment on the assessment sheet, with your observations/comments/ and reasons why you thought that.

I will give you 3 minutes. Just write down your own opinion without consulting others.

If we have some more time remaining, let us have a pair discussion – exchange your notebook with your colleague, and discuss how you can advise the teacher to deliver a quality CBC lesson involving more learners and maximizing learning opportunities for them.



Now, let us remember once again how a teacher can utilize ICT for better lesson delivery.

1. When you prepare/plan a lesson, you may find relevant teaching materials like videos or pictures to explain the topics effectively. If you can show this digital content in your classroom, learners may understand the topic much more easily, in particular when they learn science theories/concepts which are sometimes abstract and difficult to understand. This is the simplest way to use ICT for teaching in your classroom. Seeing is believing.

2. In addition, if you edit the video downloaded from a website but adapted to your lesson plan, or record a science experiment on your video recorder or smart phone, that will assist you to teach specific topics or concept.

3. Then, those digital contents could be safely kept in the PC of the school, and teachers can start sharing those digital teaching materials. That can save a lot of time for teachers preparing the same/similar digital teaching materials, because they don't need to prepare them from scratch. Additionally, this might assist young teachers to learn practical know-how of preparing teaching materials from experienced teachers.

If I summarize the above for us, ICT can assist teachers to prepare lesson plans, serve as teaching materials, and assist teachers to deliver CBC lesson in the classroom.

Of course, ICT infrastructure varies from school to school; some schools are well equipped but some are not.

So, in the next session, let us look at one of examples how we use ICT to enrich learning experiences for our children, depending on how schools are equipped with ICT.



Using ICT does not mean that a teacher will no longer use the blackboard or learners will no longer use textbooks. Online learning materials can be used as well as concrete materials.

It also doesn't mean that every lesson will be taught using ICT. A teacher when planning her/his lesson should identify when to use ICT, which ICT is required in which lesson and how ICT will be used either by the teacher or the learners. ICT is very critical during lesson planning because that is where a teacher identifies which teaching materials she/he will need.

Appropriate pedagogy to integrate the use of ICT in classroom should be developed alongside the provision of computers, internet connectivity and e-resources.

EDUCATIONAL IMPACT OF PROPER USE OF ICT

Research on Educational Software "Interactive Mathematics – Rwanda for P1/P2", July 2016



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Showing Information / Video / Picture / Digital Contents

Here, we are sharing some results of the research conducted by one private publisher in Japan assisted by JICA, on the educational impact of the proper use of PCs with educational software.

Within the framework of this research, a survey team conducted a BOOTCAMP, which is a special summer class for P1/P2 students in Kigali.

More than 50 P1-P2 learners attended this 5-day seminar. They learned mathematics intensively for 3 hours every day, to improve basic calculation skills, and mental arithmetic skills in particular.

We may say, the current situation in our schools is much further behind this picture. In this smart classroom, the teacher has a laptop PC, connected to a projector, each of the learners is given a laptop, and the number of learners in the classroom is small.

But in order to capture the educational impact of software and computers, we arranged such ideal situation which is so-called **SMART Classroom**.

EDUCATIONAL IMPACT USING ICT EXAMPLE

1 For Teachers



Teachers can enjoy teaching Mathematics in Friendly Manner, repeating Understanding / Exercise cycle.

2 For Students



Students are able to notice the rules of calculations, and are willing to apply them to solve further problems.

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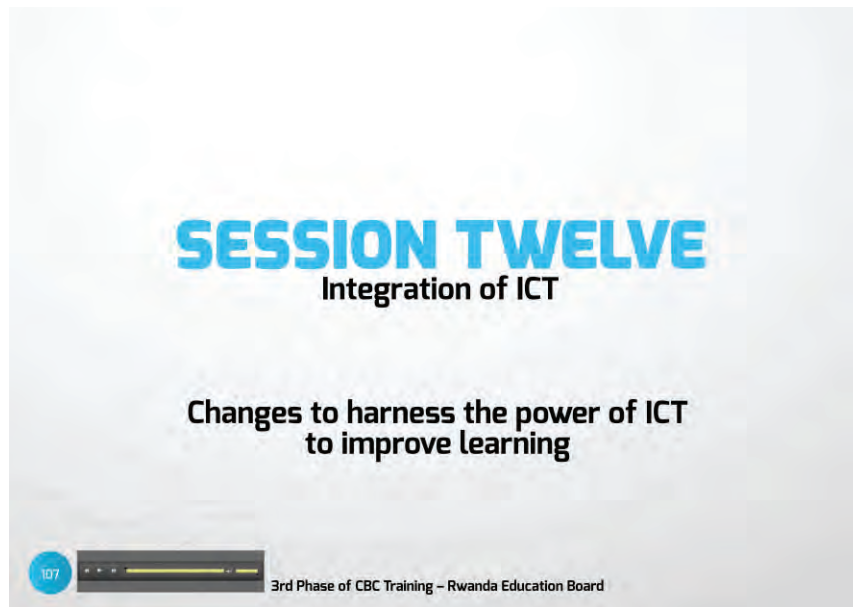
Using software may assist teachers and students.

- Teachers can enjoy teaching mathematics for example in a friendly manner.
- Students are also excited and concentrated throughout the lessons.

This is the end of session 11.

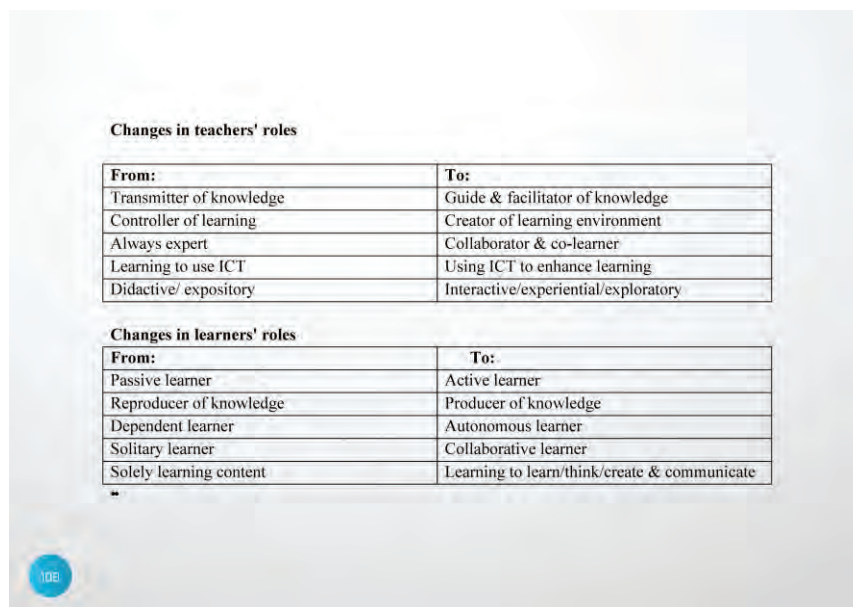
Session 12: Changes to harness the power of ICT to improve learning

This session needs one laptops per group or per participant for a group work.



Welcome to the 12th session.

In this session, let us see the different changes that should happen to harness the power of ICT to improve learning.



ICT can be used to support change and to support/extend existing teaching practices. ICT brings a lot of positive changes in the teaching and learning process; supporting the development of the 21st century skills and motivating learners to become active.


However, a shift in the role of a teacher using ICT to that of a facilitator does not remove the need for teachers to serve as leaders in the classroom; traditional teacher leadership skills and practices are still important.

Changes in curricula & delivery

From:	To:
Memorizing facts	Inquiry based
Artificial teaching exercises	Authentic learning
Rigid delivery (fixed time & space)	Open & flexible delivery
Single path progression	Multi path progression (Any time & anywhere)

Changes in media applications

From	To
Single sense stimulation	Multi sensory stimulation
Single media application	Multimedia application
Delivery of information	Exchange of information
Monologue communication	Dialogue & collaborative
Analogue resources	Digital resources

09 

However, teachers must focus on the subject content through exploiting the benefits of ICT and avoiding distraction in presentation.

Teachers must see how the technology selected fits into the objective of the lesson, methods of instructions, evaluation, feedback and follow-up initiatives.

Training teachers in ICT will increase the teaching/learning resource base and improve education delivery at all levels. A teacher who does not understand the purpose of technology integration, or how it could be applied, is less likely to be successful in a technology-based learning environment.

ICT PRACTICE

- Using a computer or any ICT device, make a lesson plan of your subject.
- Create lesson content which utilises ICT.
- Present it to the class (by teaching that lesson), using a computer, projector or other ICT tools.

10  80Min  Work in subject groups and make a lesson plan. Present it in plenary.

Now, create groups according to your teaching subjects, select a group representative, then using a computer, develop a lesson plan on your subject. Choose a level and a unit. Create the content of your lesson then get ready to present it for 10 minutes, focusing on the part of use of ICT.

You will receive feedback from other groups to improve your teaching using ICT for 5 minutes.

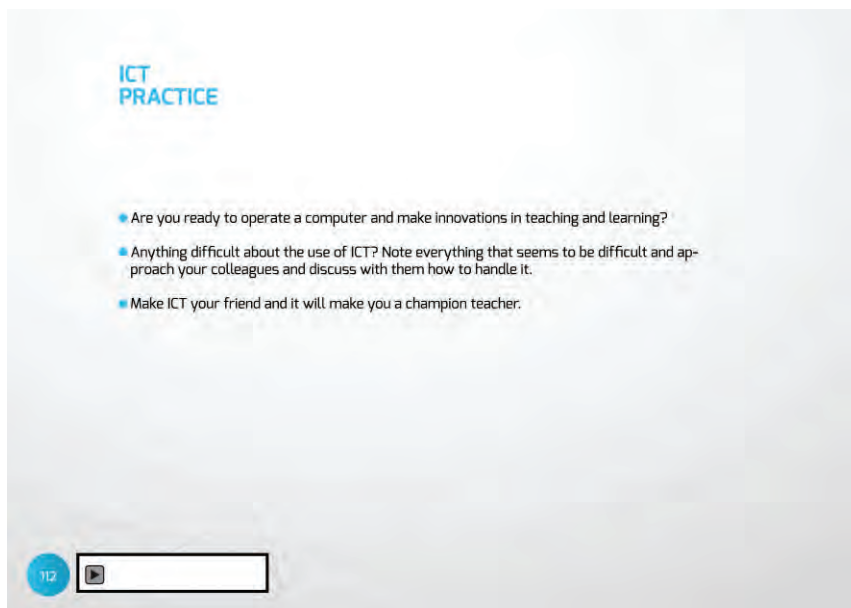


Share a soft copy of lesson plan format with each participant or group (Appendix 2). Participants should be requested to bring their laptops in advance.

Supplementary Information



Here, the participants are expected to develop a lesson plan for 30 minutes. Then, one group has 10 minutes to present and 5 minutes to get feedback. Up to three groups can do this, but you can adjust the time according to schedule.



All of us are not familiar with use of ICT in teaching and learning, but it is something crucial that you have to embrace because technology is a vital element in today's digital and internet society. It enables access to knowledge, opportunities and collaboration, surpassing most geographical limitations. As you got familiar with a smart phone, you have to be more curious about operating computers, and always try to be an innovative person by using ICT in your everyday activities (i.e. teaching and learning).



All teachers have to be computer literate to implement the CBC well. There is so much useful educational software that is available offline that can help a teacher to enrich a lesson, engaging all students enabling them to understand deeply. Classroom management is improved when a lesson is very relevant to the learners. If students are engaged or occupied, they will not disturb the lesson and classroom management will be maintained itself.

The teacher has to be familiar with the use of educational internet and different types of search engine like kiddle.com, google.com, bing.com, yahoo.com, ask.com, aol.com, etc.
Among those search engines you choose what is relevant for you, depending on the content you are searching.
This is the end of session 12.

Special Session: Overview on Teacher Management Information System

This session is about registration procedure on Teacher Management Information System (TMIS). Those who have not registered should refer to this session individually.

2. Guideline of Assessment Task and Question Development (Learning and Assessment Standards in Rwanda)

2.1. What Are National Standards and How Are They Used in Assessment?

National Learning and Assessment Standards define what every learner in the country is expected to know and be able to do. Rwanda has adopted National Learning and Assessment Standards as a basis for the assessment of basic and generic competences across the curriculum. They have been developed from the curriculum and they combine subject knowledge and skills with competences.

Standards are used for:

- Providing common criteria to assess learners' progress against.
- Clarifying learning expectations for pupils in schools. This gives learners and parents a more precise indicator of learning expectations.
- Aligning expectations with the demands of the rapidly changing economic, social and political world order to ensure that learners are prepared to participate in the contemporary world.
- Guiding and developing teaching. Clarifying what learners should know and be able to do helps to provide a clear focus for teaching practices.
- Fostering commitments to equity. Standards define the same expectations for learners independent of their level of skill, social origin, culture, race or gender.
- Identifying learners and schools in need of support.

Topic Area	Unit Title + number	No. of Periods	Subject Content	Key Unit Competence	Learning and Assessment Standard
ALGEBRA	Unit 1: Sets	30	<ul style="list-style-type: none"> • Sets • Venn diagrams • Relations 	To be able to use sets, Venn diagrams, and relations to represent situations and solve problems.	Learners will be able to: ST1: Correctly define, explain and use sets, Venn diagrams, and relations to represent situations and solve problems.
	Unit 2: Sets of Numbers	36	<ul style="list-style-type: none"> • Properties of sets of numbers • Subsets of numbers • Set and number relationship 	To be able to use operations to explore properties of sets of numbers and their relationships.	ST2: Correctly identify sets of numbers (natural, integer, rational, and real) and the relationship between them; accurately apply/determine the operation properties of sets of numbers.
	Unit 3: Linear Functions, Equations, and Inequalities	36	<ul style="list-style-type: none"> • Linear functions • Equations with one unknown • Inequalities with one unknown 	To be able to represent and interpret graphs of linear functions and apply them in real life situations; solve linear equations and inequalities; appreciate the importance of checking solutions; and represent the solution.	ST3: Accurately represent and interpret graphs of linear functions and apply them to real life situations; correctly solve linear equations and inequalities with one unknown; appreciate the importance of checking the solution, and representing the solution on a number line.
	Total number of periods for topic area	102	Notes:		
	Total number of weeks for topic area	17			

Figure 4 An Example of Assessment Standards (Mathematics)

Standards are for use in the classroom, examinations and in providing data for monitoring national performance. They offer teachers the chance to make a big difference to their learners, because the structured approach to assessment supports the new curriculum; the Learning and Assessment Standards provide the link between the curriculum and the different forms of assessment. They are used in teachers’ day-to-day assessments, in formative assessments during the teaching of topics and units, and in summative assessments by teachers at the end of a unit.

These Standards combine subject knowledge and skills with 21st century competences. The Learning and Assessment Standards are the foundation for

- teacher assessment in the classroom
- teacher and school assessment at the end of terms
- district led assessment at the end of years when there is no national examination
- national assessments and examinations at the end of each phase of schooling

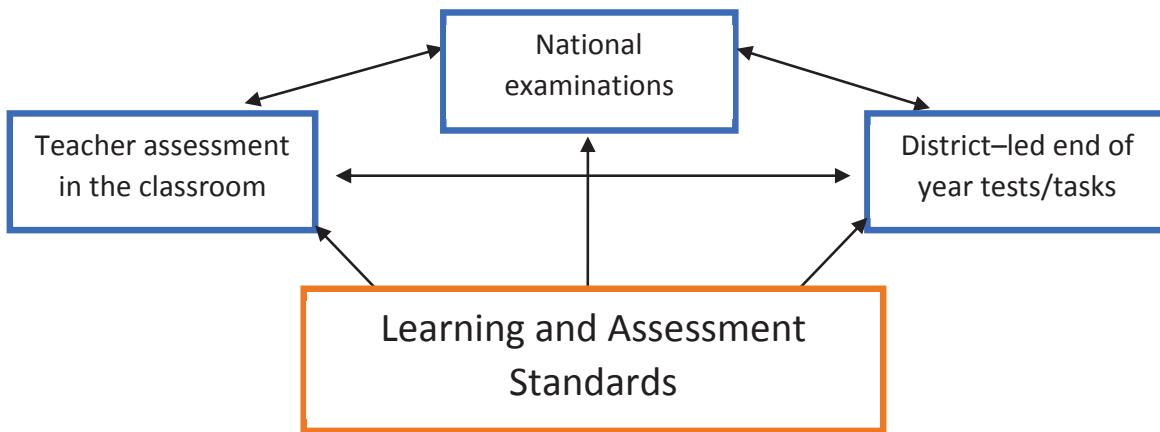


Figure 5 Learning and Assessment Standards

Instructional Objectives, Syllabus Objectives, Key Unit Competences, and Standards fit together as shown in the figure below.

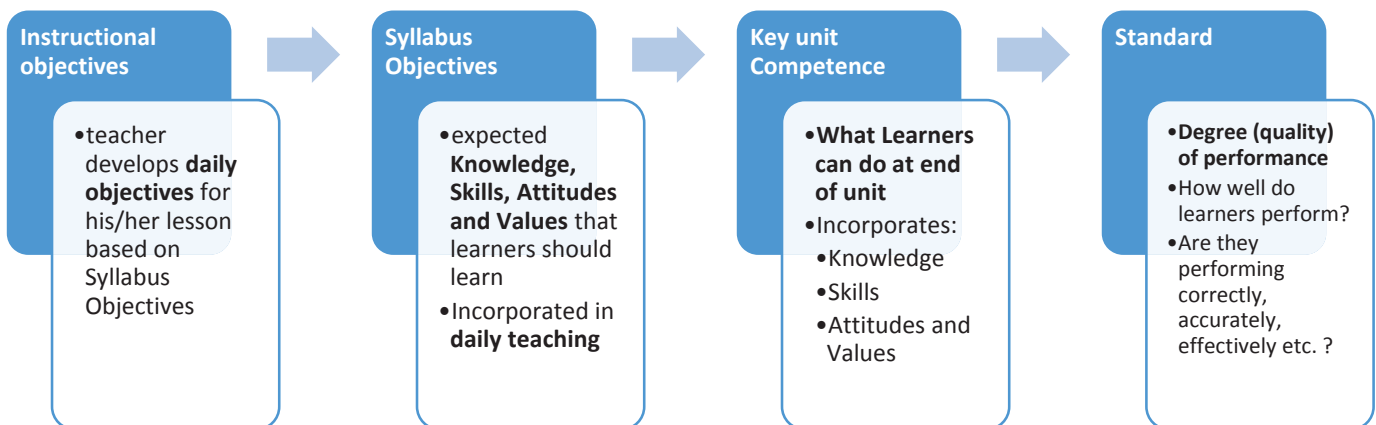


Figure 6 Relationship of Instructional Objectives, Syllabus Objectives, Key Unit Competences, and Standards

2.2. Designing assessment tasks

When a teacher assesses, he/she should focus on checking if learners are applying their knowledge and their ability to find out information from sources, rather than being told the answers and simply remembering them.

When teachers are teaching a sequence of lessons for a unit, they need to devise appropriate tasks that will show how much progress learners are making in relation to the standards.

Assessment tasks must give opportunities for learners to show:

- what they know
- how they apply their learning
- how they use their competences

Teachers will teach all the units in the curriculum but they may find it too much of a burden to attempt to formally assess and record against the Learning and Assessment Standards in every unit for every learner. In that case they should choose, if possible, to make 3 or 4 assessments of the Standards related to the Units for each term.

Planning and teaching to include the competences and standards

- 1 Look at all the units for the term and their Learning and Assessment Standards
- 2 Plan to assess 3 competences more formally during the term
- 3 Choose which competences to assess, if there are too many to include all of them
- 4 Identify the Units and competences to be assessed and plan the tasks which will give evidence of both the subject and the competence
- 5 In the second half of teaching a topic/unit, build in activities which will give evidence to be assessed against the Standard
- 6 Give the tasks and assess as many learners as possible either in the lesson or marking written work
- 7 Record the results
- 8 Review how well learners have performed the task, and decide if overall they will all succeed in achieving the Standard by the end of the unit
- 9 Give feedback to learners to help them achieve the Standard with help or independently
- 10 During the rest of the time teaching the unit, assess any learners for whom there is no assessment, watch for new evidence of progress and revise records accordingly
- 11 During this planning make sure that the amount of time for this assessment does not take away from teaching time. Remember that doing and recording these assessments can take a long time for a whole class, so plan to keep it simple

Figure 7 Relationship of Instructional Objectives, Syllabus Objectives, Key Unit Competences, and Standards

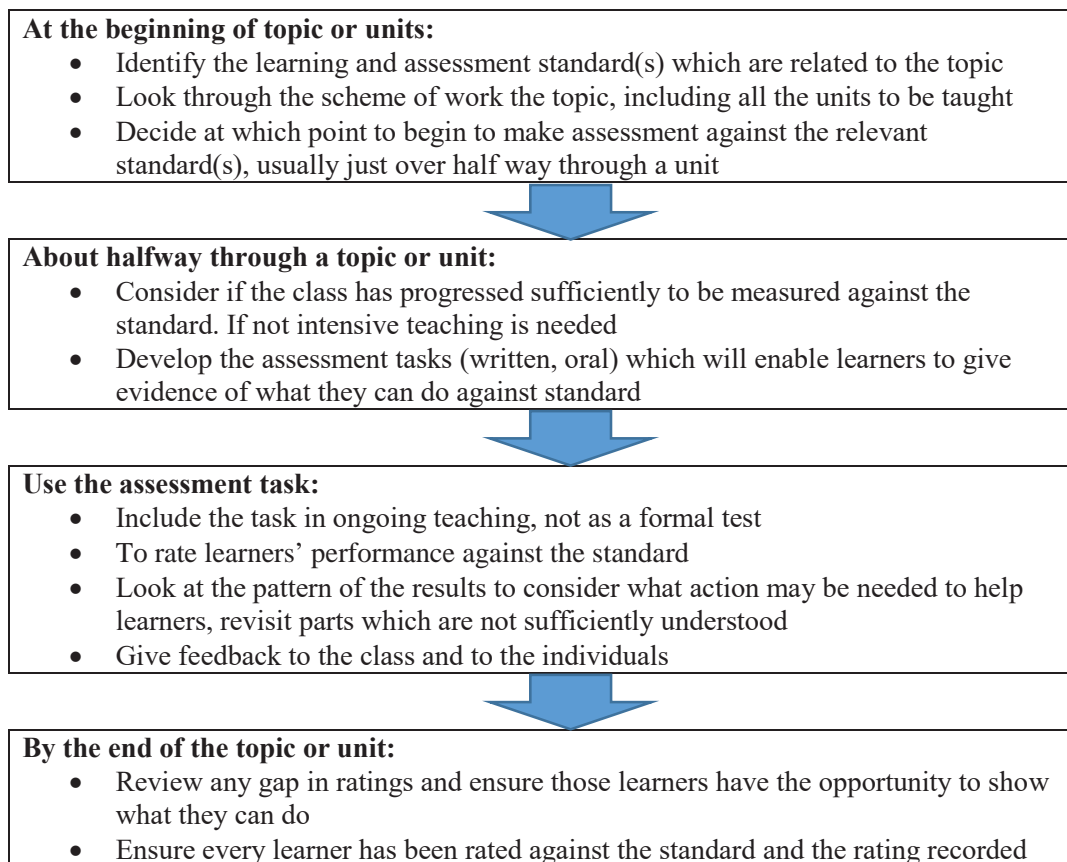


Figure 8 Using Learning and Assessment Standards in Topics and Units

To make designing tasks easier, REB has created mapping documents. These documents put the Key Unit Competence and Assessment Criteria (from the syllabus) and the Assessment Standards for the unit together in one place. Teachers can use this mapping and the subject syllabus to help them when creating assessment tasks. The assessment mapping does not replace the curriculum or subject syllabus but is intended to be a supporting document which teachers can use to help in their work when planning assessment tasks and questions.

Assessment Mapping: S1-S6 Mathematics

S1	S2	S3	S4	S5	S6
<p>Unit 1: Sets</p> <p>KUC: To be able to use sets, Venn diagrams, and relations to represent situations and solve problems.</p> <p>AC: Can use sets, Venn diagrams and relations to represent situations and solve problems.</p> <p>ST1: Learners will be able to correctly define, explain and use sets, Venn diagrams, and relations to represent situations and solve problems.</p>	<p>Unit 1: Indices and Surds</p> <p>KUC: To be able to determine and use properties of indices and surds.</p> <p>AC: Can use rules of indices and surds to simplify mathematical situation involving indices and surds.</p> <p>ST1: Learners will be able to accurately apply the rules of indices and surds to simplify mathematical expressions; find the square root using various calculation methods.</p>	<p>Unit 1: Problem Sets</p> <p>KUC: To be able to solve problem sets.</p> <p>AC: Can solve problem sets.</p> <p>ST1: Learners will be able to correctly solve problems involving sets and accurately apply mathematical rules.</p>	<p>Unit 1: Fundamentals of Trigonometry</p> <p>KUC: To be able to use trigonometric circle and identities to determine trigonometric ratios and apply them to solve related problems.</p> <p>AC: Apply trigonometric concepts to solve problems involving triangles and angles.</p> <p>ST1: Learners will be able to clearly define and accurately show graphically sine, cosine, and tangent; effectively use trigonometry, including the sine and cosine rules, to solve problems involving triangles, on bearing, air navigation, etc.</p>	<p>Unit 1: Trigonometric Functions and Equations</p> <p>KUC: To be able to solve trigonometric equations, inequalities and related problems using trigonometric functions and equations.</p> <p>AC: Learners are able to apply trigonometry functions, transformation formulas and equations to solve problems related to trigonometry.</p> <p>ST1: Learners will be able to effectively use trigonometric functions, transformation formulas and equations to solve problems involving trigonometric concepts.</p>	<p>Unit 1: Complex Numbers</p> <p>KUC: To be able to perform operations on complex numbers in different forms and use complex numbers to solve related problems in physics (voltage and current in alternating current), computer science (fractals), trigonometry (Euler's formula to transform trigonometric expressions).</p> <p>AC: Learners are able to perform operations on complex numbers in different forms and use complex numbers to solve related problems in physics (voltage and current in alternating current), computer science(fractals), trigonometry (Euler's formula to transform trigonometric expressions).</p> <p>ST1: Learners will be able to accurately apply the</p>

Figure 9 An Example of Mapping

Teachers should follow the process below in order to design assessment tasks:

1. Use the unit and the Standard to identify the main subject knowledge and skills.
2. Decide to assess the whole standard, or just part of a standard.
3. Identify which aspects of the generic competence can be included, such as creativity, problem solving, or critical thinking. The competences of cooperation or communication or some aspects of the other competences may be better assessed in a practical task than by a written task.
4. It is possible to set tasks for learners to work on individually or for groups of learners to do together. The teacher can observe the groups, as well as assessing the final product of their work.
5. Construct questions/tasks related to the knowledge and skills and the competence being assessed.
6. Identify criteria for judging the learners' work. Include this in the design of the task.

A task should have several activities to assess the standard and to see how learners can apply their learning.

There are two kinds of task; assessment tasks used in a single lesson, and tasks used at the end of a unit (**End of Unit Assessment Tasks**).

◆ **Tasks used in single lessons**

Tasks used in lessons are designed to be used as part of the teaching/learning process. They only cover **part** of the standard for the unit. The teacher may design several other tasks and activities to cover the other parts of the standard. Therefore, because assessment tasks used in a single lesson only cover a part of the standard, it is necessary to include instructional objectives to show which part of the standard is being assessed.

For example, let us look at how the objectives will be included:
The task below only assesses part of the standard: *Learners will be able to clearly describe evidence of continental drift*. In order to clarify which parts of the standard are focused on this task, the instructional objectives have been included.

Topic Area: Physical Geography	Unit 3: The Origin and Distribution of Continents
ST5: Learners will be able to clearly describe evidence of continental drift and its effects on the evolution of physical features.	
Learning Objectives Assessed Learners will be able to:	
<ul style="list-style-type: none"> • Define the term continental drift. • Identify evidence of continental drift. 	

(NB. only part of the task is shown here)

◆ **End of Unit Assessment Tasks**

End of Unit Assessment Tasks are designed to measure whether learners have reached the expected standard by the **end** of the unit. In order to reach this standard, learners must have developed the Key Unit Competence. End of Unit Assessment Tasks are therefore more complex. They are designed to test various skills, knowledge attitudes and values from the start of a unit up to the end of the unit. These tasks must include activities that measure learners’ ability to use their new knowledge and skills and attitudes to solve a problem. The learners must integrate everything that they have learned within the unit to solve the problem. These tasks do not require instructional objectives because they are assessing the standard as a whole.

Note: These tasks had previously been called integration situations but they have now been modified to become End of Unit Assessment Tasks.

For example, this task does not include instructional objectives:

Topic Area: Physical Geography	Unit 3: The Origin and Distribution of Continents
ST5: Learners will be able to clearly describe evidence of continental drift and its effects on the evolution of physical features.	

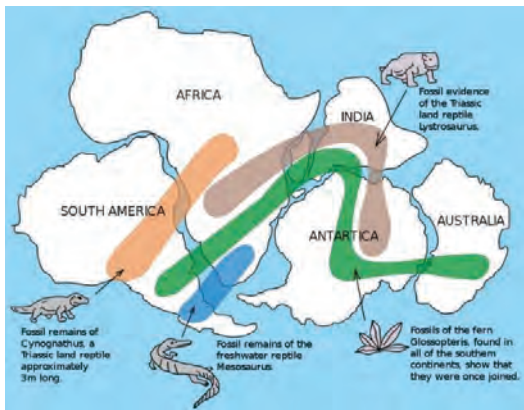
(NB. only part of the task is shown here)

◆ Example of a task to be used in a single lesson:

Assessment Task: S6 Geography

Topic Area: Physical Geography	Unit 3: The Origin and Distribution of Continents
ST5: Learners will be able to clearly describe evidence of continental drift and its effects on the evolution of physical features.	
Learning Objectives Assessed Learners will be able to: <ul style="list-style-type: none"> • Define the term continental drift. • Identify evidence of continental drift. • Identify the effects of continental drift on the evolution of physical features. 	

Task: Study the photographs and use the textbooks provided to complete the activities that follow.



A



B

Activities:

1. Explain the meaning of continental drift.
2. Use the photographs A and B to describe the distribution of continents.
3. Describe evidence of continental drift.
4. Examine the effects of continental drift on the evolution of physical features.

Assessment criteria: Learners are able to correctly explain the origin and distribution of the continent

Evidence for understanding the subject:

- Define the term continental drift.
- Identify evidence of continental drift.
- Identify the effects of continental drift on the evolution of physical features.

Evidence for communication competence:

- Convey ideas confidently through writing
- Organize and structure sentences correctly to express meaning
- Use appropriate vocabulary

◆ **Example of End of Unit Task:**

End of Unit Assessment Task: S3 Geography

Topic Area: Physical Geography	Unit 7: Environmental Conservation
ST11: To be able to evaluate the methods of environmental conservation	
Learning Objectives Assessed	
Learners will be able to:	
<ul style="list-style-type: none">• Categorise environmental resources.• Explain effects of environmental degradation and suggest conservation measures.	

Task: Read the Case Study below and complete the activities that follow.

Case Study:

The local leaders in Gakenke District in Northern Province are very concerned with the increasing occurrence of landslides, deep gullies that are now common in the area, flooding in valleys and destruction of crops and property. The land officers in the district are worried about the nature of land that is made up of unconsolidated (loose) soils. The district has had a number of intervention measures that include: afforestation, reforestation, and promoting better methods of farming. However, the problem is still worrying. The relief or nature of the landscape is described by steep slopes associated with scars left behind by numerous landslides during the rainy season. While other parts of the district have gentle sloping areas that are appreciated for having stable soil conditions. Local leaders have embarked on an environmental conservation campaign at the grass root level or in all villages. This has called for the training of the village representatives on the importance of environmental conservation.

The community leaders of your village (Umudugudu) have nominated or selected you to be part of the trainers at the district level.

1. Suppose the district land officer asks you to address the trainees:
 - a) Prepare how practically you would address the problem of landslides, severe soil erosion and flooding in your village.
 - b) Address one of the participants who asks the following question: “I planted trees but recently the whole land was affected by land slide.”
2. In spite of the hard work and serious land conservation measures the district has used, still landslides are common as per the case study above.
 - a) Referring to the short story entitled “Save our mother Earth” how would you advise the land office of Gakenke District on how practically it is possible to solve the environmental concerns in the district.
 - b) Show how you would creatively use local available resources to assist local farmers to conserve natural resources.

Evidence for understanding the subject:

- Categorise environmental resources.
- Explain effects of environmental degradation and suggest conservation measures.

Evidence for communication competence:

- Adapt to others' ideas
- Adapt to different situations
- Ensure everyone contributes

To complete the above stated task, it requires integration of knowledge, skills, attitudes and values taught throughout the previous 3 lessons as well as drawing on previously gained competences from S2 units; 8, 10, 15, and 16 prior to S3.

2.3. Assessing Generic Competences

The checklists below suggest what teachers can look for when assessing generic competences. They also contain suggestions of activities which help to develop those competences. A teacher can use this information to help design assessment tasks relating to the Assessment Standards to check if a competence has been developed.

Cooperation Checklist	
<p>This Competence is primarily concerned with group work and collaboration in groups of different sizes. It focuses on the talk and actions which enable group work to succeed and show more learning than could be achieved individually.</p> <p>Bigger groups need a structure to work well – roles such as chair/leader, secretary, practical worker, can be designated by the teacher and, increasingly, decided by learners.</p>	
<p>Types of Activities</p> <ul style="list-style-type: none"> • Use pairs, small and large groups • Require joint action, sharing ideas and working towards a common goal. • Avoid tasks where one person can dominate, or where a very able learner can fulfil the task immediately. • Cannot be included in a written test. 	<p>Types of contributions which teachers can see and hear</p> <ul style="list-style-type: none"> • Suggesting ideas • Listening to others • Ensuring everyone contributes • Building on others' contributions • Being positive about others' contributions • Helping to reach agreement • Adapting to others' ideas • Adapting to different situations

Communication (oral) Checklist	
<p>This competence is primarily concerned with speaking and listening, particularly in more formal situations such as speaking to all the class, debating, reporting a group discussion</p>	
<p>Types of Activities</p> <p>Informal:</p> <ul style="list-style-type: none"> • Use pairs, small and large groups • Require discussion between learners, exchanging ideas and negotiating ways forward <p>Formal:</p> <ul style="list-style-type: none"> • Debates, presentations, interviews. Tasks should require learners to speak for longer and present to whole classes and bigger groups • Include different audiences (classes, teachers, parents) to ensure learners to adjust their language and style to ensure good communication and show they can engage different audiences for different purposes • Cannot be included in a written test 	<p>Features of speaking and listening which teachers can see and hear</p> <ul style="list-style-type: none"> • Speaking audibly and clearly • Looking at listeners • Making sense • Expressing good ideas • Using good English • Well chosen vocabulary • Engaging listeners • Adjusting in the light of others' contributions • Varying expression, tone, volume • Using gesture, body language, facial expressions well • Responding thoughtfully to questions • Justifying ideas

Creativity and innovation Checklist	
In showing creativity learners think for themselves rather than simply seeking the right answer from the teacher. Learners adapt the ways they solve problems to reach the best outcomes.	
Types of Activities <ul style="list-style-type: none"> • Allow for a range of correct answers where possible • Different ways to reach a product, outcome, solution or design. • Encourage imagination and initiative 	Types of contributions which teachers can see or hear <ul style="list-style-type: none"> • Suggesting imaginative ideas for consideration • Making connections between different information and ideas • Showing initiative • Expressing emotions and feelings in words, movement, visually, with artistic intention • Building on others' ideas • Making something new • Thinking of different solutions

Research and Problem Solving Checklist	
<p>Research: Independent learners find out things for themselves. When investigating and looking for evidence for questions and hypotheses, learners research thoroughly, finding relevant information independently and evaluating it carefully to reach conclusion.</p> <p>Problem solving: This is an essential skill for life, where learners focus on solutions, planning ways forward, responding flexibly to changes and critically evaluating both methods and solutions.</p>	
Types of Activities <ul style="list-style-type: none"> • Present questions for investigation, with access to practical and written resources • To do research and solve a problem, • Tasks may include experiments and practical activities 	Types of contributions which teachers can see or hear Research: <ul style="list-style-type: none"> • Using the most appropriate methods to search for information – key words, skimming, scanning, • Choosing sources carefully – books, websites – and evaluating if they are trustworthy • Considering what is relevant and what is irrelevant • Using own words rather than copying • Putting together information from different sources • Trying to form an overview • Reaching conclusions based on evidence Problem solving: <ul style="list-style-type: none"> • Identifying the key aspects of a problem • Considering different ways to proceed and

	<p>the different likely outcomes, by using hypothesis, prediction and testing out ideas</p> <ul style="list-style-type: none"> • Following a process carefully, reviewing as it proceeds • Working out practical solutions • Evaluating the outcome in terms of a successful solution • Working with others, building on their ideas to reach a conclusion
--	--

Critical thinking Checklist	
<p>Critical thinking varies with different subjects. In language and literature, and often in social sciences, there is evaluation of the effectiveness of what is written or said. In sciences and mathematics there is evaluation of conclusions and scientific processes of hypothesis, experimentation and results.</p>	
<p>Types of Activities</p> <ul style="list-style-type: none"> • Encourage evaluation of ideas and solutions • Require explanations of why something is/is not useful, valid, believable or complete. • Must also allow for disagreement and encourage learners to give reasons for different views. 	<p>Types of contributions which teachers can see or hear</p> <ul style="list-style-type: none"> • Reflecting on others' ideas and opinions • Evaluating whether things are true • Evaluating how well things are expressed and how convincing they are • Evaluating results and evidence and drawing conclusions • Considering how far an idea is workable • Comparing ideas and information to reach a full understanding • Estimating likely results and checks accuracy of calculations • Suggesting where things are incomplete or wrong, with reasons • Evaluating conclusions and their usefulness

The competences below are not Generic Competences but are necessary to develop Key Unit Competences:

Literacy (reading and writing) Checklist	
<p>Reading: Reading is the skill of making meaning from written text by decoding letters and words, and understanding literal and implied meaning in sentences and whole texts.</p>	<p>Writing: Writing involves a complex set of skills which includes fine motor skills, being able to form letters and words and being able to express ideas and information in sentences and whole texts. This includes accuracy in grammar, punctuation and spelling. The aim of these skills is to communicate effectively to readers.</p>
Types of contributions which teachers can see or hear	
<p>Reading</p> <ul style="list-style-type: none"> • Connecting sounds and letters to make meaning • Reading fluently and accurately • Identifying the main points in texts • Locate information in texts, using different techniques • Understanding literal and implicit meanings 	<p>Writing</p> <ul style="list-style-type: none"> • Communicate clearly and imaginatively with a range of readers • Writing simple and complex sentences with accurate grammar and punctuation • Organizing and structuring writing to make meaning clear • Spelling accurately • Writing with neat, legible and joined handwriting
Corresponding activities from the syllabus	
<p>read texts suited to their levels of literacy</p>	<p>writing tasks should give learners time to do this, including drafting, and to write in full sentences where appropriate.</p>

Numeracy Checklist	
<p>Numeracy is the foundation of mathematics and of the handling of data, solving problems and presenting information accurately across the curriculum. More complex mathematical operations at secondary level are included in mathematics and science subjects</p>	
<p>Types of Activities:</p> <ul style="list-style-type: none"> • The use of number operations and of different ways to present data should be integral to many subjects. • Learners encouraged to use their numeracy independently. 	<p>Types of contributions which teachers can see or hear</p> <ul style="list-style-type: none"> • Using the 4 mathematical operations accurately • Solving problems • Making calculations, measurements and estimates correctly • Representing data in different ways • Understanding and interpreting data

ICT/Digital Checklist

The use of various digital devices and computers, operating programmes, file organization, and being aware of the dangers and significance of technology in life and work. This competence relates to a variety of devices, eg mobiles phones, laptops, where available.

Types of Activities:

- Use of ICT for recording, researching, reporting and presenting information and data
- Use ICT and digital resources, including mobile phones in studies

Types of contributions which teachers can see or hear

- Using digital devices and media to communicate
- Selecting and using the most efficient ways to find information on the internet
- Using digital communication positively and safely
- Saving and loading files
- Using a word processing program or spreadsheet

Appendices

Trainers are recommended to either print out materials in the appendices for participants or share them in soft form.

Appendix 1. Assessment Sheet (Session 0)

Assessment Sheet

Date:

Name:

Assessment	Good	Fair	Poor
(1) Did the teacher communicate lesson objectives?			
(2) Did the teacher introduce new concepts and terms?			
(3) Did the teacher structure the lesson well?			
(4) Did the teacher maximize learners' understanding (effective use of blackboard, notebook)?			
(5) Did the teacher maximize learners' understanding (effective use of textbooks and supplementary teaching materials)?			
(6) Did the teacher integrate generic competencies and cross cutting issues?			
(7) Did the teacher maximize learners' understanding (group work/pair work) ?			
(8) Did the teacher maximize learners' understanding (atmosphere)			
(9) Did the teacher maximize learners' opportunity?			
(10) Did the teacher assess/evaluate learning?			

Comment:

Appendix 2. Lesson Plan Format (Session 4)

LESSON PLAN

School Name: Teacher's name:

Term	Date	Subject	Class	Unit N ^o	Lesson N ^o	Duration	Class size
.....
Type of Special Educational Needs to be catered for in this lesson and number of learners in each category							
Unit title							
Key Unit Competence							
Title of the lesson							
Instructional Objective							
Plan for this Class (location: in / outside)							
Learning Materials (for all learners)							
References							

Timing for each step	Description of teaching and learning activity		Generic competences and Cross cutting issues to be addressed + a short explanation
	Teacher activities	Learner activities	
Introduction ...min			
Development of the lesson ...min			
Conclusion ...min			
Teacher self-evaluation			

Appendix 3. Lesson Plan Sample (Session 4)

LESSON PLAN

School Name: Teacher's name:

Term	Date	Subject	Class	Unit N ^o	Lesson N ^o	Duration	Class size
II	26 /6/ 2017...	SET....	P4....	11....	...6 .	40min...	...
Type of Special Educational Needs to be catered for in this lesson and number of learners in each category							
Unit title	Plants						
Key Unit Competence	To be able to demonstrate stages of germination and establish the relationship between parts of plants and their function						
Title of the lesson	Parts of the plant ♣ Roots ♣ Stem ♣ Leaf ♣ Flower . ♣ Fruit						
Instructional Objective	At the end of this lesson, students should be able to -Label different parts of the plant -Understand proper feeding of rabbit -Explain how to conserve or protect animals and plants as well as their socio-economic role						
Plan for this Class (location: in / outside)	Classroom						
Learning Materials (for all learners)	Charts, CARDS...						
References							

Timing for each step	Description of teaching and learning activity		Generic competences and Cross cutting issues to be addressed + a short explanation
	Teaching parts and function of plant in connection with its role feeding rabbit		
	Teacher activities	Learner activities	
Introduction ...5min	Who can remind me class rules? Motivation by posting smile and bad faces charts Who can tell me what you eat at home? Some food are plants and others are animals, who can tell me plants from what you are coming to tell?	Respect others, keep silent, ... Beans, cabbages, rice, meat, porridge, bread, carrots, ... Beans, bread, rice, cabbages, carrots	
Development of the lesson ...30min	Show and post a chart of plant and ask to draw it and label parts Take labels' cards in hands Who can come, take a card and put on respective part on plant? Then, what is importance of plants? Discuss as you sit One said plants give us umuyaga, what is it in English?	Individual work on drawing and labeling a plant posted on blackboard One failed to put "root" in correct place others put: fruit, flower, stem, leaves correctly umuyaga, eat, oxygen, umuti (medicine), construction wind!	Environmental

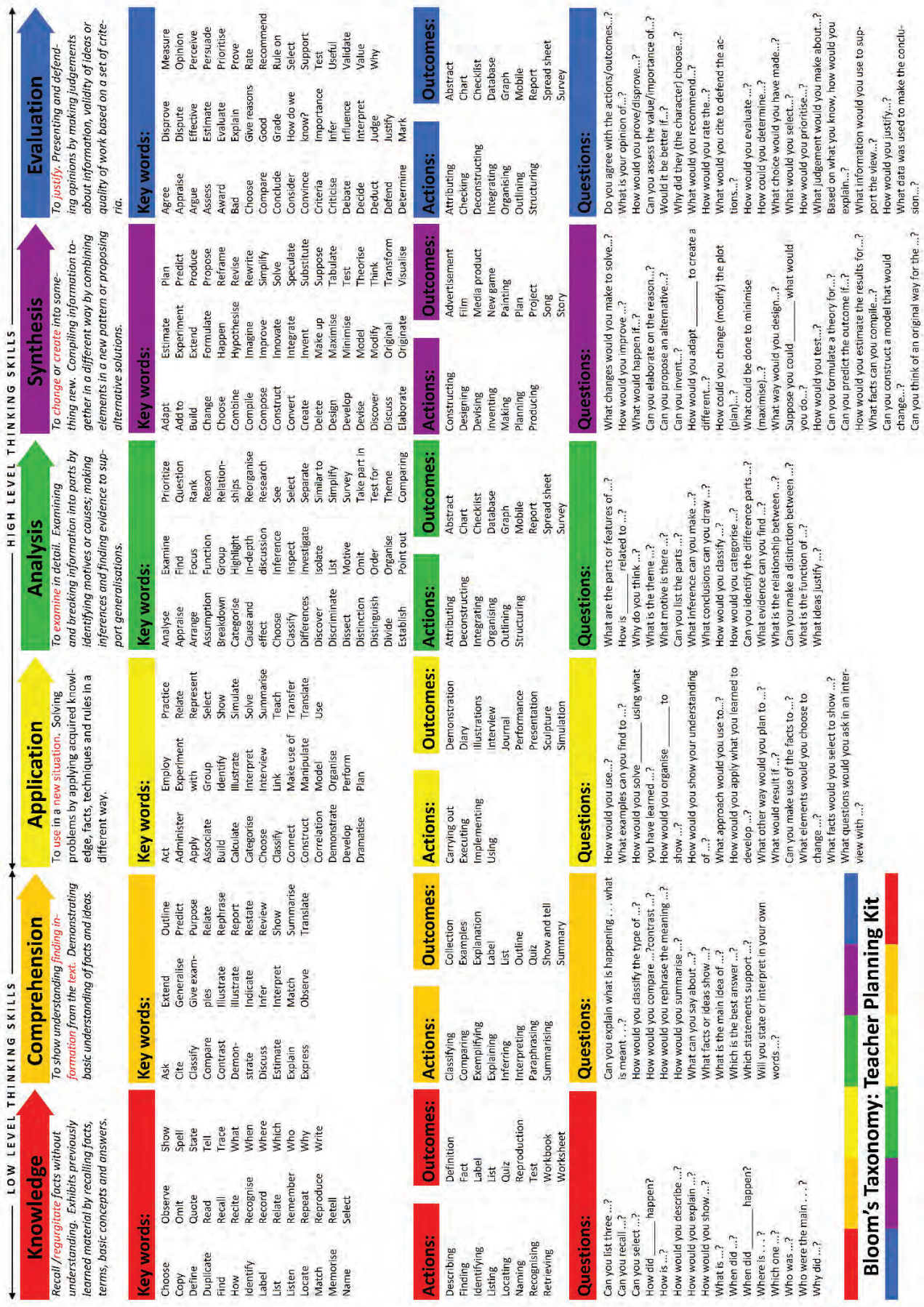
Appendix 3. Lesson Plan Sample (Session 4)

	<p>You said they can give food, who can give me example of animals that eat plants?</p> <p>Okay, let us take an example of rabbit. What is the food of rabbit?</p> <p>Does rabbit eat rice??</p> <p>There is another food of rabbit “pellets”</p> <p>It is food produced from factory.</p> <p>Posts a rabbit’s chart (eating grasses and maize growing) on blackboard. Do you see there?</p> <p>Looking at that chart, discuss how to protect plants and animals.</p> <p>Let other things: “not kill animals”. If you kill them where can we get fertilizers?</p> <p>Animals and plants are complement each other, we can get meat from them but in planned manner.</p>	<p>Cow, goat, sheep, pork (pig), hen, rabbit, ...</p> <p>Carrots, cabbages, beans, rice, grass, ...</p> <p>No!</p> <p>What is pellets?</p> <p>Yes, I see rabbit, maize, grass, rabbit feces, ...</p> <p>We can keep animals in farms, give animals good food</p> <p>How can we get meat?</p> <p>We can kill at least one!</p>	
<p>Conclusion</p> <p>...5 min</p>	<p>Teacher sums up.</p> <p>Homework: you will ask your parents how to protect environment.</p>	<p>Write homework</p>	<p>Financial</p>
<p>Teacher self-evaluation</p>			

Problem focus: LOADED CURRICLUM

CONDENSING CONTENTS (different topics) IN 40 MINUTES PERIOD

Appendix 4. Bloom's Taxonomy (Session 7)



Bloom's Taxonomy: Teacher Planning Kit

Appendix 5. Rubric Example 1 from Phase II CBC Training (Session 9)

Marking Rubric

Marking Rubric for Presentations (Single learner/Group)					
	4	3	2	1	Marks
Visual appeal	There are no mistakes in the concepts used, the communication skills are integrated in the presentation. The visuals capture the attention of the audience.	There are a few errors in description of some concepts used. The information is not presented in a logical order while presenting. Visuals are good.	There are various errors observed visual in visuals which means that concepts are not well expressed. Information is not well sequenced. The audience is not clearly involved.	There are several of errors in description of concepts and how they are presented. Writing/ illustration is poor/low quality with small fonts used. The data presented not attractive. Failure to present accurately what is prepared/No visual appeal at all.	
Comprehension	Shows extensive knowledge and understanding of the topic being applied. The members/presenter shows appropriate understanding of the task. Provided appropriate solutions to the questions asked.	The presenter/members show a moderate understanding of the Unit/Topic. Able to provide solutions to the questions asked by the audience.	Shows inadequate understanding of a few sub-sections of the Unit.	The presenter/members show no signs of understanding the content of the unit. Wrong and inappropriate information provided by the presenter/members.	
Presentation skills	The presenter/members show high level communication skills/Used gestures/enabled the audience to stay focused/audience was engaged/voice audible enough/eye contact at most times.	The presenter/members pay attention to the individuals in the audience/ use eye contact regularly/involve the audience/speak at a fair volume/lack some confidence while speaking/presenting/discussing.	The presenter/members used sporadic eye contact/the audience was not fully able to remain focused/ less involvement of audience/not audible enough/limited gestures used.	Minimal eye contact by the presenter/most members focusing on a very small portion of the audience. Zero involvement of the audience/speak at high speed (Quickly) /low tone. Inappropriate/unnecessary gestures (Body Language).	

Appendix 5. Rubric Example 1 from Phase II CBC Training (Session 9)

Content	<p>The presenter/members presented a concise summary of the unit. All questions are adequately answered. Unit/topic adequately covered. Relevant information is provided.</p>	<p>The presenter/members presented a good summary of the unit. Most vital information is provided. Little irrelevant information is presented.</p>	<p>Educational information is presented. Many questions from the audience are not answered. Not all important points are given. Much irrelevant information is presented.</p>	<p>The presentation shows insufficient information. Significant points left out. Irrelevant points dominate the presentation.</p>
Preparedness/ Participation/Group dynamics (If the work is done in groups)	<p>The presenter/all members adequately know the content/information. Participate actively. Teamwork is evident (Where group work is used). Extremely well-prepared and planned for presentation.</p>	<p>Dominated the discussion/slight domination of one presenter. If working in groups, members assisted each other. Adequately prepared.</p>	<p>The presenter /members spent much time trying to get information arranged leaving the audience unattended to. Read the slides/or hard copies of the presentation. Inadequately prepared.</p>	<p>Presentation not well-balanced. Too much seeking for assistance and clarity from the audience that asked questions/Complete lack of listening skills. Complete lack of preparation/rehearsal. Total dependency on hard copies or slides.</p>

Comments

.....
.....

Appendix 5. Rubric Example 2 from Phase II CBC Training (Session 9)

Student Assessment Rubric

The document below is an individual student assessment rubric that teachers can use to track learners' progress in developing the generic competences outlined in the competence-based curriculum.

School name: Class:

Date: Academic year:

Name of student: Subject:

General areas to be assessed	Description	Achievement exceeds expectation 4	Achievement meets expectation 3	Achieved below expectation 2	Not achieved 1	Comments
Interpersonal relationship	Working as a team member and collaborating with others					
	Respecting views and rights of others and accepting positive criticism					
Communication	Communicating and conveying confidently and effectively information and ideas through speaking and writing and other forms of communication using correct language structure and relevant vocabulary effectively in a range of social and cultural contexts.					
	Writing coherent and logical reports					
Critical and creative thinking	Uses critical and creative thinking skills with a high degree of effectiveness					
Research and problem solving	Produce new knowledge based on research of existing information and concepts and sound judgment in					

Appendix 5. Rubric Example 2 from Phase II CBC Training (Session 9)

General areas to be assessed	Description	Achievement exceeds expectation 4	Achievement meets expectation 3	Achieved below expectation 2	Not achieved 1	Comments
	developing viable solutions					
Co-operation	Co-operating with others as a team in whatever task assigned.					
Innovation	Use imagination beyond knowledge provided to generate new ideas to enrich learning.					
Mastery of the content	Demonstrate understanding of the content					
Values and Attitudes	Demonstrate positive values and attitudes					
Acquired unit competence	Demonstrate the mastery of the key unit competence					

Teacher's name and signature:

Appendix 5. Rubric Example 3 from Phase II CBC Training (Session 9)

Category:	Excellent	Good	Satisfactory	Poor	Score
	4	3	2	1	
Relevance	Points made are all relevant to the topic	Points made are nearly all relevant to the topic	Some points made that are not relevant to the topic	Several points made that are not relevant to the topic	
Support with Facts	Many facts are used to support argument	Some facts are used to support argument	One or two facts are used to support argument	Facts are not used to support argument	
Persuasiveness	Arguments made are always clear and convincing	Arguments are mostly clear and convincing	Arguments are sometimes clear and convincing	Arguments are rarely/never clear and convincing	
Teamwork	Team members talk for roughly equal amounts of time (25%)	One team member dominates (talks >50% of the time)	One team member dominates (talks >75% of the time)	Only one team member contributes to argument	
Organization	Opening statement electrifies audience.	Opening statement grabs the attention of the audience.	Opening statement introduces topic	No clear opening statement to introduce topic	
	Closure convinces audience	Brings closure to the debate	Brings some closure to the debate	No clear closing statement	

Debate Scoring Grid

TOTAL _____

SMART Task Checklist

S (Specific)	<ul style="list-style-type: none"> • Does the assessment task clearly align with the standards and the unit taught? • Is the task easy to understand for all readers in the same way? • Does the task provide enough information for learners to complete it?
M (Measurable)	<ul style="list-style-type: none"> • Does the task provide opportunities for learners to develop self-evaluation skills? • Does the task include assessment criteria which shows evidence that learners have developed the required knowledge, skills, attitudes and values?
A (Achievable)	<ul style="list-style-type: none"> • Is the level of the task appropriate for learners at this stage?
R (Relevant)	<ul style="list-style-type: none"> • Does the task include a generic competence? • Does the task test knowledge, skills, attitudes and values of learners? • Does the task allow learners to apply what they have learned to solve a problem or apply what they know to a real-life situation? • Is the task academically correct? • Does the task use locally available materials? • Does the evidence needed in the assessment criteria align with the task? • Is it possible to prepare the task within manageable time?
T (Time-bound)	<ul style="list-style-type: none"> • Does the task allow learners to complete within reasonable duration of time?

添付 9. DCC オリエンテーション及び 問題分析ワークショップマニュアル



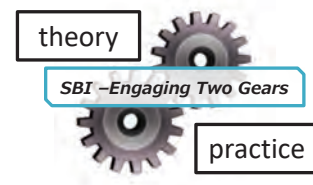
Orientation for the District District CPD Committee

Strengthened role of district for
continuous learning of teachers

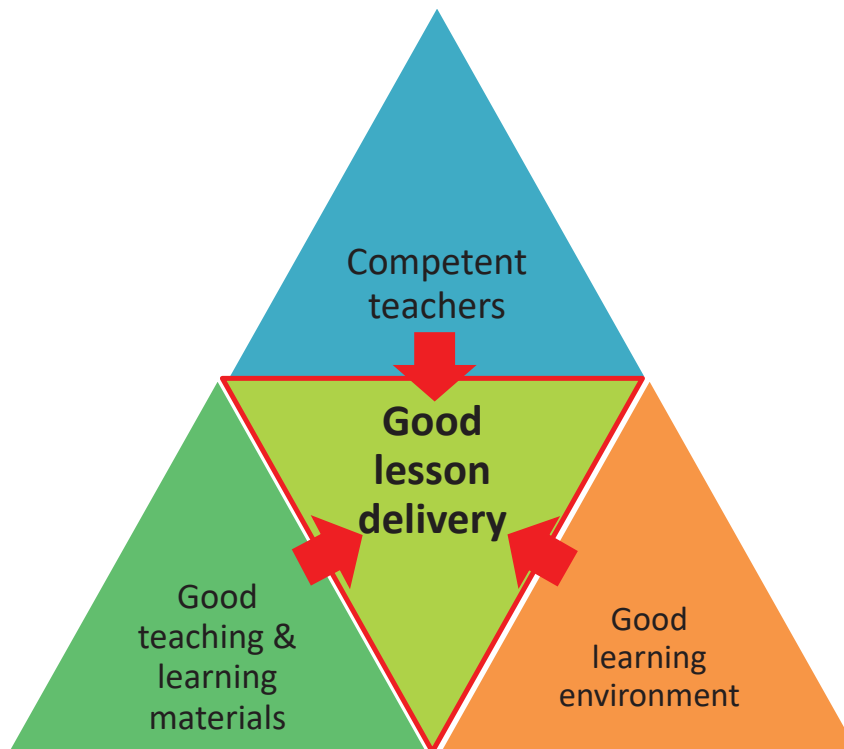
Project Scope

The Project aims at providing technical support and expertise to REB/TEMP to realize the nationwide professional development mechanism for all teachers.

- **Project Period:** Jan. 2017 -- Dec. 2019 (3 Years)
- **Target:** Primary and secondary school teachers (mainly math and science)
- **Component 1:** contents development for REB CBC training (math and science)
- **Component 2:** strengthening M&E mechanism at sector and district level
- **Key approach:** To transform theory into practice through SBI
- **Project members:** 6 Japanese experts + 2 Rwandan staff + REB counterparts
- **Project office:** in TEMPD, REB

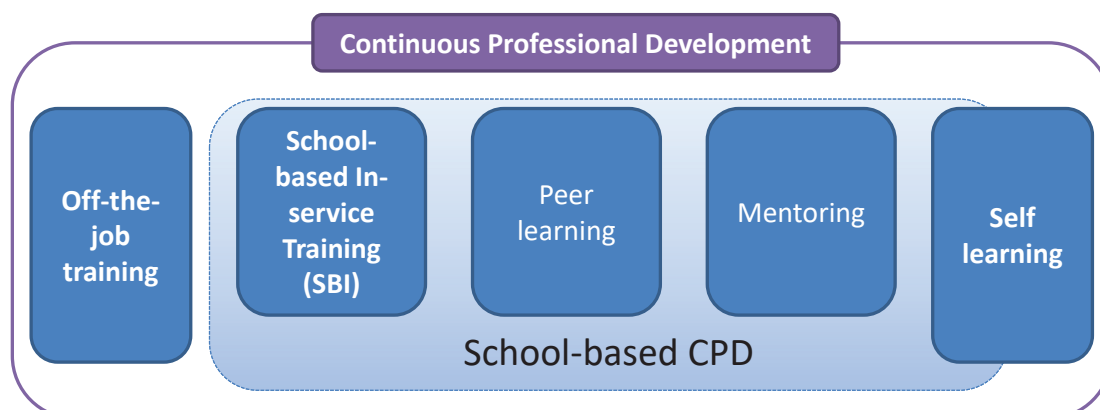


In-school factors influencing the quality of lessons



Importance of Continuous Professional Development of Teachers

- Like any other professionals, teachers have a responsibility and owe it to themselves and their profession to deepen their knowledge, extend their skills and keep themselves abreast with major developments affecting their profession.
- CPD can take place both outside and inside the school.



School-based CPD and CBC

- In the CBC, the teacher is expected not only to deliver the knowledge, but also to facilitate the learners in their learning process to attain expected competencies intended in the curriculum.
- Good facilitator should be able to customize the lesson based on the different characteristics of each class. They should always be reflective of their practice to constantly improve it.
- **Sector/School-based CPD(Continuous Professional Development)** will serve as a platform to continuously explore the best approach to the learners in that sector.

5

National/Local Demarcation in CBC Training

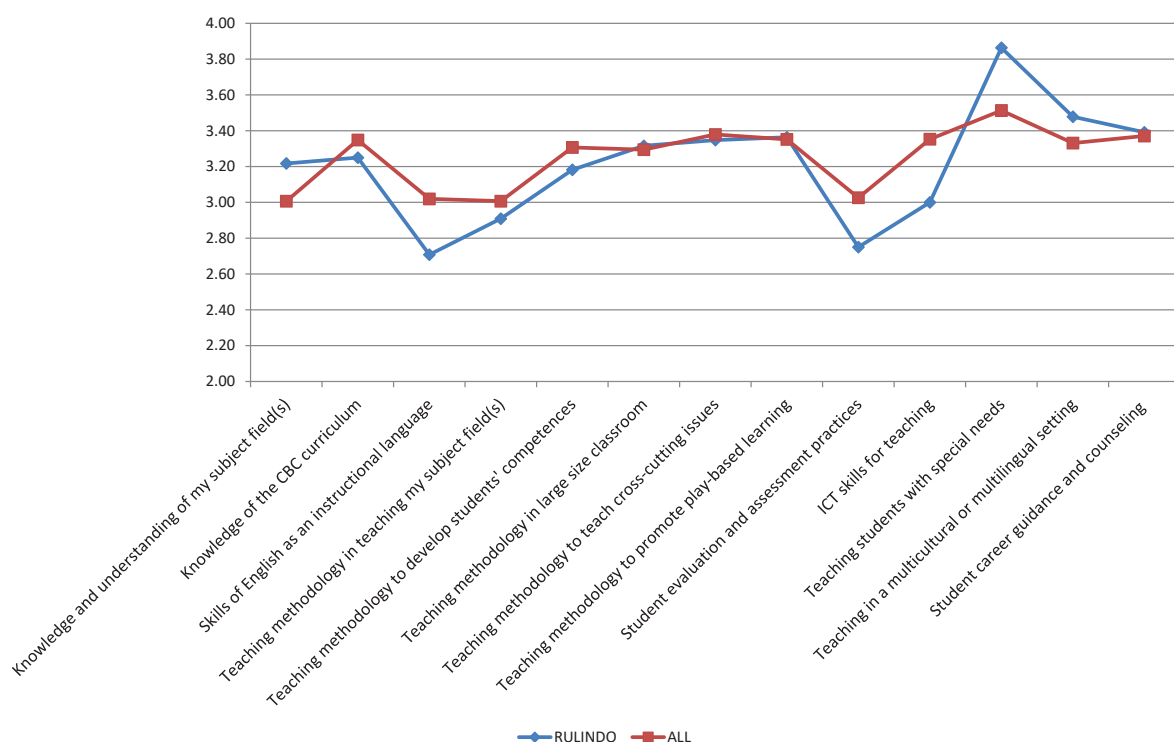
REB	<ul style="list-style-type: none"> ✓ Develop a training system which is able to disseminate contents to all teachers ✓ Develop training materials ✓ Train National Trainers (NTs) who trains Sector-based Trainers (SBTs) ✓ Develop a monitoring system that enables REB/District/Sectors to provide solutions to address challenges for the teachers
District (DCC/DEO)	<ul style="list-style-type: none"> ✓ Make sure that teachers in service in the district are trained through Sector-based CPD sessions ✓ Monitor and evaluate Sector-based CPD conducted in the district and take actions accordingly.
Sector (SEO)	<ul style="list-style-type: none"> ✓ Make sure that teachers in the sector are trained through the Sector-based CPDs ✓ Monitor and evaluate Sector-based CPDs and take actions accordingly

6

What DCC can bring to the district?

- **Strengthened and systematic monitoring of schools by using evidence and objectively analyzing it**
- **Customized solution according to the challenges which may differ district by district**
- **Better implementation of school-based CPD, which is the only activity that teachers can continuously improve their performance. It also contributes to mitigate in-school factors for the dropout, which is one of the imihigo targets of Nyarugenge district.**

Teachers' training needs on CBC



SIIQS's support

- **As per districts' request, SIIQS can provide technical support in**
 - **conducting a problem analysis workshop with an experienced Japanese expert in this area and to develop district's CPD action plan**
 - **Finding DPs in support some CPD activities in the district**





DCC Problem Analysis Workshop

JICA SIIQS Project

Objectives of this Workshop

1. To analyze challenges on quality of education in your district
2. To make an action plan for DCC based on your analysis



Today's Program

Presentation & Group Activities

Step 1: Problem Analysis

Step 2: Objective Analysis

Step 3: Presentation & Discussion

Step 4: Action plan development



Today's Program

Visualization



Facilitator



Stakeholders



Participatory Workshop

✓ Visualization

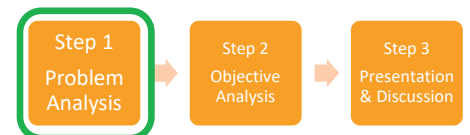
✓ Consensus

1. Write your own idea on your card.
2. Write one idea on a card.
3. Write facts specifically.
4. Write cards before discussion.
5. Take a consensus within your group before removing cards from the board.
6. Do not criticize ideas that other members wrote.



Step 1: PROBLEM ANALYSIS

Step1: Problem Analysis



<Aims>

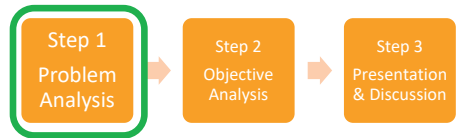
1. To identify existing problems faced by a target group.
2. To analyze the identified problems in form of a cause and effect diagram called “Problem Tree”

< Why do we do this analysis? >

This analysis will give you clear ideas how existing problems relate with each other.



Step1: Problem Analysis



<Example case>

A friend of mine called Ms. Toyota is a math teacher. She works for a primary school in your district.

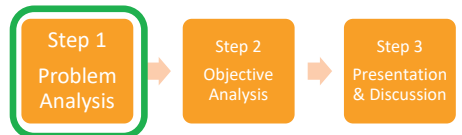
She is good at teaching and her students love her very much.

However, she has one problem. She always comes late for school. She wants to know why she is always late and wants to be a punctual teacher.

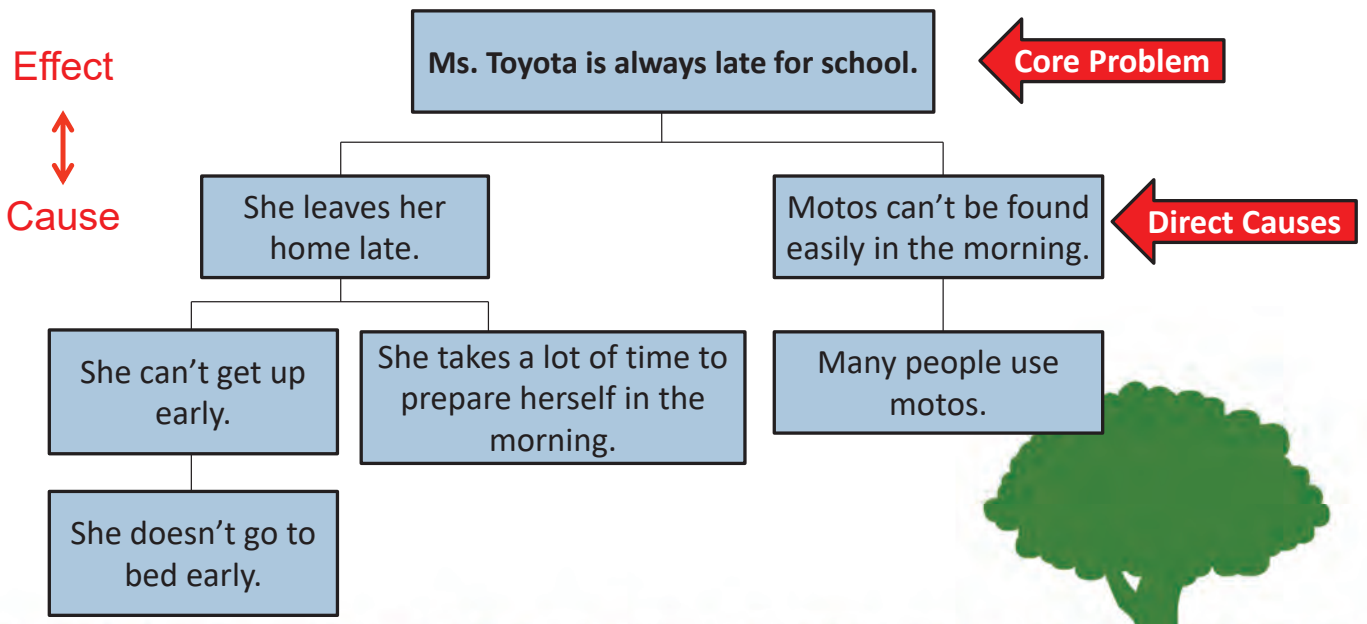
<Ms. Toyota's problem>
Ms. Toyota is always late for school.



Step1: Problem Analysis



Whose problem? : Ms. Toyota (Target group)
Target Area: XXX district



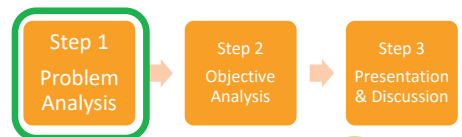
Step1: Problem Analysis



How to do this analysis...?

1. Identify a **Target Group** and **Core Problem**.
2. Find out problems that directly cause the Core Problem (**Direct Causes**), and place them under the Core Problems.
3. Find out problems that cause the Direct Causes, and place them under the Direct Causes.
4. Repeat finding causes and complete a “Problem Tree” diagram.

Step1: Problem Analysis



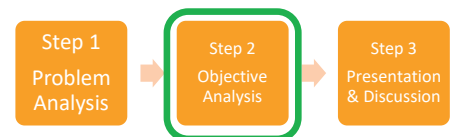
Some rules of this analysis...

1. Write the facts.
2. Write problems (negative sentences).
3. Write only one problem on a card.
4. Do not write a cause and effect on one card.
5. Do not use sentences like “There is no (smth/sb)” or “We do not have (smth/sb)”. Find problems that are results of lacks/absence of resources.
6. Avoid “Zingalo” analysis. Find out different causes for each problem.



Step 2: OBJECTIVE ANALYSIS

Step2: Objective Analysis



<Aim>

To examine “means” and “ends” to achieve an objective by making a tree diagram.

< Why do we do this analysis? >

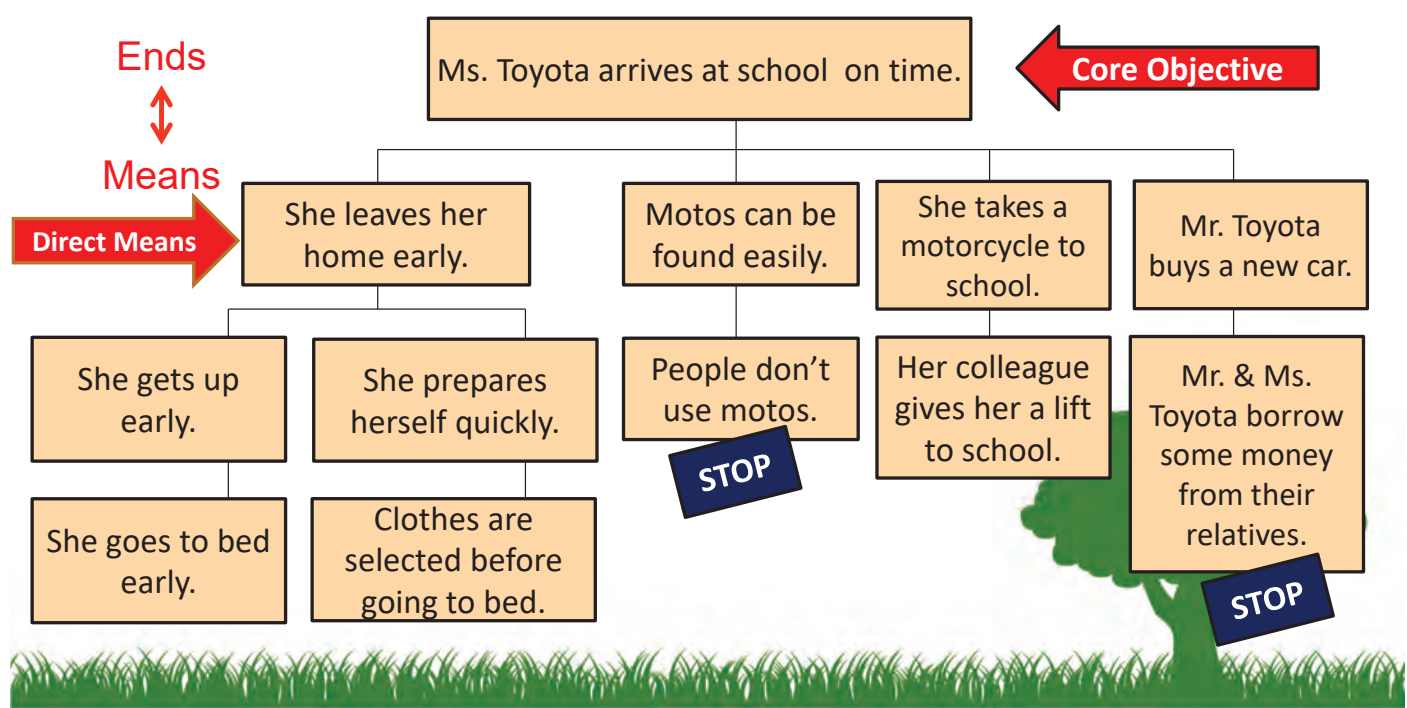
This analysis will give you clear ideas how to achieve your objective.



Step2: Objective Analysis



Target Group: Ms. Toyota
Target Area: XXX district



Step2: Objective Analysis



How to analyze...?

1. Identify a **Core Objective**. Rephrase the sentence to a desired situation.
2. Rephrase **the Direct Means** (the Direct Means) and find out other direct means, and place them under the Core Objective.
3. Repeat finding means and complete a "Objective Tree" diagram.

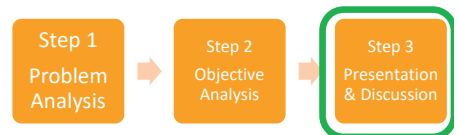
Step2: Objective Analysis



Some rules of this analysis...

1. Consider feasible means and ends.
2. Consider if negative effects happen when “means” are taken.
3. Consider other means if needed.

Step3: Presentation & Discussion



Let's share your analysis with your colleagues !

**Presentation
&
Discussion**





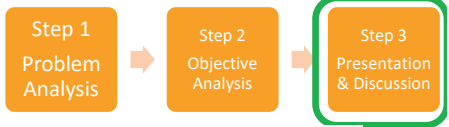
Step 4: ACTION PLAN DEVELOPMENT

Action Plan Format

Output 1																				
												Objectively Verifiable Indicator								
No.	Activities	Expected Result	Schedule												Place	Person (organization) in charge	Implementers	Input		Remarks
			7	8	9	10	11	12	1	2	3	4	5	6				Budget	Materials & Equipment	
1-1																				
1-2																				
1-3																				

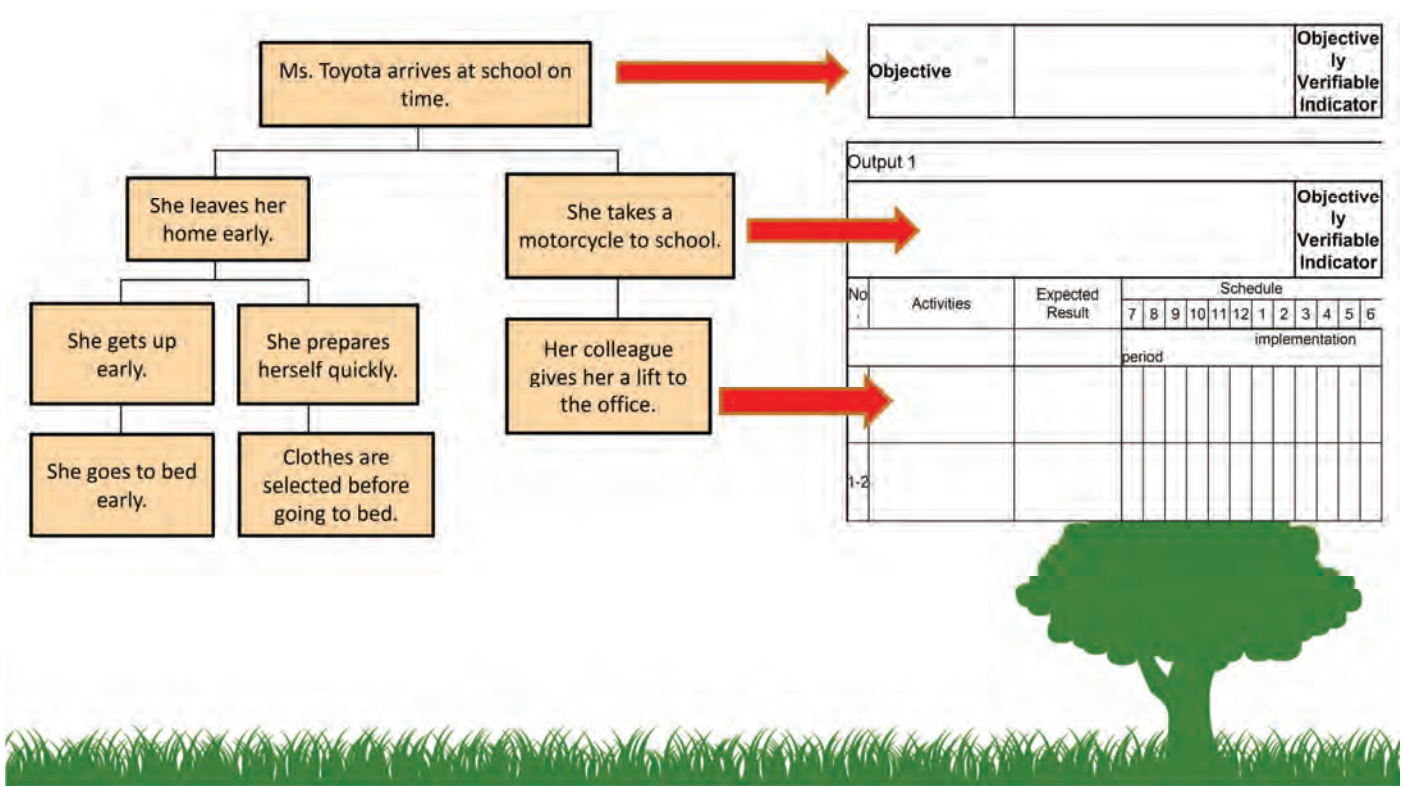


Step4: Action Plan



Action Plan (2017-2018)												Date:	27 June 2017			
Name																
Organization		Musanze DCC (Group A)														
Objective		All sectors are improving performance in the national exam.					Objectively Verifiable Indicator									
Output 1																
Teachers give homework regularly							Objectively Verifiable Indicator									
No.	Activities	Expected Result	Schedule						Place	Person (organization) in charge	Implementers	Input		Remarks		
			7	8	9	10	11	12				1	2		3	4
			Implementation period													
1-1	All teachers plan and coordinate school activities.	Every HT has a written action plan for his school.									school	HTs				
1-2	HTs and teachers collaborate in planning and evaluating school activities.	Each term, HT and teachers meet to plan and evaluate school activities.									school	HTs and DOB				
1-3	Parents support their children while doing homework.	Children do homework everyday and parents sign for them.									Home	Parents				
1-4	Teachers correct homework and give feedback.	Everyday homework are corrected and feedback is given.									School	Teachers				
1-5	Teachers prepare and effectively teach lessons.	Every lesson has lesson plan.									School and Home	Teachers				
1-6	HTs and BEOs have results analysis skills.	Each term results analysis are done and published to public.									School and Sector	HTs and BEOs				
1-7	Head Teachers concentrate on school based activities.	HTs sign alternative book.									School	HTs				
1-8	BEOs fully participated in M&E of education activities in sector.	BEOs prepare weekly reports and share them to stakeholders (education).									School and Sector	BEOs				

Step4: Action Plan



Step4: Action Plan

Indicators should be **MEASURABLE**.
Indicators are **MONITORED** to check its achievements.

What should be included in Objectively Verifiable Indicators?

OBJECTIVE	Ms. Toyota arrives at school on time.
1. What? (Type of Data)	The annual average number of days she arrives at school on time
2. Whose?	Ms. Toyota
3. How much? (Quantity)	Increase by 80% as compared with the annual average number of days in 2017
4. How well? (Quality)	With good health conditions
5. By When?	2019
6. Where?	Karongi



By December 2019, the annual average number of days Ms. Toyota who lives in district arrives at school on time will increase by 80% with good health condition as compared with that in 2017.

Step4: Action Plan

Discussion to agree on one action plan

Points to consider

- ✓ What outputs are more important?
- ✓ What outputs are easy to be achieved?
- ✓ What outputs are urgent?





Murakoze Cyane !

添付 10. DCC/SCC コンセプトノート
改訂版

Revised Concept Note for DCCs and SCCs

Background

Vision 2050 aspires to take Rwanda beyond high income to high living standards by the middle of the century. Its income targets are to attain upper middle income country status by 2035 and high income status by 2050 with the intention of providing high quality livelihoods and living standards to Rwanda citizens by mid-century. Education provides the foundation for achieving prosperity and the Competence-Based Curriculum is the tool for ensuring that Rwanda's children develop the knowledge, skills, attitudes and values that will enable them to contribute to national development. However, the National Strategy for Transformation highlights that whilst access to primary education has reached near universal levels there has been mixed overall performance in education during the period of the Vision 2020 exemplified by falling primary completion rates and low net enrolment rates at secondary level. It concludes that increased access can adversely affect quality.

The challenge now is to raise the quality of education to maximise the learning of children. Effective continual professional development (CPD) of teachers and school leaders is essential to significantly impact on the quality of education going forwards. The greatest opportunity for CPD for teachers is at the school level. This is where teachers can frequently engage with each other to support improvement in practice, whilst setting an expectation of daily self-reflection which is critical for teachers' development. At the same time CPD of school leaders, including SGAC members is also required to ensure improvements in teaching and learning.

The new draft ESSP for 2018 to 2023 has an emphasis on strengthening professional development and on tracking learning at various levels within basic education. With a highly decentralised political system in Rwanda it is necessary that the drive to improve teaching and school leadership and track children's learning is apparent at district and sector levels to improve the overall performance of the education sector.

District and Sector Continual Professional Development Committees for Raising Quality of Education

It is proposed that District and Sector Continual Professional Development Committees (DCCs and SCCs) are established as sub-committees of District and Sector Education Councils to undertake evidence-based planning, monitoring and evaluation related to teachers' and school leaders CPD and its impact on their practice and children's learning. This represents a broadening of the scope and purpose of existing DCCs and SCCs and would support district and sector administrations to own efforts for improving the quality of education.

Rationale for revised concept for DCCs and SCCs

District and Sector officials have lacked full engagement in programmes and activities aimed most directly at improving teaching, school leadership and children's learning. However, in the Rwanda decentralised system it is local level ownership of development efforts which result in the highest impact. Currently, efforts to improve the quality of education are mainly captured in the plans and associated monitoring and evaluation of MINEDUC, REB and development

partners. Without real local ownership of those plans and processes, implementation and impact has been inconsistent producing mixed results in terms of education performance.

Establishing and operationalizing DCCs and SCCs would enable districts and sectors to take ownership for improving the quality of education, whilst providing strong support for government and development partner quality education initiatives. In time it would be expected that districts, sectors and schools will set the agenda for improving CPD for teachers and school leaders in their areas based on more specific knowledge of their learning needs and what works in the localized contexts.

By positioning the DCCs and SCCs as sub-committees of the District and Sector Education Councils evidence-based consideration of progress on quality of education will be brought more fully into council meetings. Sustained operations of the committees would be supported through their linkage with established mechanisms and the opportunity for coordinated efforts of districts, sectors and partners to improve the quality of education would be substantially increased.

Furthermore, the broadening of the scope and purpose of the committees would fix attention on a range of factors that impact on teachers' CPD including that of school leadership by head teachers and SGACs. At the same time evidence of impact on teachers' classroom and school leaders' practice and on learning will enable evaluation of the effectiveness of CPD activity to inform continual improvement in provision. Overall, the purpose of the committees would more closely relate to the aims of REB's TEMPD department and the new ESSP which is focused on factors that most directly contribute to quality education.

Membership of the DCCs and SCCs

The recommended membership of the DCCs would be:

- Vice-Mayor for Social Affairs
- District Education Officials
- All SEOs
- Representatives of Head Teachers, SGAC chairpersons and Teachers
- Representatives of TTCs (where present in the district)
- Representatives from development partners with relevant programmes/projects in the district

The recommended membership of the SCC would be:

- Sector Executive Secretary
- Sector Education Officer
- All sector Head Teachers
- Teacher Representatives
- SGAC chairpersons (invited when relevant)
- Representatives from development partners with relevant programmes/projects in the sector

Frequency of DCC and SCC Meetings

The regular meetings are recommended to take place on a termly basis. This will provide sufficient time between meetings for data collection and field monitoring and meetings would be sufficiently frequent to enable changes to be made in relation to provision of CPD on a regular basis.

DCC and SCC Key Functions

The committees would have 5 main functions:

- Planning
- Monitoring
- Evaluation
- Review and Learning
- Reporting

The effective combination of these functions would involve regular adaption of content and methodology of CPD for teachers and school leaders based on evidence of needs. This would result in improvement in practice to impact on learning.

Planning

On a yearly basis DCCs and SCCs will produce an action plan. The plan will include details on:

- Timing, content and methodology of CPD activities at school, sector and district levels for teachers and school leaders, including SGACs
- Data to be collected on implementation of CPD, teachers' and school leaders' practice and learning of children
- How data will be collected and frequency

The quantity and frequency of CPD and data at pre-primary, primary and secondary levels will be different according to needs and availability of resources.

The content of the plans will combine planned activities of the district, sectors, REB and development partners. Therefore the committee will undertake functions of monitoring, evaluation, review and learning in relation to these plans. This will enable more effective collaboration between local government and development partners in regard to these functions, whilst enabling greater support for REB programmes of activities.

The extent to which CPD meets the training needs of the people engaged in the activities determines the effectiveness of the CPD. The collection and consideration of data on teachers' and school leaders' practice and data on learning at sector level and district level will support identification of more specific CPD needs. Also, this data will support identification of what works and what does not work in terms of methodologies of CPD in the local context. In time, therefore, DCCs and SCCs can support a process by which CPD more specifically meets the needs of the teachers and school leaders in their areas and is less dependent on larger top-down programmes of government and development partners. As such DCC and SCC plans should become over time more contextualised

Monitoring

Data collection and investigative field visits undertaken by district and sector officials and development partners will support monitoring. This will involve finding out what CPD activities have been undertaken and how they have been implemented and also consideration of evidence of impact of CPD on teachers' and school leaders' practice and periodically on learning. As electronic data collection become more prevalent and MINEDUC's and REB data management systems develop more data will be accessed direct from the system whilst other data, including more qualitative data, will be provided directly to the committee.

This evidence can be used to track progress against output and outcome indicators of relevant parts of district, sector and development partner plans. Consideration of this evidence can lead to updating of the committees' action plans and/or the district, sector and development partners' plans. There should also be discussion on challenges faced and any lack of action or lack of commitment to achieve the objectives of the action plan and also discussion on what is working well which could be scaled up. Agreements on remedial actions should also be agreed to improve implementation of the committees' action plan. At district level the responsibility for remedial actions will focus mainly on SEOs whilst at sector level the responsibility will focus mainly on school leaders.

The key results of monitoring by the SCCs should be communicated to the DCCs and vice versa.

Evaluation

Evaluation involves assessment of impact and efficiency and leads to consideration of whether there should be significant changes in approach or not. In terms of impact evidence would inform the extent to which CPD is positively affecting the practices of teachers and school leaders and learning. In terms of efficiency there would be discussion about the extent to which the methodology, types, frequency and timing of CPD are resulting in impact.

Evaluation can take place periodically through the year informed by monitoring. However, it must take place thoroughly at the end of the year of the action plan.

The key findings from evaluation by SCCs should be communicated to the DCC and vice versa.

Review and Learning

This follows on from evaluation. Key questions would be: what has worked well and what has not worked well? What should be changed in terms of provision of CPD? What strategies can be used to share best practices across the district, or across the sector? What data do we have which provides new evidence on the training needs of teachers and school leaders?

Again, review and learning can take place through the year. However, deeper discussion based on evidence should follow on from the thorough evaluation at the end of the year of the action plan and the answers to the key questions would inform the development of the next annual action plan of the committee and the plans of districts, sectors and development partners.

Key learnings identified in SCCs should be communicated to the DCC and vice versa.

Reporting at District and Sector Level

The DCC should report to the District Education Council and the SCC should report to the Sector Education Council. Information and conclusions derived from the processes of planning, monitoring, evaluation and review and learning will inform the content of the reports.

Reporting to REB

It is expected that data that REB required periodically through the year will be mainly collected electronically and fed into its data management system and therefore there would not need for regular reporting to REB about its CPD programmes. However, it will very useful for DCCs to report to REB about its learning in relation to CPD to inform REB's programmes of training. In addition, it would be good for DCCs to have an opportunity to feedback on their functioning and support needs.

REB will consider the most efficient approaches for enabling DCCs to report and enable discussion of issues.

Capacity development support for DCCs and SCCs

Evidenced-based approaches to planning, monitoring, evaluating, reviewing and learning of quality education focused around the provision and impact of CPD requires the development of skills of District and Sector officers, particularly around the analysis and use of data. Over the next few years collectively development partners are well-positioned to provide support in skill development across all districts to enable DCCs and SCCs to function effectively.

Conclusion

It is essential for the successful implementation of the National Strategy for Transformation and the new ESSP that district and sector administrations are fully-engaged in ensuring that CPD is effectively and regularly undertaken by every teacher and school leader in Rwanda. Fully-functioning DCCs and SCCs would enable local government and development partners to collaborate in planning, monitoring, evaluation, review and learning in relation to the provision of CPD. As such more effective implementation of the Competence-based Curriculum should follow resulting in children developing the knowledge, skills, attitudes and values required to provide the foundation for future national prosperity.

添付 11. 地区及び学校レベル CPD ガイドライン

REPUBLIC OF RWANDA



MINISTRY OF EDUCATION



Teacher Training Manual Phase II



COMPETENCE –BASED CURRICULUM (CBC)
Guideline for Sector/School-based Continuous
Professional Development (CPD) for CBC

January 2017

Acknowledgement

The introduction of a CBC calls for a big paradigm shift for teachers. It requires comprehensive change and new thinking with regard to instructional approaches in teaching, learning and assessment processes. However, most teachers tend to teach using approaches through which they were taught. Since CBC requires teachers not only to deliver the knowledge but also to facilitate learners in their learning process to attain expected competencies, they need to customize the lesson based on the different characteristics of each class. Trainings at ground level serve as an optimal platform for teachers to continuously explore the best approaches to the learners in their locality.

I would like to highlight the importance of making sure that all teachers are trained in CBC because learners have an equal right to receive good quality education according to the new curriculum. SEOs are expected to coordinate trainings at sector and school level and report any challenges to the district. District, as an employer of teachers, is expected to supervise trainings conducted at sector and school level and make sure that all teachers are trained. Training teachers in CBC also contributes to mitigate the dropout, which is one of the imihigo targets in most of the districts, because it helps teachers teach in a learner-friendly manner.

I express my sincere gratitude to the all development partners for their technical support in developing this material. Their support significantly contributed to the successful production of this material by Teacher Management and Professional Development Department (TEMPD).

Gasana I Janvier
Director General
Rwanda Education Board

List of Abbreviations

CBC	Competence Based Curriculum
CPD	Continuous Professional Development
DCC	District Continuous Professional Development Committee
DEO	District Education Office
DoS	Director of Studies
HT	Head Teacher
MINEDUC	Ministry of Education
M&E	Monitoring and Evaluation
NT	National Trainers
LP	Lower Primary
LS	Lower Secondary
PDSI	Plan-Do-See-Improve
Off-JT	Off the Job Training
OJT	On the Job Training
REB	Rwanda Education Board
SBI	School Based In-service Teacher Training
SBT	Sector Based Trainer
SBM	School Based Mentor
SEO	Sector Education Officer
S-SBI	Standardized School-based In-Service Training
SSL	School Subject Leader
SoW	Scheme of Work
T/L	Teaching and Learning
TTC	Teacher Training College
UP	Upper Primary
US	Upper Secondary
URCE	University of Rwanda – College of Education

1. Purpose of this Guideline

CBC training contents should be cascaded to sector level to train all teachers so that they become competent in teaching according to the CBC. District and Sectors are responsible in ensuring that all teachers are trained at the sector level.

The final stage of CBC training will take place at the sector level. This is called Sector-based Continuous Professional Development (CPD). Sector-based CPD is a good way to involve all teachers in CBC training effectively and efficiently, with minimum sacrifice of the classes to attend trainings. CPD at the sector and school level also provides opportunity for teachers to continuously improve the lesson and generate new ideas to improve teaching and learning (T/L) appropriate to the local context.

The purpose of this guideline is to enable SEOs and Sector-based Trainers (SBTs), who will be the main organizer of Sector-based CPD, so that they can thoroughly plan and implement it. Specific objectives are to

- stipulate and delegate roles and responsibilities of stakeholders
- guide SEOs and SBTs how to plan and implement Sector-based CPD sessions
- monitor Sector-based CPDs to reflect and improve the quality of implementation

Although this guideline is primarily for SBTs and SEOs, it also stipulates roles and responsibilities that DEOs and District Continuous Professional Development Committee (DCC) should bear in supervising the planning, implementing and monitoring Sector-based CPDs. It also helps HTs/DOS to understand the processes involved in preparing and implementing CPD activities.

The expected timeline to train all in-service teachers through Sector-based CPD is shown in the following table. All training sessions will be completed and practices to deepen CBC proficiency will be started by the end of the 2nd term. Readers of this guideline are required to conduct Sector-based CPD properly according to above timeline.

Table 1-1 Overview of the timeline for Sector-based CPDs

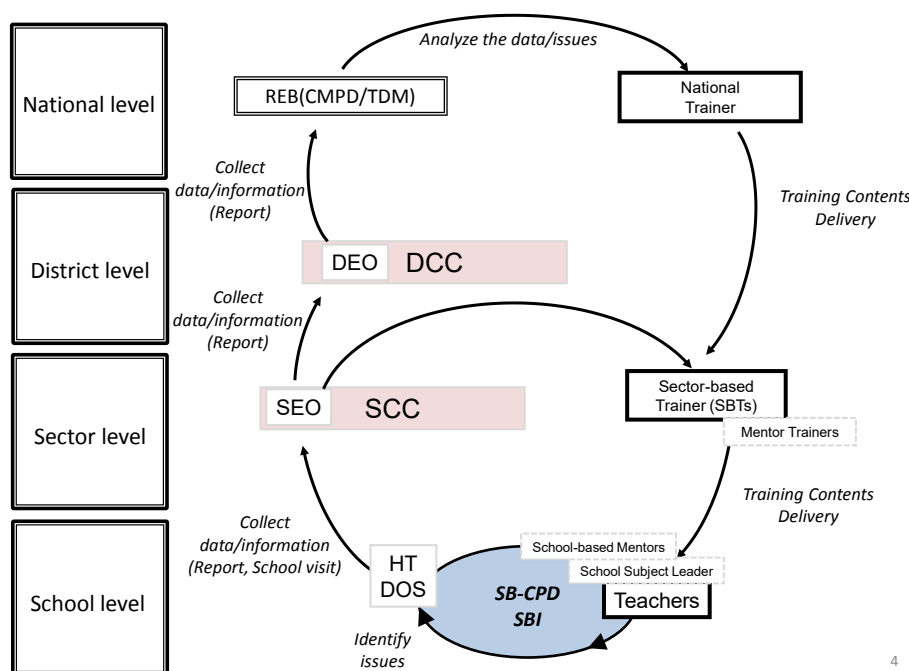
	Activity	Key activity	Timeline
0	Training for SEOs	REB trains SEOs	Around mid-February
1	Orientation	Group formation Preparation of Action Plan (scheduling)	By the end of February
2	Sector-based CPD	Implementation of Sector-based CPD	From March to July All the contents should be finished by the end of 2 nd Term
3	Review session	Report any unclear points and come up with Action Plan for Follow up activities	After the completion of Sector-based CPD
4	Follow up activities	Activities to address issues and challenges	After the completion of Sector-based CPD

2. Concepts of Sector-based CPD for Competence-Based Curriculum

2.1 Conceptual Framework of CBC training

The introduction of a Competence-Based Curriculum (CBC) in schools calls for comprehensive change and new thinking with regard to instructional approaches in teaching, learning and assessment processes. Most teachers tend to teach using approaches through which they were taught. However, CBC requires teachers not only to deliver the knowledge but also to facilitate learners in their learning process to attain expected competencies intended in the curriculum. Therefore, they need to customize the lesson based on the different characteristics of each class and be reflective of their practices to constantly improve them.

In order to equip all teachers in service, problem solving cycle, as described in the figure below, will be applied. It consists of two streams, top-down stream for dissemination of training contents and bottom up stream for monitoring and evaluation (M&E). School-based CPD is located to connect these two streams. .



Top-down stream is to make sure that all teachers are trained in CBC. CBC training takes a unique approach. As shown in the right side of the diagram above, it applies a combination of cascading training and Continuous Professional Development (CPD). REB develops training contents and train National Trainers (NTs). NTs train Sector-Based Trainers (SBTs), who will train teachers in a series of Sector-based CPD sessions. Sector/School-based CPD will serve as a platform to continuously explore the best approaches to the learners in the sector. School-based Mentors (SBMs) also play an important role in this mechanism in supporting teachers especially in the area of medium of instruction.

When teachers face any challenges in applying what they learned in the training in the classroom, they will consult with SBMs and School Subject Leaders (SSLs) or report such challenges to HTs and DoS. If they cannot solve these challenges inside the school, challenges can be reported to SEOs. SEOs are encouraged take measures, for example, doing follow up trainings with SBTs. If challenges cannot be solved at the sector level, SEOs should report them

to DEOs. DEOs, together with newly established District CPD Committee members, make sure that all teachers in the district are trained and if teachers are facing challenges, DCC is expected to tackle these challenges at the district level. If any challenges cannot be solved at the district, they will be reported to REB. These challenges will inform REB to consider contents of the future trainings.

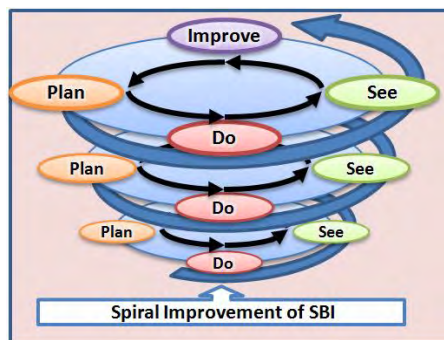
2.2 Rationale for Sector-based CPD in CBC training

Sector-based CPD engages all teachers in the standardized CBC training

Primary role of Sector-based CPD in CBC training is to engage all in-service teachers. Sector-based CPD is a good way to involve all teachers in an efficient and effective manner, because they don't have to sacrifice many classes to attend training and they can practice what they learned in the training in the class immediately after the training. All teachers will understand and master sufficient knowledge and skills needed for CBC implementation through a series of trainings. Measures to enable all teachers to attend Sector-based CPDs should be taken by SEOs, SBTs and HT/DoS (see 3 Planning and its Implementation of Sector-based CPD for details). Concept of Sector-based CPD is similar to what it used to be called as "S-SBI (Standardized-SBI)" in the CBC training first phase in 2015-2016.

CPD continuously improves CBC proficiency

Training at the sector level is the final stage of CBC training though it also is the beginning of Continuous Professional Development (CPD). CPD is a spiral improvement process which consists of Plan-Do-See-Improve (PDSI) to improve teachers' proficiency of CBC. CPD is a repeating practice, because teachers in CBC should always be reflective of their practices to constantly improve lessons. Sector/School-based CPD sessions will serve as this platform so that teachers can continuously explore the best approach for the learners in the sector. Through this process, good attitude as role model may be developed while they teach and learn together in Sector CPD groups as well.



Through this process, good attitude as role model may be developed while they teach and learn together in Sector CPD groups as well.

School/Sector-based CPD generates new ideas of CBC practice with peer

In the CBC, the teacher is expected not only to deliver the knowledge, but also to facilitate the learners in their learning process to attain expected competencies intended in the curriculum. Cascade training provides common CBC ideas. However, to be a good facilitator, teachers need be able to customize the lesson based on the different characteristics of each class. School/Sector-based CPD allows teachers to learn with peers who work in similar situation, environment or context so that teachers can easily exchange ideas to invent the best T/L approach for students according to the context.

2.3 Stakeholders for the Sector-based CPD

2.3.1 Demarcation in CBC Training

As mentioned in 1. Introduction, the CBC training program will be cascaded to all teachers through Sector-based CPD sessions and continuous improvement cycle will take place at the sector and school level. REB is responsible in developing contents and training SBTs while Districts and Sectors make sure that all teachers are trained at the sector level and supervise their continuous improvement cycle based on different situation and environment in their locality.

Table 2-1 Overall Demarcation in CBC Training

REB	<ul style="list-style-type: none"> ✓ Develop a training system which is able to disseminate contents to all teachers ✓ Develop training materials ✓ Train National Trainers (NTs) who trains Sector-based Trainers (SBTs) ✓ Develop a monitoring system that enables REB/District/Sectors to provide solutions to address challenges for the teachers
District (DCC/DEO)	<ul style="list-style-type: none"> ✓ Make sure that teachers in service in the district are trained through Sector-based CPD sessions ✓ Monitor and evaluate Sector-based CPD conducted in the district and take actions accordingly.
Sector (SEO)	<ul style="list-style-type: none"> ✓ Make sure that teachers in the sector are trained through the Sector-based CPDs ✓ Monitor and evaluate Sector-based CPDs and take actions accordingly
DPs	<ul style="list-style-type: none"> ✓ Support CBC training in a technical, managerial and financial manner ✓ Provide materials and expertise to NTs / SBTs

2.3.2 Roles and Responsibilities Associated with Sector-based CPD

For Sector-based CPD to function as a platform to improve CBC practice, it is important that HT/DoS, SBT, SEO, DEO and DCC bear their responsibilities in different steps in the Sector-based CPD. The table below summarizes the responsibilities for each stakeholder.

Table 2-2 Main responsibilities of stakeholders

	Teacher	HT/DOS	SBM	SSL	SBT	SEO	DEO	DCC
Preparation		✓			✓	✓		
Implementation	✓	✓	✓	✓	✓			
Review	✓	✓	✓	✓	✓	✓		
Follow-up	✓	✓	✓	✓	✓	✓		
Monitoring and Evaluation		✓			✓	✓	✓	✓

Specific roles and responsibilities associated with Sector-based CPD are described in the following table. SBT will play a central role in assuring the quality of Sector-based CPD. SEOs are expected to manage the Sector-based CPDs. School Subject Leader who were appointed in the previous phase of CBC training will be a resource person or a facilitator in the Sector-based CPD to provide subject specific expertise to the Sector CPD Groups. DCC through DEO oversees the situation of implementation of Sector-based CPDs in the district based on the reports from SEOs. In regards to the DCC, please also refer to the communication by [REB to the all mayors on the Establishment and Rollout of District CPD Committees dated 29/07/2016 \(ref: 1793/REB/TDM/2016\)](#).

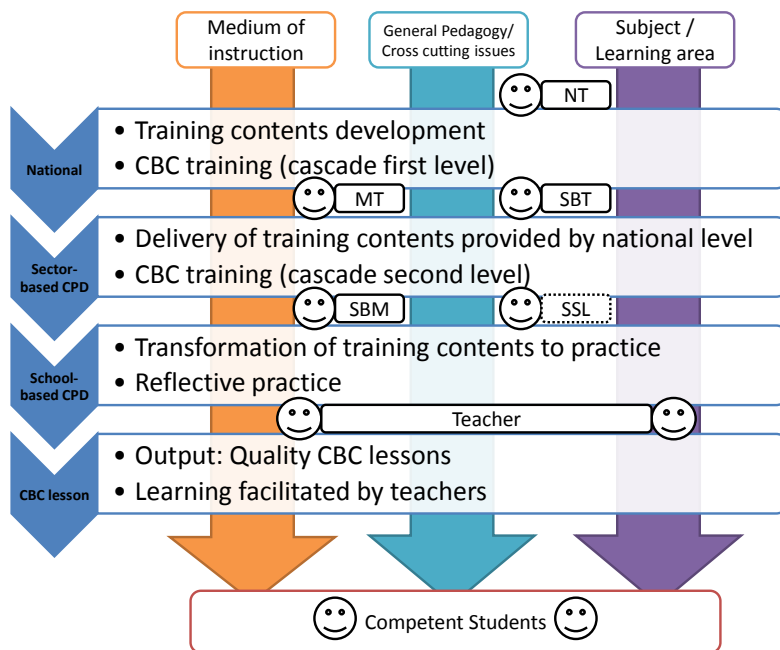
Table 2-3 Roles and responsibilities of stakeholders

Stakeholder	Roles and responsibilities
Teachers	<ul style="list-style-type: none"> ✓ Make sure that they are part of the Sector CPD Group that they are supposed to join ✓ Check the schedule of Sector-based CPD sessions and report any difficulties in attending them if any ✓ Actively take part in Sector-based CPD activities ✓ Report their attendance to HT/DOS

	<ul style="list-style-type: none"> ✓ Share challenges and good practices with HT/DOS and SBTs
HT/DOS	<ul style="list-style-type: none"> ✓ Make sure that teachers in their school are involved in the Sector CPD Group that they are supposed to join ✓ Coordinate with SEOs and SBTs in developing schedule of Sector- based CPD sessions ✓ Assist SEOs and SBTs in planning and implementing Sector-based CPD by hosting some sessions and providing refreshment / materials if fund is available ✓ Report teachers' attendance to SEO/SBTs ✓ Share challenges and good practices with SEO/SBT
SBT	<ul style="list-style-type: none"> ✓ Be responsible in delivering the contents of the training that they attended at the training center to the teachers in the Sector CPD Group that SBTs are leading ✓ Follow up the Sector-based CPD sessions by organizing a review meeting to act on the challenges that teachers are facing and to ensure that all teachers in the Sector- CPD Group attain the required competencies
SBM	<ul style="list-style-type: none"> ✓ Coordinate School-based CPD activities. ✓ Share materials that they have with other teachers if appropriate ✓ Follow up the Sector-based CPD sessions by sharing challenges and good practices observed at the school level with SBTs
SEO	<ul style="list-style-type: none"> ✓ Make sure that teachers in the sector are trained in the Sector-based CPDs based on thorough planning and supervision ✓ Recommend SBTs to the district ✓ Compile action plans developed by each Sector- CPD Group, make the Action Plan for the Sector and submit to the DCC through DEO ✓ Act on challenges that are reported by the SBTs, HT/DOS and teachers and report any unsolved challenges to DCC through DEO
SSL	<ul style="list-style-type: none"> ✓ Play a role of resource person, especially in a subject area, by providing useful resources and facilitating CPD activities at sector and school level
DCC/DEO	<ul style="list-style-type: none"> ✓ Compile action plans submitted by the Sectors and develop an action plan for the district, consistent with the District Performance Contract. ✓ Nominate SBTs and other resource persons for the Sector-based CPDs ✓ Monitor and evaluate Sector- based CPDs conducted in the district. ✓ Evaluate SBTs and other resource persons for the Sector-based CPDs. ✓ Report any challenges that cannot be solved at the district level to REB

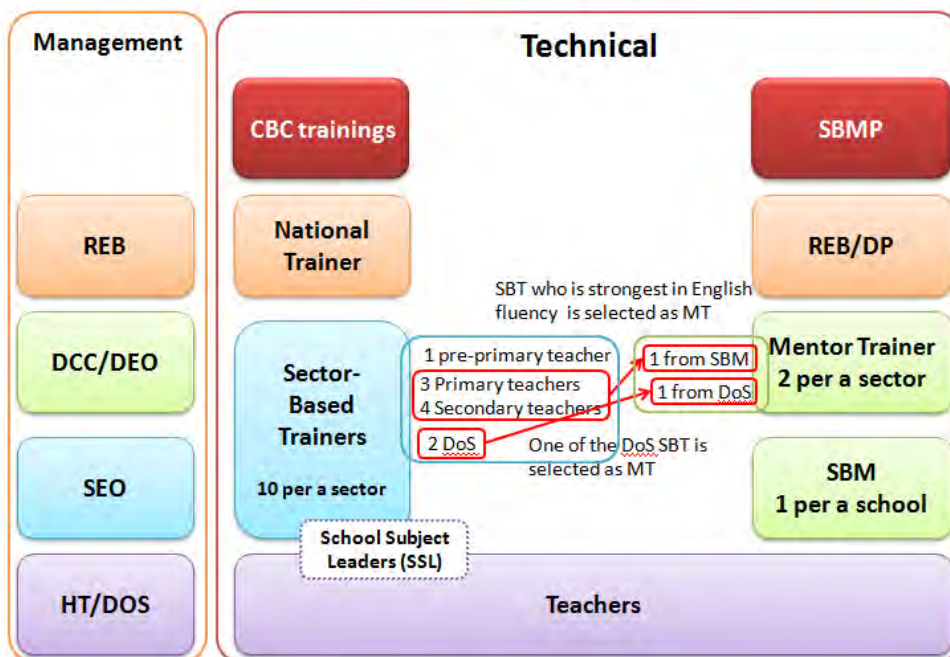
2.3.3 CBC Training and School-based Mentorship Programme (SBMP)

One School-based Mentor (SBM) per school has been nominated to support teachers' CPD especially in the areas of English language and pedagogy for competence-based teaching and learning. There will be two Mentor Trainers (MTs) per a sector too to train SBMs, one selected from SBMs and the other selected from DoS. MTs will be selected from SBTs. Please refer to the SBMP Framework as attached for the details about SBMP.



Box: How to nominate Mentor Trainers (MTs)
For the effective coordination between the CBC Training and SBMP

As explained in the SBMP Framework (attached), 2 Mentor Trainers (MTs) per a sector will be nominated to support activities conducted by SBMs. Because SBMs are expected to help teachers improve their English language skills as well as competence-based teaching and learning, MTs should also be capable of helping SBMs in CBC. SBTs have already been trained by National Trainers in CBC, therefore, districts and sectors are expected to select MTs from the group of SBTs. SBT who is strongest in English fluency should be selected as MT. One of the DoS SBT will also play a role of MT.



3. Planning and its Implementation of Sector-based CPD sessions

3.1 Overview of the Sector-based CPD Process

As described in previous chapter, Sector-based CPD follows PDSI cycle and the cycle can be interpreted into the steps below.

Table 3-1 PDSI Cycle of Sector-based CPD

Cycle	Steps	Quick Check Points
Plan	1. Sector CPD Group formation (Annex 1)	Thorough group formation ensures active communication among teachers. ✓ Appropriate number of members ✓ Similar background (teaching grade, subject) ✓ Access to venue of Sector-based CPD sessions from home/school
	2. Action planning (Annex 2)	Clarify what to prepare for Sector-based CPD ✓ Is venue (training center) available? ✓ Can all group members attend with planned schedule? (no overlap with other events?) ✓ Can all the training contents be covered in schedule? ✓ Is a trainer (and/or a resource person) assigned?
Do	3. Sector-based CPD sessions	✓ Necessary logistics (i.e. preparation of materials) are done prior to Sector-based CPD? ✓ Did all teachers in the Sector- CPD group attend? ✓ Were all the contents in the plan covered?
See	4. Review session	After the completion of all training, teachers will apply what they learned in the training and then; ✓ Were there any unclear points or challenges for CBC lesson? ✓ What can be the solution to address above issues? ✓ Any good practice to be shared?
Improve	5. Follow-up activities	Solutions discussed in review session should be examined. ✓ How does the solution work? (Lesson observation can be held) ✓ Further issues raised?

3.2 Preparation of Sector-based CPD

3.2.1 Orientation at the Sector level

In order to plan Sector-based CPD sessions effectively, it is highly recommended to organize an orientation at the sector level for all teachers to form the Sector CPD groups and to develop Action Plans.

(1) Purpose of the Orientation

After SBT training (16-21 January, 2017) at the training centers, SEOs, in cooperation with SBTs, should organize an orientation for all the teachers in the sector. The purpose of the orientation is twofold.

- (a) to form Sector- CPD Groups and assign an SBT to each group
- (b) to set the schedule for each Sector CPD Group for the coming months

(2) Participants to the Orientation

The orientation should involve all teachers (including HTs and DoS) and all the SBTs in the sector. SEOs are expected to coordinate with HTs to set a schedule for the orientation that is convenient for all the teachers as much as possible.

(3) Venue of the Orientation

The venue of the orientation should be decided by the SEO. Note that the venue should be big enough to host all the teachers in the sector. It would be preferable to have classrooms available where Sector CPD Groups can have breakout sessions to set up the schedule.

(4) Programme of Orientation

The orientation consists of three parts; a) Introduction by the SEO, b) Sector CPD Group Formation and c) Preparation of Action Plan. Following sections explain the contents that should be covered in each part.

a) Introduction by the SEO

Firstly, SEO should give an introduction to the teachers. In the introduction, SEO is expected to talk about the following points.

- Purpose of Sector-based CPD: to train teachers to be competent in facilitate learning according to the CBC.
- Overall schedule of the Sector-based CPD sessions: teachers will go through a series of Sector-based CPDs in the coming months. Sector-based CPD sessions may take place over the weekend
- Contents of Sector-based CPD sessions: SEO can briefly explain the contents to be covered in the Sector-based CPD sessions. Contents are listed in the Annex 2.
- Ask for HTs' facilitation to conduct Sector-based CPD: HTs are expected to facilitate the implementation of the Sector-based CPD by (1) hosting some sessions in their school, (2) coordinating the schedule with school events, (3) availing SBTs for leading the planning and implementation of Sector-based CPD, and (4) availing capitation grant for Sector-based CPD

b) Sector CPD Group Formation

Secondly, SEO will coordinate the grouping process. The following is the principle in forming Sector CPD Group. However, because the situation is different sector to sector, SEOs and SBTs are expected to adjust the group formation according to the situation in the sector.

Principles for forming Sector CPD Groups

- An Sector CPD Group consists of teachers teaching the same level and same learning area.
- The preferable number of teachers in a group is more than 5 and less than 20. If it exceeds 20, the group can be divided into 2. If the members are less than 4, they can merge other group of the same learning area for the different level, if that group is not too big.
- SBT is the leader of the Sector CPD Group. SEO should assign SBTs based on the subject(s) they are teaching. However, there are only 10 SBTs¹ and they don't necessarily cover all the learning areas for all the levels. In that case, SBTs can invite a resource person (e.g. a senior teacher, TTC lecturer, etc), especially for the sessions which deal with subject contents, for example, Writing Scheme of Work (Session 3.2 in the Annex 2), Writing Lesson Plans (Session 4.5) and Using T&L materials (Session 4.6).
- If a teacher teaches several levels, for instance, lower secondary and upper secondary, he/she doesn't have to attend two groups because the contents are same except Writing Scheme of Work (Session 3.2 in the Annex), Writing Lesson Plans (Session 4.5) and Using T&L materials (Session 4.6). However, it would be useful for that teacher to get sample scheme of work, lesson plan and T&L materials from their colleagues attending the other group.

¹ 1 pre-primary, 3 primary, 4 secondary and 2 DoS according to the communication by REB to mayors dated 27/10/2016, N. 3493/REB/TDM/2016

The sample grouping for Sector-based- CPD is described in the following table.

Table 3-2 Sample Sector CPD Groups

Learning area	Languages	Humanities	Math	Science & ICT
Pre-primary	Pre-primary Group			
Lower Primary	LP Language Group	LP Humanities Group	LP Math Group	LP Science & ICT Group
Upper Primary	UP Language Group	UP Humanities Group	UP Math Group	UP Science & ICT Group
Lower Secondary	LS Language Group	LS Humanities Group	LS Math Group	LS Science & ICT Group
Upper Secondary	US Language Group	US Humanities Group	US Math Group	US Science & ICT Group

When Sector CPD Groups are formed, each group should fill Member List for Sector CPD Group (Annex 1) and submit to SEO.

c) Preparation of an Action Plan

Lastly, SBTs will bring teachers in his/her Group together to set a schedule for the Sector-based CPD sessions. The contents that should be covered in the Sector-based sessions are broadly divided into 5 areas; 1) Understanding the Syllabus, 2) Pedagogy, 3) Scheme of Work, 4) Lesson Plans and 5) General Skills. The full list is on the Annex 2.

SBT and the members will then set the schedule for each session and fill the Action Plan (Annex 2). It is preferable to organize Sector-based CPD sessions when they don't have classes in order not to sacrifice the lessons. SBTs are expected to coordinate with HTs and SEOs to ensure a venue for the Sector-based CPD sessions. Teachers should check the schedule for the school events and make sure that they can attend all Sector-based CPD sessions. If the schedule overlaps, teachers should report it to the SBTs.

After completing the Action Plan, SBT should submit the plan to SEO, who should sign to confirm the receipt. It is preferable that the all the sessions will be finished by June 2017.

(5) Compilation of Action Plan and Submission to the DCC

SEO should compile the action plans submitted by the SBTs and make an action plan for the Sector. This information will be submitted through online monitoring, whose form will be provided later. A copy should be given to DCC so that DCC can supervise the implementation status of the Sector-based CPDs at the sector level.

3.3 Implementation of Sector-based CPD (CBC training at sector)

Members of Sector CPD Group implement Sector-based CPD sessions according to the developed action plan.

3.3.1 Logistical preparation

Prior to the Sector-based CPD sessions, SEOs and SBTs are requested to confirm specific responsibility of each member of the Group in implementing the Action Plan. Holding a regular meeting or communication through phone, email and SMS is a good way to check the status of logistics work for implementation. You do not have to follow original plan strictly, Action Plan can be modified if you identify problems or difficulties in this process. You are recommended to communicate with supervisors (HT, DoS and DEO) so that necessary support can be

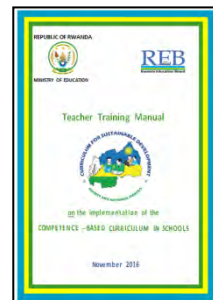
provided. If you have question about Sector- based CPD or whole CBC training process, you may contact REB staff too.

3.3.2 Facilitating Sector-based CPD

SBTs are required to conduct Sector-based CPD according to the given session plan and timeframe defined by your Action Plan. You should also recall facilitation skills inducted through this CBC training (See session 5.7 Facilitation skills). As repeatedly explained, Sector-based CPD aims to provide opportunities learning from peer, SBTs are expected to utilize such facilitation skills boost active interaction among group members.

3.3.3 Resources for Sector-based CPD

Teacher Training Manual was distributed to the SBTs in the SBT training. SBTs are expected to use these Manuals when conducting the Sector-based CPD sessions. They can also use materials which are available on Teacher Community of Practice (TCOP; <https://www.tcop.rw/>) and use the community forum on the same website to share good practices and learn from them.



3.4 Further Improvement of CBC proficiency

All teachers should be able to apply new T/L methodologies that they learned in the Sector-based CPD sessions properly in their classroom. SBTs are mandated not only to deliver the training contents, but also to ensure that all teachers in their Sector CPD group become competent.

Most people believe training ends when all training contents are taught. However, as you can refer the spiral PDSI cycle diagram, CPD continues even after completing the Action Plan. Reviews and follow-up activities are highly valued in entire CPD process.

TEMP/REB will remind DCC (DEOs) and SEOs to organize these reviews and follow-ups at appropriate timing identified through monitoring and progress of CBC lessons. SEOs and SBTs are then expected to lead the review session and follow-up activities as well, so that teachers are kept engaged in the CPD process. Review and follow up are the key in ensuring that teachers become proficient in CBC.

3.4.1 Review session

After completing the series of Sector-based CPD in the Action Plan, teachers will practice what they learned in the training. It is anticipated that the teachers face various issues and challenges in classroom when applying given T/L methodologies due to premature understanding and mastery on training contents. Or a certain situation and environment in some schools may not allow teachers to apply such new methodologies.

Review session is the opportunity to share and to report such issues, challenges and unclear points on CBC implementation. SEOs and SBTs are requested to facilitate the discussion to guide Sector CPD group members on the right track.

Issues and challenges derived from premature understanding and mastery on training contents should be solved within the Sector CPD group in cooperation with sector and schools. Giving supplementary sessions by SBT, lesson observations and peer material developments are the possible measures/solutions. Sharing good practices among group members could also inspire solutions.

SEOs and SBTs are expected to plan and facilitate such activities as follow-up activities. Developing such plan for follow-up activities should be included in this review session as well.

Among the issues and challenges the teachers have, those issues that are difficult to find measures/solutions by sector / schools should be reported to DCC (DEOs) and TEMP/REB.

3.4.2 Follow-up activities

After the review session, follow-up activities should be conducted according to the action plan developed in review session. SEOs and SBTs should lead and facilitate planning and implementation of follow up activities. Follow up activities can take place at the sector or at the school. It is important to plan follow-up activities in a way that is feasible and is effective in generating the expected impact. Combination of various T/L improvement activities, like those introduced in review session section, can accelerate the mastery of CBC. Series of lesson observation in group members is the excellent idea so that teachers in the group can easily develop their mutual understanding. Resource persons other than SBTs, such as Mentor Trainers (MTs), School-Based Mentors (SBMs) and School Subject Leaders (SSL), are expected to play a role of resource persons in the follow-up activities, by facilitating sessions and providing expertise.

These activities are quite similar to the original School-Based INSET. If your school has already started SBI at school level, you may unite SBIs – Sector/School CPD together.

4. Other related issues of Sector-based CPD

4.1 Monitoring and Evaluation

**Detailed monitoring system and structure and tools will be finalized by referring the current situation and progress of Sector-based CPD. Thus details will be communicated later.*

Sector-based CPD in Rwanda, as you have seen in this guideline, is designed by considering the following points well to ensure that all teachers in Rwanda become competent.

- ✓ Delivering the same CBC training contents across the country
- ✓ Engaging all teachers in CBC training
- ✓ Provide all teachers opportunities for Continuous Professional Development (CPD)

Hence the main focus of monitoring and evaluation (M&E) for Sector-based CPD will be designed to study the above points. The below table summarize the major M&E points.

Table 4-1 Summary of M&E Areas and Points

M&E Areas	M&E points
Delivery of contents	<ul style="list-style-type: none"> ✓ All contents are taught as expected? ✓ All SBTs present? ✓ All training centers are prepared?
Engagement in CBC training (Sector-based CPD sessions)	<ul style="list-style-type: none"> ✓ All teachers participated? ✓ Degree of understanding of teachers ✓ What issues and challenges are raised in review? ✓ What measures/solutions proposed?
Engagement in CPD (Follow-ups and School-based CPD)	<ul style="list-style-type: none"> ✓ All teachers participated? ✓ What activities are conducted? ✓ What issues and challenges are raised? ✓ What good practices are generated through School-based CPD activities?

As issues and challenges in Sector-based CPD are raised along with the context of CBC training, these may be linked to CBC issues. Thus this M&E process covers a part of CBC monitoring itself (Findings should be feedback to CPMD/REB as well)

4.2 Measures for Absent Teachers

CBC training is a mandatory for all in-service teachers in Rwandan schools which implement CBC. No teacher is allowed to absent from this training. This training is cascaded to sectors to reduce the burden of teachers accessing to the training. Districts, sectors and schools are expected to provide full support for all teachers to attend the trainings.

Meanwhile, if teachers cannot attend the trainings with some unavoidable reasons, districts, sectors and schools are expected to consider alternative trainings for absentees to assure quality of lessons in your districts, sectors and schools.

Training of absentee teachers by fellow teachers in the same schools can be the one of the efficient solutions.

Member List for Sector CPD Group

Name of the Group: _____

Name of SBT: _____

Date: _____

#	Name	Subject	Grade	Affiliation (School)	Phone
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Name of SEO: _____

Date: _____

Action Plan for Sector-based CPD Sessions

Name of the Group: _____

Name of SBT: _____

Date: _____

Learning Area	Sessions	Schedule (Day/Time)	Venue
0. Orientation	0.1 Development of Action Plan (this session)		
1. Understanding the Syllabus	1.1 Understanding the Syllabus		
	1.2 Competences		
	1.3 Cross-Cutting Issues		
2. Pedagogy	2.1 Facilitating Inclusive Classrooms		
	2.2 Praise & Error Correction		
	2.3 Using Games and Songs		
	2.4 Managing Large Classes		
	2.5 Making and Gathering T&L Materials		
	2.6 Using Texts/Books in the Classroom		
	2.7 Integrating ICT and Digital Materials in the Class		
3. Developing Scheme of Work	3.1 Using Syllabi in Developing Scheme of Work		
	3.2 Writing a Scheme of Work		
4. Developing Lesson Plans	4.1 Why Lesson Plan		
	4.2 Writing Instructional Objectives		
	4.3 Sequencing Activities		
	4.4 Integrating Cross Cutting Issues & Generic Competences		
	4.5 Writing Lesson Plans		
	4.6 Using T&L Materials		
5. General Skills	5.1 Understanding ICT Concepts		
	5.2 Computers and Internet		
	5.3 Integration of ICT in Teaching & Learning		
	5.4 Introduction to Assessment		
	5.5 Assessment Techniques (formative & summative)		
	5.6 Using Assessment Data		
	5.7 Facilitation Skills		
	5.8 Giving/Receiving Feedback		
6. Review session	6. Review of the Sector-based CPDs		

Name of SEO: _____

Date: _____

添付 12. 授業研究実践ガイド

A photograph of a classroom where several young students are sitting at wooden desks. Many of the students have their hands raised, suggesting an active or participatory learning session. The students are wearing yellow and green uniforms. In the background, a camera on a tripod is visible, indicating that the scene might be part of a video recording or a formal observation. The text 'LESSON STUDY PRACTICAL GUIDE' is overlaid in large, bold, yellow letters on a semi-transparent green rectangular background.

LESSON STUDY PRACTICAL GUIDE

SI IQS Project
November 2019



How to use the Lesson Study Practical Guide

This guide has been designed for District CPD Committees (SCCs), Sector CPD Committees (SCCs) and schools to understand the effectiveness of Lesson Study and to know how to put it into practice.

As a DCC/SCC member, you can use this guide to encourage schools to understand the effectiveness of Lesson Study and support them when there are challenges in implementation. As a teacher, you can try to conduct Lesson Study by following the steps suggested in this guide.

*Effective teacher learning must be built into teachers' daily and weekly schedules
Schools must become the places where teachers, not just students, learn.*

Stigler and Hiebert (2009, p.37)

Your support and effort is greatly appreciated.

Acknowledgement

This guide builds on the collaborative work in Lesson Study at six pilot schools of the SIIQS project, drawing on experience of and feedback from math and science teachers of these schools. The Project expresses its gratitude to the pilot schools and DCCs/SCCs which have supported CPD at these schools:

Gasabo District	:	GS Kabuye Catholique, DCC Gasabo, SCC Jabana
Kayonza District	:	GS Mukarange Catholique, DCC Kayonza, SCC Mukarange
Musanze District	:	GS Notre Dame des Apôtres Rwaza, DCC Musanze, SCC Remera
Rulindo District	:	EP Buhande, DCC Rulindo, SCC Bushoki
Rwamagana District	:	GS APAGIE Musha, GS St Aloys Rwamagana, DCC Rwamagana, SCC Musha, SCC Kigabiro

Reference in this Guide

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Introduction

1.1 What is Lesson Study?

Lesson Study is one of the Continuous Professional Development (CPD) activities to **improve the way teachers teach**. They work together in subject groups to research what happens in their lessons and to find solutions to improve their teaching. It is called “study” because it is an activity to verify effectiveness of a teaching approach, using evidence.

During Lesson Study, teachers **investigate the best teaching and learning methods for learners** in their school. In a live lesson, teacher-observers research how a lesson-giver’s actions and facilitation, especially on specific problems (research topics) are effective in helping learners during lessons, and then report on the results so that all Lesson Study group members can benefit from it.

The Lesson Study process forms a continuous cycle.

1.2 History of Lesson Study in Japan

Lesson Study started in Japan more than 100 years ago after a new school system was introduced. Teachers wanted to apply better teaching methods for learners than the one the government recommended. Thus, they developed and proposed various teaching methods through Lesson Study Communities. Lesson Study has been conducted to date in Japan and expanded to other countries, serving various teaching approaches to the ever-changing education sector.

1.3 Effective CPD model

Darling-Hammond, Hyler and Gardner (2017) identified seven characteristics of effective teacher professional development. Lesson Study comprises all these features as shown in the table below.

Table 1: Seven Characteristics of Effective Teacher Professional Development

Effective CPD Model Feature	Description	Interpretation in Lesson Study
1: Is content focused	Focuses on teaching strategies associated with specific curriculum content within teachers’ classroom contexts.	Targets a specific lesson and develops a lesson plan
2: Incorporate active learning	Engages teachers directly in designing and trying out teaching strategies, while providing them an opportunity to engage in the same style of learning they are designing for their students.	Offers teachers active and participatory lesson planning, micro-teaching, research lesson and reflection
3: Supports collaboration	Creates space for teachers to share ideas and collaborate in their learning, often in job-embedded contexts	Encourages teachers to discuss and collaborate to develop lessons together.
4: Uses models of effective practice	Provides teachers with a clear vision of what best practices look like.	Applies a certain technique or model in the research lesson.
5: Provides coaching and expert support	Shares expertise about content and evidence-based practices, focused directly on teachers’ individual needs.	Engages experts, DOS, SBM and SSL in CPD to give advices in the context.
6: Offers feedback and reflection	Provides built-in time for teachers to think about, receive input on, and make changes to their practice by facilitating reflection and soliciting feedback	Ensures the time for reflection and revision of the lesson plan both after micro-teaching and at the end of the program
7: Is of sustained duration	Provides teachers with adequate time to learn, practice, implement, and reflect upon new strategies that facilitate changes in their practice.	Consists of continuous plan, do and reflect cycle integrated in daily school life.

Lesson Study Steps

How should we conduct Lesson Study at school?



Step 1: Research topic selection (2–3 hours)

- ✓ Brainstorm to decide the necessary research topic (learning problems that learners currently face, challenges that teachers have with teaching etc.)
- ✓ Focus on Pedagogical Content Knowledge (PCK). PCK is a combination of what teachers know about teaching (pedagogical knowledge), and what they know about their subject (subject knowledge).

What is it?

Before starting Lesson Study, teachers form a Lesson Study group composed of those who teach the same subject or grades. One of them will deliver the research lesson on behalf of the group. Involvement of the school leaders (head teacher, deputy head teacher/director of study), and senior teachers (e.g. school subject leader/school-based mentor) and collaboration with them are highly desirable. It would be much better if the group can invite external resource persons such as the Sector Education Officer (SEO) and development partners. Then, the group decides on a problem to be addressed and the research lesson topic. The topic should be chosen from challenging ones for learners to learn and/or for teachers to teach. It is also possible to give some quizzes and identify learners' weak areas. Members agree on the research topic by discussing what pedagogical problem to solve, and what to achieve through Lesson Study. They should focus on Pedagogical Content Knowledge (PCK), a combination of what teachers know about teaching (pedagogical knowledge), and what they know about their subject (subject knowledge). Subsequently, they brainstorm as many practical measures and strategies as possible to solve the identified problem.

Step 2: Lesson Design (A few weeks)

- ✓ Conduct a study on the content of the unit
- ✓ Agree on a lesson schedule
- ✓ Develop a lesson plan and teaching materials with colleagues

What is it?

The second step is lesson design. Ideally, it starts about a month before the research lesson, as it may take a few weeks. Members conduct a study on the content of the topic, including a study on any connections with topics learned previously and those to be learned in the future, by referring to the Scheme of Work, syllabus and textbook. It is important to be aware of the expected date of the research lesson and class, and agree on the schedule for the day. Teachers should write down as detailed as possible when developing a lesson plan collaboratively in the group. Above all, they are expected to incorporate learners' perspectives – that is, to include possible learners responses to the teacher's action. They may question themselves, for example:

- *How are learners likely to think about this?*
- *What ideas are they likely to have?*
- *What questions are they likely to ask?*
- *What misunderstandings or mistakes are they likely to make?*

During the lesson design period, the Lesson Study group also develops/prepares the necessary teaching aids (flash cards, posters, materials for an experiment/observation etc.).

Lesson Study Steps



Step 3: Lesson Practice (Micro-teaching)

(A few weeks)

- ✓ One teacher rehearses the lesson. Micro-teaching (role-play) is often used to do this, with one group member acting as the teacher and the others acting as learners.
- ✓ After micro-teaching, the group gives feedback on the lesson plan focusing on the research topic and they revise it collectively.

What is it?

After development of the lesson plan, it is recommended that the teacher practices developing a specific teaching method and to verify that it can work well before the actual lesson delivery. Micro-teaching is often used for these purposes at this stage. The teacher teaches the planned lesson to other group members who act as learners. It can be a whole lesson or the group can only examine a certain component of the lesson plan (i.e. for a period of five to ten minutes). Micro-teaching can even be done with a small group of actual learners, if conditions permit, to get real reactions from them. In this case, other members of the Lesson Study group observe the micro-teaching.

After the micro-teaching, the group discusses what went as expected and what did not, and make modifications on the lesson plan. If group members can take photos or video recording during the micro teaching, these can be useful content for discussion. This process continues until the group confirms/observes achievement of the learning objective in micro-teaching.



Step 4: Research Lesson (Lesson Implementation)

(1 period)

- The representative teacher delivers the lesson in an actual class and other members observe it by using a lesson observation form. Observers should;
- ✓ Observe the achievements of learners with regards to the research topic
 - ✓ Move around the classroom to check how learners learn and to record observations (evidence) for discussion in the Reflection stage.

What is it?

It is time to deliver the lesson to an actual class. The teacher delivers, while others observe. This is called “research lesson” because teachers analyze the effectiveness of a teaching method from lesson observation.

To make the most of the research lesson, learners should be made aware of the purpose of the research lesson and roles of observers. When there are observers who did not participate in the steps of Lesson Study, pre-lesson briefing may be useful. Providing photocopies of the lesson plan for observers would help them quickly understand.

The pre-lesson briefing can include:

- The schedule and flow for the day
- Information about the class (learners’ performance level, what they should already know with regards to the topic, and any prior activities on the topic, etc.)
- Sharing the lesson plan

A sample of the lesson observation form is attached in Appendix 1.



Guide to Observers

It is important that lesson observation in Lesson Study is not associated with assessing teachers. Lesson Study is an opportunity for a teacher to try something new, from which everyone will learn.

Below is the guide to observers about the research lesson.

Reference: Guide for professional development using Lesson Study (based on problem solving with Bowland Maths materials) <https://www.bowlandmaths.org.uk/lessonstudy/guide.html>

How should we observe?

- Read the lesson plan before classroom observation.
- Observe the learners learning that is taking place and do not make judgements about the teaching of the teacher.
- Focus on;
 - learners learning
 - time management
 - class management
 - use of teaching materials (textbooks, ICT, locally available materials etc.)
 - lesson objectives achieved or not?
- Refrain from talking to the learners or interfering with group discussions.
- Move around the classroom to constantly check how learners learn.
- Make notes and record observations (evidence) for discussion in the Reflection stage.



Step 5: Reflection (Post-lesson conference) (2-3 hours)

Reflect on the observed lesson by using a post lesson conference (ideally right after the observation).

- ✓ Give feedback on the research topic based on observation results,
- ✓ Discuss alternative ideas to address issues raised during the feedback session,
- ✓ Review the entire process of Lesson Study itself.

The Lesson Study group makes a Lesson Study report later.

What is it?

The reflection or post-lesson discussion should take place on the same day and in the same classroom as the research lesson.

The discussion can be comprised of four parts;

1. The Lesson Study group describes the lesson plan, which parts they carefully designed and the reasons behind it.
2. The observers describe what they observed in relation to the research topic (the problem to be addressed).
3. A wider discussion including issues other than the research topic to enable suggestions for any revisions of the lesson plan and implication for future lessons.
4. Resource persons such as the SEO and development partners highlight key points and suggest improvements.

Lesson Study is a Continuous Learning Process...

A reflection in Lesson Study leads to a plan for the next Lesson Study even if the subject or topic changes. As teachers work together to conduct Lesson Studies, experience as a school is accumulated. Therefore, not only the performance of one teacher can be enhanced, but also the teaching level of entire school is expected to improve.

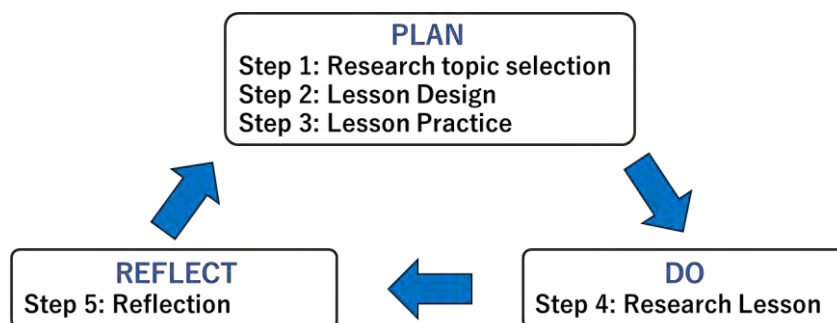


Figure 1: Continuous Lesson Study Process

Experience at Pilot Schools

SIIQS Project supported six pilot schools in implementing Lesson Study in math and science in 2017 to 2019.

Table 2: List of Pilot Schools

School	District	Category	# of Lesson Study cycles conducted
EP Buhande	Rulindo	Primary	4
GS Kabuye Catholique	Gasabo	9 year basic education	2
GS Mukarange Catholique	Kayanza	12 year basic education	3
GS St Aloys Rwamagana	Rwamagana	Secondary	1
GS APAGIE Musha	Rwamagana	Secondary	4
GS Notre Dame des Apôtres Rwaza	Musanze	Secondary	3

The following sections are findings from the Project Endline Survey in June 2019, which compared the status of teaching and learning between six pilot schools and five non-pilot schools (See Table 3 for the sample size).

Table 3: Sample Size of the Project Endline Survey

Survey items	Pilot Schools				Non-pilot schools			
	Primary	Lower Secondary	Upper Secondary	Total	Primary	Lower Secondary	Upper Secondary	Total
Lesson plan	6	9	8	23	6	6	2	14
Lesson video	6	9	8	23	6	8	4	18
Learning Achievement Test	422	449	442	1,313	499	374	160	1,033
Questionnaire for teachers				55				46

Lesson Study Improves Teaching Practice

Lesson Planning

In the National Teacher CPD Framework, lesson plans should include the following information (See Competence 2.1 of the Framework for more details);

- ◆ Clear and measurable learning outcomes and objectives, and activities to achieve them
- ◆ Learning outcomes and objectives support learners to move from simple and familiar to more complex and sophisticated knowledge and skills
- ◆ Regular revision of learning and learning assessments
- ◆ Adaptions for specific learners who, for example, require where extra guidance or extension tasks
- ◆ Use a range of teaching learning resources and vary interaction patterns
- ◆ Classroom layout to ensure all learners can participate and learn

Source: Rwanda Education Board. (2019).

As a result of Lesson Study, lesson plans of the pilot schools have become more structured, specifying the **steps of the learning activity** in the “Description of teaching and learning activity” section. Activities of both the teacher and learners were arranged in sequence. They contain **“expected (correct) answers of learners”** so that a teacher and observers can properly assess learning achievement timely during the lesson. These activities, as well as those in the “Assessment” section were also consistent with the objectives of the lesson. **Teaching aids are graphically illustrated** in the plans.

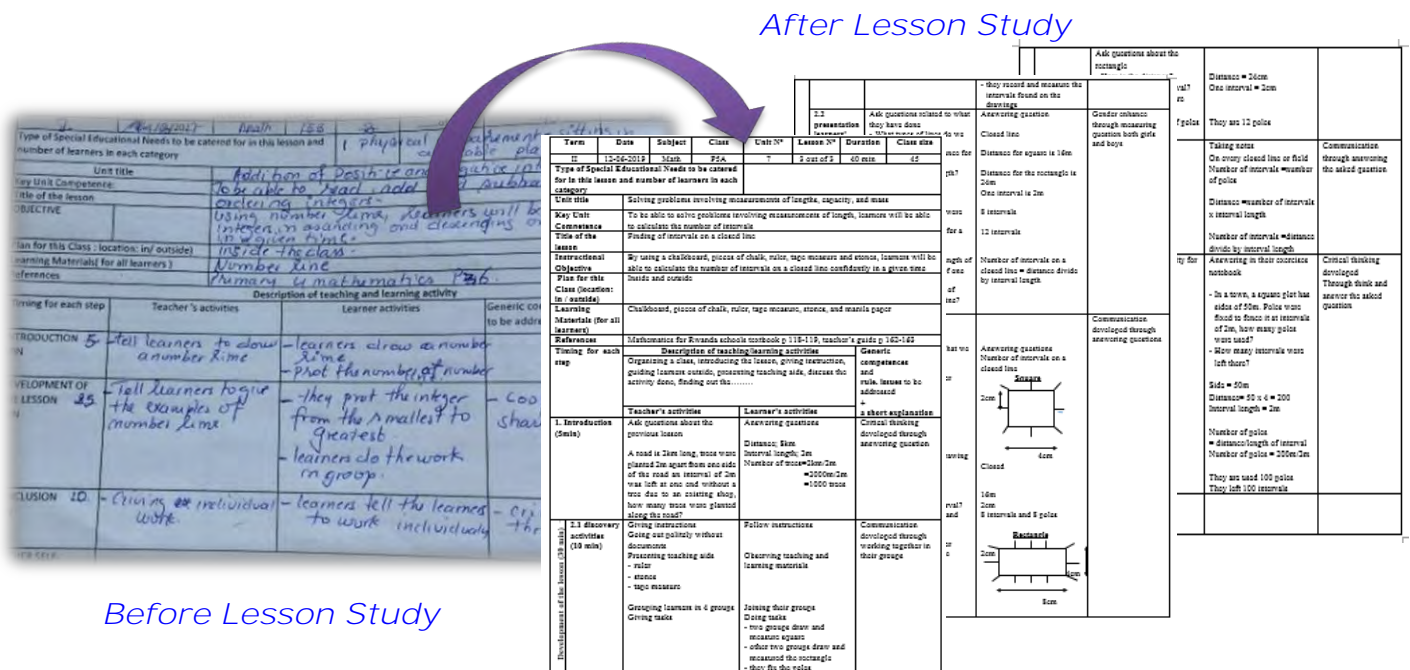


Figure 2: Lesson Plans Before and After Lesson Study

Two examples of the lesson plans developed by pilot school teachers are attached in Appendix 2, with comments on good points.

Teachers' Facilitation

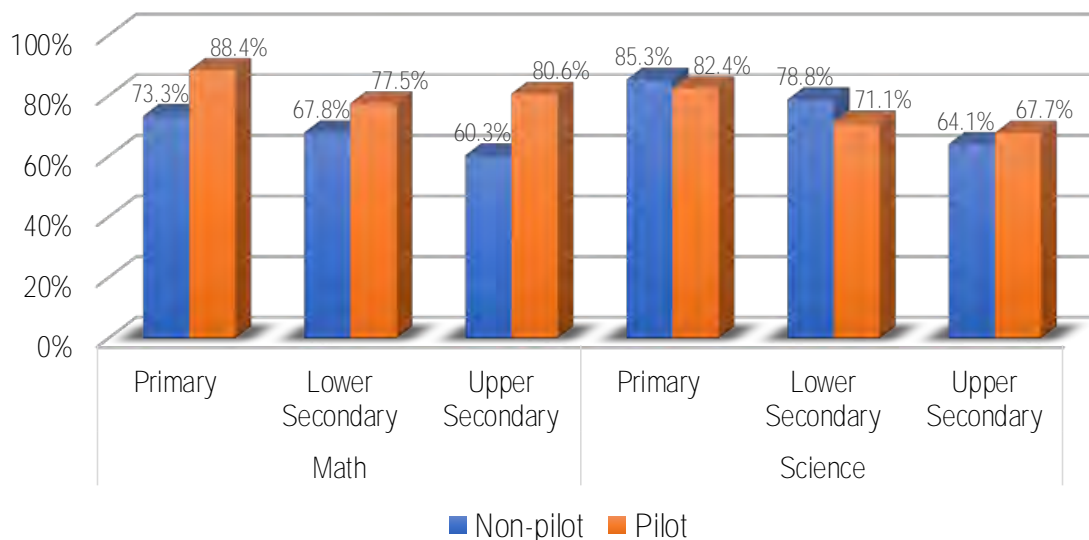
A teacher uses lessons to teach necessary subject matter and support learners in learning. We assumed that a teacher who became familiar with **Learner-Centered Methodology** through Lesson Study used more dialogue towards learning support and less for teaching. To verify this assumption, we conducted a discourse analysis of math and science lessons at pilot and non-pilot schools by transcribing and classifying teacher talks into codes. The codes were then categorized into *Learning support*, *Teaching* and *Others* according to the nature of the talks. The classification is shown in the box below.

Learning Support Codes: Closed Question, Open Question, Rephrase teacher, Rephrase student, Confirmation, Instruction, Encouragement

Teaching Codes: Explanation, Justification

(Others: Call attention, Point student, Clap, Impossible to listen, Others)

The average frequency of “Learning Support” codes is illustrated in Figure 3. The rate of “Learning Support” code frequency in the pilot schools is higher than that in the non-pilot schools with some exceptions in science in primary and lower secondary levels. This implies that teachers in the pilot schools used more open dialogue to support learning, whereas teachers in the non-pilot schools directly taught subject matters. The teachers at the pilot schools improved facilitation skills and applied “**Indirect Teaching**”, the ideal pedagogy in CBC, which gives learners opportunities to participate in their learning while teacher serves as a guide.



NB: “Others” codes were eliminated from this analysis to focus on essential classroom practice.

Figure 3: Rate of Learning Support by Intervention and School Level

Examples of Open Questions

The following are examples of open questions that can encourage learners to think deeply.



The square has fifty meters. This fifty meter’s side is 50m. How can we calculate the distance or the perimeters of that square? (Math in primary level)



A person is sitting on the chair. Between the person and the chair, which one is exerting the force on the other? Explain your answer based on Newton laws of motion. (Science in secondary level)

Lesson Study Improves Learners' Performance

Open-ended Responses

As teachers in the pilot schools applied indirect teaching more, the average frequency of open-ended responses was higher in the pilot schools with an exception in math in primary level (Figure 4). Overall, learners in the pilot schools were given more opportunities to express their broader ideas than in the non-pilot schools.

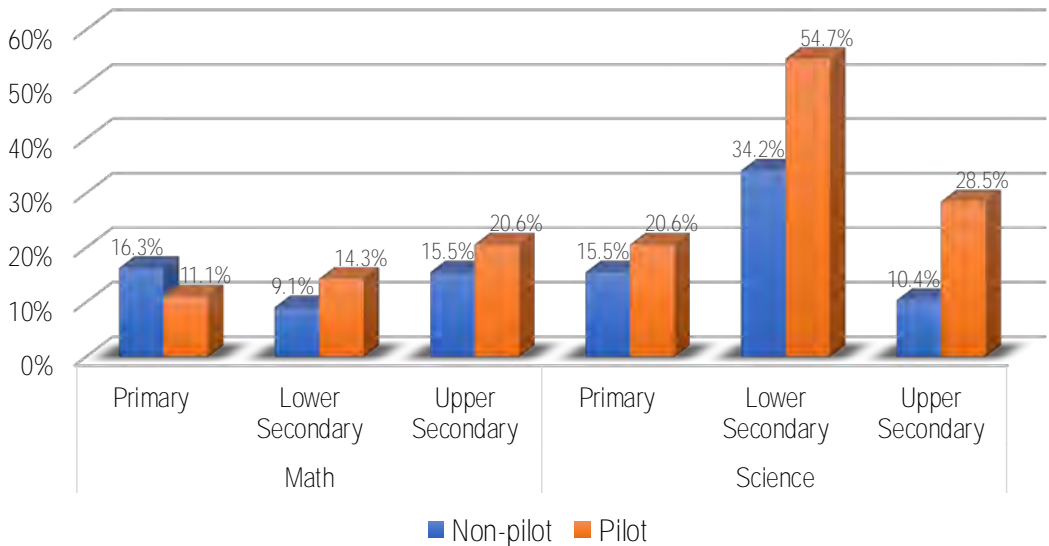


Figure 4: Rate of Open-ended Responses by Intervention and School Level

Interaction among Learners

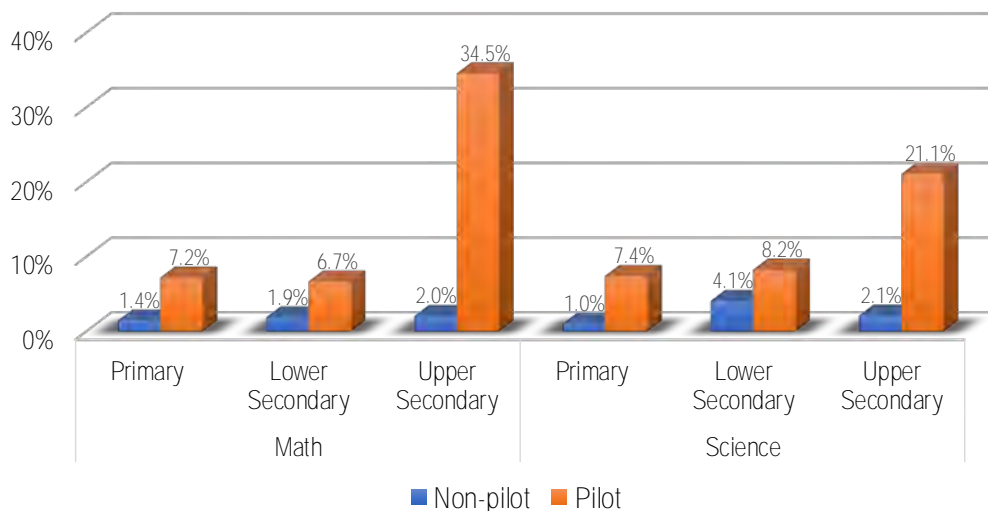
We also assumed that Learner-Centered Methodology activates more communication among learners compared to “teacher-centered lesson” where learners just respond to teachers. We thus, transcribed and classified learners’ talks into codes. The codes were then categorized into *To teacher* and *To students* according to the direction of the talks, as well as *Others*. The classification is shown in the box below.

To Teacher Codes: Yes / No answer to teacher, One term answer to teacher, Question to teacher, Opinion to teacher, Repeating or just reading, Silent to teacher, Writing or gesture to teacher

To Students Codes: Yes / No answer to another student, One term answer to another student, Question to another student, Opinion to another student, Silent to another student, Presentation, Writing or gesture to another student

(Others: Point student, Clap, Incomplete answer, Impossible to listen, Others)

We found similar trends both in mathematics and science. The rate of “To students” code frequency in the pilot school is higher than that in the non-pilot schools at all levels as shown in Figure 5. It implies that communication among students in the pilot schools was more active, whereas students in the non-pilot schools tended to communicate directly with the teacher.



NB: "Others" codes were eliminated from this analysis to focus on essential classroom practice.

Figure 5: Rate of Interaction among Learners by Intervention and School Level

Learning Achievement

The Project designed multiple-choice type mathematics and science tests for P6/S3/S6 learners at the pilot and non-pilot schools. The questions in the tests were basically chosen from new CBC-based textbooks authorized by REB, and some were selected from major international assessment tests such as Trends in International Mathematics and Science Study (TIMSS) and Programme for International Student Assessment (PISA). The questions covered content up to P4, S1 and S4 for primary, lower secondary and upper secondary level tests respectively. Figure 6 shows average scores of the tests by intervention (pilot/non-pilot) and school levels.

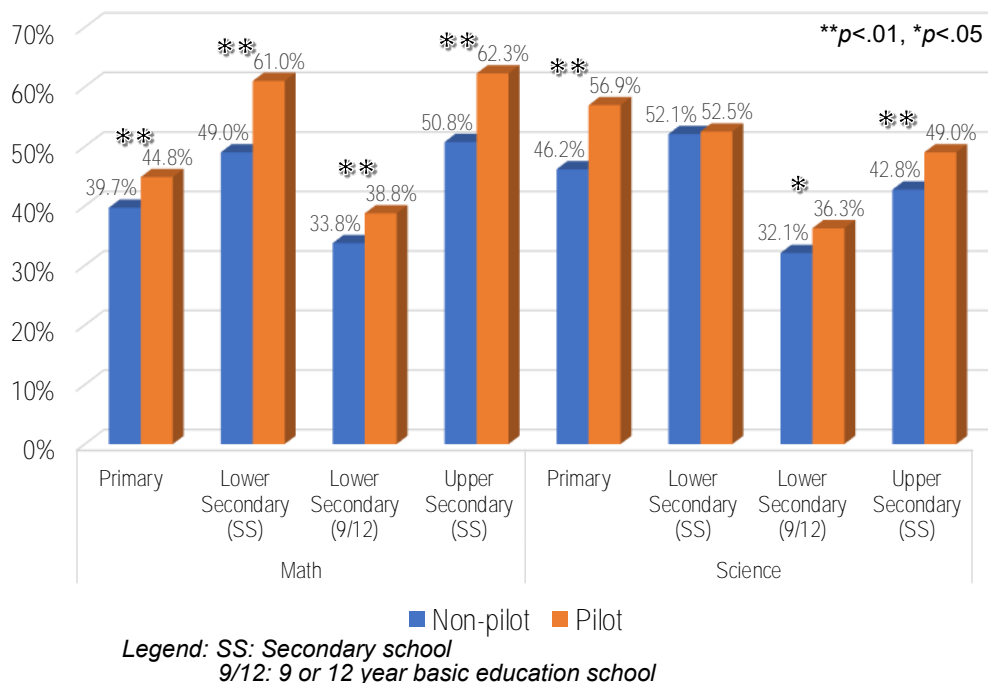


Figure 6: Learning Achievement Test Results by Intervention and School Level

In mathematics, the average scores of the pilot schools were significantly higher than those of the non-pilot schools. In science, the average scores of the pilot schools were significantly higher than those of the non-pilot schools at all levels except for the lower secondary level at secondary schools. The results imply that the "indirect teaching" induced by Lesson Study improved learners' performance of the pilot schools.

Lesson Study Changes Teachers' Belief

Understanding of CBC

The Project investigated how teachers in the pilot and non-pilot schools understood specific teaching behaviors. Questions were prepared based on “misconceptions” confirmed by the Project throughout the project activities. Likert Scale questions (on a four-level grading scale; strongly disagree, disagree, agree, strongly agree) were given to teachers to rate their degree of agreement. Figure 7 shows the rate of teachers who understood specific teaching behaviors in a desirable direction. For instance, for Q1, 92.6% and 84.8% of teachers in the pilot and non-pilot schools respectively answered that they “strongly disagree” or “disagree” with the statement. The pilot school teachers understood the teaching behavior properly. The pilot school teachers’ responses suggest that they changed their perception or awareness of CBC in a desirable direction.

Preferable Answers to the Questions about Teaching Behavior

Q1: When students do not understand a concept, it is because students do not study harder.

A1: Disagree. Learners' understanding also depends on teaching quality and encouragement by the teacher.

Q2: When students do not understand a learning concept, it is because the teacher did not use effective L/T strategies.

A2: Agree. Lesson quality assurance is primarily the teachers' obligation.

Q3: When a student gives a wrong answer, teacher should call another student to get correct answer immediately.

A3: Disagree. The reason behind the wrong answer is meaningful for formative assessment.

Q4: Teachers should rely on students' oral responses than students' face expressions and behaviors for formative assessment.

A4: Disagree. Teachers need to observe and collect various information to conduct formative assessment.

Q5: Blackboard writing should be erased when students solve assessment question at the end of a lesson.

A5: Disagree. The assessment at the end of the lesson is not the occasion for recalling of knowledge learned but for applying the knowledge learned to solve problems.

Q6: Lesson conclusion should be given by teacher.

A6: Disagree. The new knowledge learned should be constructed by learners.

Q7: CBC should always include group work.

A7: Disagree. Teachers in CBC are encouraged to use various suitable techniques not only group work.

Q8: To treat learners equal, teachers should provide the same instruction to all learners regardless of their understanding.

A8: Disagree. Teachers in CBC are encouraged to choose suitable instructions according to individual learning needs to be inclusive.

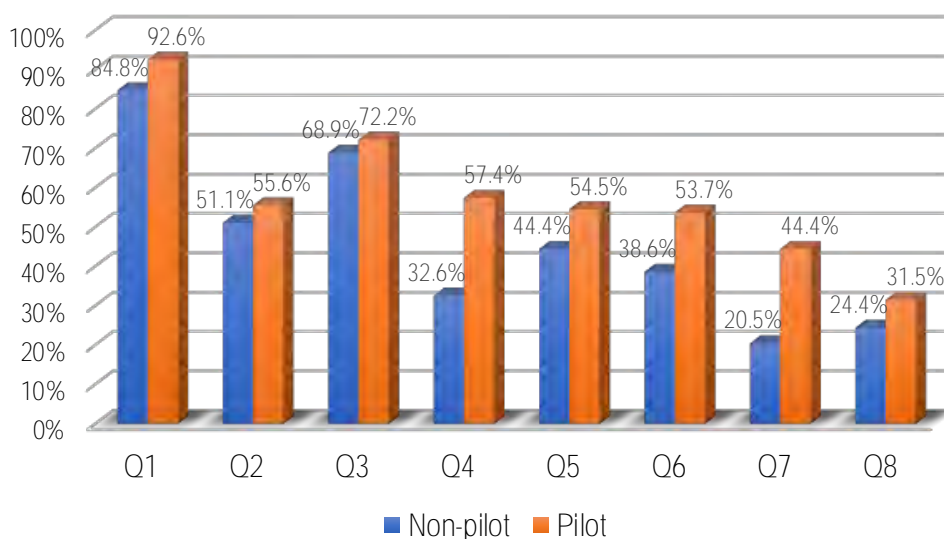


Figure 7: Rate of Teachers who Understood Specific Teaching Behaviors in a Desirable Direction

Perception about School Circumstances

Five Factors influencing teachers' participation in CPD

The Project conducted an exploratory factor analysis in 2017 to investigate characteristics of teachers who did not attend trainings. It uncovered five factors and highlighted the importance of supporting an environment that encourages teacher participation in CPD.

Five factors influencing teachers' participation in CPD

Factor 1: Shared School Vision

Factor 2: Participatory School Management

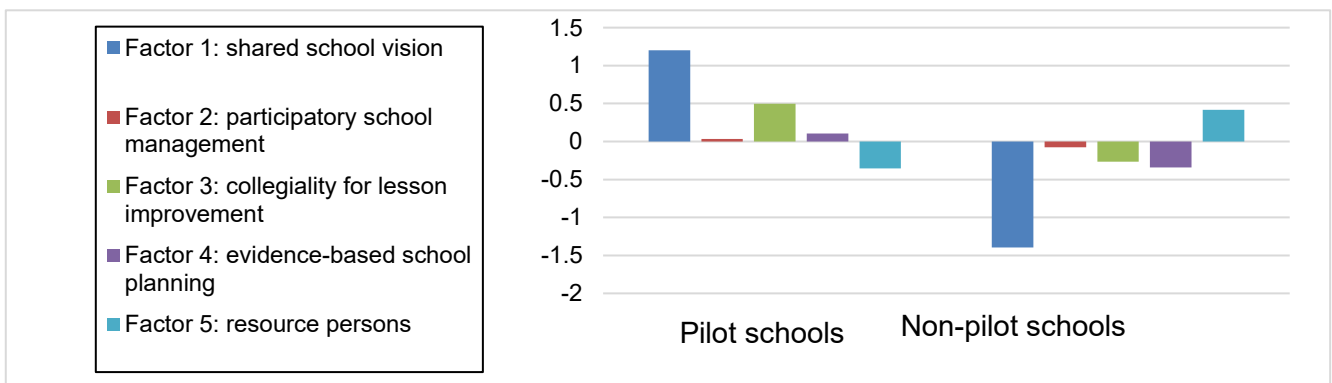
Factor 3: Collegiality for Lesson Improvement

Factor 4: Evidence-based School Planning

Factor 5: Resource Persons

Findings from the Exploratory Factor Analysis

Figure 8 shows the factor scores by intervention (Pilot/Non-pilot), using teachers' responses to questions related to school circumstances. The pilot school teachers' scores for Factor 1 (shared school vision) and Factor 3 (collegiality for lesson improvement) were positive in contrast to the non-pilot school teachers' scores, while the score for Factor 5 (resource persons) was negative. Lesson Study may have contributed in transforming school visions into clear missions about teaching practices. Undoubtedly, it also promoted collegiality through collaboration. These results certainly verify the effectiveness of Lesson Study.



NB: The negative score for Factor 5 for pilot school teachers may imply that SBMs and SSLs had less of a chance to play a leading role in CPD because the project members served as resource persons in this Lesson Study program.

Figure 8: Factor Scores by Intervention

Quotes from literature about Lesson Study

Lesson study is a comprehensive program that can provide teachers with opportunities for practice-based professional development that, until now, they have been denied. – Stigler and Hiebert (1999, p.152) –

The lesson-study process has an unrelenting focus on student learning. All efforts to improve lessons are evaluated with respect to clearly specified learning goals, and revisions are always justified with respect to student thinking and learning. – Stigler and Hiebert (1999, p.121) –

Teachers & Education Officer's Voices about Lesson Study



UJENEZA Seraphine
Math teacher,
EP Buhande

Lesson study has given me an opportunity to learn from colleagues to improve my lessons and learners' outcomes. Making an effective lesson plan is one of benefits that I have gained from the Lesson Study program. It has made me a self-confident teacher in front of both learners and entire community



KANAMUGIRE Pascal
Head teacher,
GS Mukarange Catholique

Lesson Study has been a good opportunity for teachers to sit together to discuss issues in the teaching and learning process, challenge one another and learn from each other. Lesson Study is certainly helping in transforming curriculum to competences.



HITIYISE J Damascène
Director of Study,
APAGIE Musha

Teachers' attitudes and behaviors have gradually improved and we can attribute this improvement to Lesson Study. Throughout the course of Lesson Study, teachers have been able to open and reveal their weaknesses and welcomed their fellow teachers for support.



NUWAYO Jean Denys
DDE Rulindo

Lesson Study has promoted sharing and collaboration among teachers. Newly recruited teachers learn from experienced teachers. Even experienced teachers learn how to adapt themselves to change. CBC implies that teachers should change their behavior and attitude. Lesson Study helps teachers to focus on their subject and figure out how to teach challenging topics.



Solutions to Some Challenges

Q1 Should we always include group work in CBC lessons?

A1 It is not necessary to use group work in all lessons. Teachers should be encouraged to use different methods depending on the advantages, such as individual work, solve an example question as a whole class with the teacher's guided instruction, as well as group work.

Q2 How can we address teachers who are reluctant to participate in CPD including Lesson Study?

A2 The main reason for such an attitude may be that they do not really understand what they would benefit from participating in CPD. School leaders and School-based Mentors can convince them by explaining the benefits of CPD including Lesson Study.

Q3 How can our school secure CPD time in the teachers' timetable?

A3 The following are examples of some schools putting CPD time in the timetables.

- Conduct CPD time when learners clean the school
- Set CPD time by department levels (teachers in the same department have CPD time in the same periods)
- **Manipulate teachers' timetables and create one day without teaching duties per week so that they can spend the day planning lessons, marking, etc.**

Q4 How can we get budget for Lesson Study?

A4 Lesson Study basically take place at school level, using available resources. Therefore, there should not need much budget. But it would be good if the school uses capitation grant and provides facilitation such as lunch, transportation when necessary.



Appendix 1: Sample of Lesson observation form

LESSON OBSERVATION FORM

School name: Teacher's name:

Class: Number of learners:out of..... Number of learners with SEN: ... Subject:

Unit title: Lesson title:

Lesson n°..... out of Period: Date:

Note: Please focus on learners learning, time management, class management and use of teaching materials (textbooks, ICT, locally available materials, etc.).

Phase	Observation on teacher's activities	Observation on learners' activities
Introduction		
Development		
Conclusion		

Analysis and feedback

	Observation on teacher's activities	Observation on learners' activities
Strong Points		
Areas for Improvement		

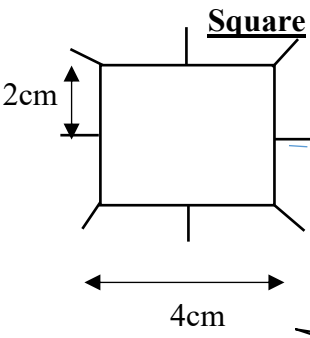
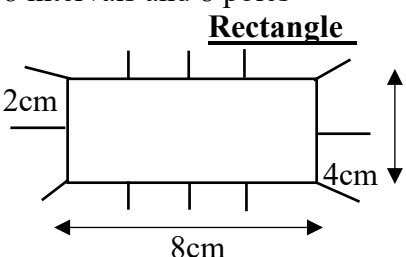
LESSON PLAN

School Name: XXXXXXXXXX

Teacher's name: XXXXXXXXXX

Term	Date	Subject	Class	Unit N°	Lesson N°	Duration	Class size	
II	12-06-2019	Math	P5A	7	3 out of 3	40 min	45	
Type of Special Educational Needs to be catered for in this lesson and number of learners in each category								
Unit title		Solving problems involving measurements of lengths, capacity, and mass						
Key Unit Competence		To be able to solve problems involving measurements of length, learners will be able to calculate the number of intervals						
Title of the lesson		Finding of intervals on a closed line						
Instructional Objective		By using a chalkboard, pieces of chalk, ruler, tape measure and stones, learners will be able to calculate the number of intervals on a closed line confidently in a given time						
Plan for this Class (location: in / outside)		Inside and outside						
Learning Materials (for all learners)		Chalkboard, pieces of chalk, ruler, tape measure, stones, and manila paper						
References		Mathematics for Rwanda schools textbook p 118-119, teacher's guide p 162-163						
Timing for each step		Description of teaching/learning activities				Generic competences and rule. issues to be addressed + a short explanation		
		Teacher's activities		Learner's activities				
1. Introduction (5min)		Ask questions about the previous lesson		Answering questions		Critical thinking developed through answering question		
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Concreate guiding questions and expected outputs engage learners in lesson </div>		A road is 2km long, trees were planted 2m apart from one side of the road an interval of 2m was left at one end without a tree due to an existing shop, how many trees were planted along the road?		Distance; 8km Interval length; 2m Number of trees= $2\text{km}/2\text{m}$ $=2000\text{m}/2\text{m}$ $=1000$ trees				
Development of the lesson (30 min)	2.1 discovery activities (10 min)		Giving instructions Going out politely without documents Presenting teaching aids - ruler - stones - tape measure Grouping learners in 4 groups Giving tasks		Follow instructions Observing teaching and learning materials Joining their groups Doing tasks - two groups draw and measure square - other two groups draw and measured the rectangle		Communication developed through working together in their groups	
							<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Outside activities with various materials provide exclusive learning experiences </div>	

Appendix 2: Example of a lesson plan (P5 math)

			<ul style="list-style-type: none"> - they fix the poles - they record and measure the intervals found on the drawings 	
<p>2.2 presentation learners' findings production (10 min)</p>	<p>Ask questions related to what they have done</p> <ul style="list-style-type: none"> - What types of lines do we have? - How long is the distance for squares? - How long is one length? <ul style="list-style-type: none"> - How many intervals were left for square? - How many were left for a rectangle? <ul style="list-style-type: none"> - By considering the length of distance and length of one interval how can we calculate the number of intervals on a closed line? 	<p>Answering question</p> <p>Closed line</p> <p>Distance for square is 16m</p> <p>Distance for the rectangle is 24m</p> <p>One interval is 2m</p> <p>8 intervals</p> <p>12 intervals</p> <p>Number of intervals on a closed line = distance divide by interval length</p>	<p>Gender enhance through measuring question both girls and boys</p>	
<p>2.3 exploitation findings production (5 min)</p>	<p>Tell pupils to enter a classroom</p> <p>Ask questions about what we have studied outside</p> <p>Presenting manila paper where written square</p> <p>Ask questions about drawing</p> <ul style="list-style-type: none"> - Is that figure open or closed? - What is its distance? - How long is one interval? - How many intervals and poles are there? <p>Presenting manila paper where written rectangle</p>	<p>Answering questions</p> <p>Number of intervals on a closed line</p>  <p>Closed</p> <p>16m</p> <p>2cm</p> <p>8 intervals and 8 poles</p> 	<p>Communication developed through answering questions</p>	

Clear images allow learners to move from simple to more complex knowledge, skills and concepts

Appendix 2: Example of a lesson plan (P5 math)

	<p>Ask questions about the rectangle</p> <ul style="list-style-type: none"> - How is the distance? - How long is one interval? - How many intervals are there? - Finding the number of poles there are 	<p>Distance = 24cm One interval = 2cm</p> <p>They are 12 poles</p>	
<p>2.4 conclusion/summary (5min)</p>	<p>Create summary with learners</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Summary is constructed with learners so that learners use higher order thinking skills to retain new knowledge.</p> </div>	<p>Taking notes On every closed line or field Number of intervals =number of poles</p> <p>Distance =number of intervals x interval length</p> <p>Number of intervals =distance divide by interval length</p>	<p>Communication through answering the asked question</p>
<p>3. assessment (5min)</p>	<p>Giving individual activity for evaluation</p>	<p>Answering in their exercises notebook</p> <ul style="list-style-type: none"> - In a town, a square plot has sides of 50m. Poles were fixed to fence it at intervals of 2m, how many poles were used? - How many intervals were left there? <p>Side = 50m Distance= 50 x 4 = 200 Interval length = 2m</p> <p>Number of poles = distance/length of interval Number of poles = 200m/2m</p> <p>They are used 100 poles They left 100 intervals</p>	<p>Critical thinking developed Through think and answer the asked question</p>
<p>Observation of lesson</p>			

LESSON PLAN

School Name: XXXXXXXXXX

Teacher's name: XXXXXXXXXX

Term	Date	Subject	Class	Unit N ^o	Lesson N ^o	Duration	Class size
2	17/06/2019	Biology	S2A	6	3 of 6	80min	50
Type of Special Educational Needs to be catered for in this lesson and number of learners in each category				Take care of slow learners			
Unit title	Enzymes						
Key Unit Competence	To be able to explain the roles of enzymes in living organisms and how they are affected by temperature and pH.						
Title of the lesson	Characteristics of enzymes						
Instructional Objective	By using textbooks, learners should accurately describe the characteristics of enzymes based on enzymes made of substances and substrates						
Plan for this Class (location: in / outside)	Computer laboratory						
Learning Materials (for all learners)	Student's books, manila paper, and marks						
References	Student's book						
Timing for each step	Description of teaching/learning activities					Generic competences and Cross-cutting issues to be addressed + a short explanation	
	Teacher's activities			Learner's activities			
1. Introduction (10min)	Asking some questions - What is an enzyme? - What is a catalyst? - What are the types of enzymes?			Answer teacher's questions		- Critical thinking through remembering the previous lessons - Communication through talk	
2. Development of the lesson (50 min)	2.1 discovery activities (20min) - Ask students to form groups of 6 pupils - Provide materials (student's book) - Ask learners to open the book to page 86 and 87 and ask learners to search for characteristics of enzymes - Monitor the students and help them			Form groups of 6 pupils and share responsibility - Learners listen to instructions-Students conduct research on characteristics of enzymes through student's books		- Inclusive Education through the involvement of girls and boys - Communication developed through discussion - Cooperation developed through interaction - Research and problem solving developed through search engine activity	

Appendix 2: Example of a lesson plan (S2 biology)

	<ul style="list-style-type: none"> - Ask learners to record their findings (note down) and steps undergone 	<ul style="list-style-type: none"> - Learners record their findings (note down) and steps have undergone 	
<p>2.2 presentation learners' findings production (10 min)</p>	<ul style="list-style-type: none"> - Invite representatives of the group to present their findings (one among the group members will be randomly chosen to present) <p>Concrete output the teacher expects or learner should find</p> <ul style="list-style-type: none"> - Request the rest of the class to write down whatever other groups are presenting - Give time to learners to ask for clarifications 	<ul style="list-style-type: none"> - Representatives of groups present their findings * Enzymes are protein in nature * Enzymes are affected by temperature * Enzymes work best at specific pH * Enzymes remain unchanged after catalyzing a reaction * Enzymes catalyze reversibly <p>Reactions</p> <ul style="list-style-type: none"> * Enzymes are substrate-specific * Enzymes work rapidly * Enzymes are efficient <p>Other students follow the presentations</p> <ul style="list-style-type: none"> - Learners write down questions and comments for clarification - Learners ask and comments on each group presentation 	<ul style="list-style-type: none"> - Communication developed through presentation - Interpersonal relations and life skills - Lifelong learning promotes the development of higher-order thinking skills (the way group members assist representative)
<p>2.3 exploitation findings production (10 min)</p>	<ul style="list-style-type: none"> - Ask students to evaluate presentation which one among the characteristics given are correct <p>The teacher helps learners to judge the student findings. Put apart correct and wrong answers in order to clarify the intention of the lesson</p> <ul style="list-style-type: none"> - Check if all characteristics have been covered (*) 	<ul style="list-style-type: none"> - Give comments on the production - Follow to the correction of teacher - Learners ask for clarifications and are comfortable with all the presented findings 	<ul style="list-style-type: none"> - Critical thinking developed through judging information <p>Allow learners to move from simple to more complex knowledge, skills and concepts</p>

Appendix 2: Example of a lesson plan (S2 biology)

<p>2.4 conclusion/summary (10min)</p>	<ul style="list-style-type: none"> - Requesting learners to summarize the characteristics of enzymes by clarifying the characteristics given by themselves - Give time to take notes (summary) 	<ul style="list-style-type: none"> - Participating actively in summarizing the contents - Make short notes 	<ul style="list-style-type: none"> - Creativity and innovation developed by putting information together
<p>3. assessment (20 min)</p>	<p>Engage students to work individually on questions that follow:</p> <p>.....</p> <ul style="list-style-type: none"> - State any 6 characteristics of enzymes - Explain the specificity of enzymes - What do you think is the role of enzymes? 	<p>Do exercise as indicated</p> <p>Learners should clarify:</p> <ul style="list-style-type: none"> - What are enzymes made of? - What factors affect enzyme action? - Do enzymes act on all substrates? - Do enzymes change after a reaction? 	<ul style="list-style-type: none"> - Critical thinking developed through linking learners' findings and the next lesson
<p>Observation on lesson delivery (to be completed by the teacher)</p>			

Learners summarize themselves so that teacher and learners are on the same page

Clear assessment questions



ABISHYIZE HAMWE



Learners discussing in a group at GS Notre Dame des Apôtres Rwaza



Learners raising their hands at EP Buhande



A teacher monitoring learners' work at GS Kabuye Catholique



Teachers discussing a lesson plan at GS APAGIE Musha



A teacher listening to learners at GS APAGIE Musha



NTA KIBANANIRA

The Lesson Study group discussing teaching methods at GS Notre Dame des Apôtres Rwaza



A teacher facilitating an experiment at GS St Aloys Rwamagana

Learners presenting their findings at GS Mukarange Catholique



A teacher and learners during an outside activity at GS Kabuye Catholique



A teacher asking giving a question to learners at EP Buhande



SIIQS Project Brief

- Project Title** : The Project for Supporting Institutionalizing and Improving Quality of SBI Activity (SIIQS)
- Period** : January 2017 – December 2019 (3 years)
- Target Area** : Nationwide
- Beneficiaries** : Teachers in primary, 9/12YBE, secondary schools
- Implementing Agency** : Rwanda Education Board and Japan International Cooperation Agency (JICA) through provision of expertise by PADECO Co., Ltd.
- Overall Goal** : Students' learning process in classroom is improved.
- Project purpose** : Implementation of CBC-based lesson in the classroom is strengthened through SBI activities.
- Output 1** : Teachers' understanding of CBC-based lesson implementation is enhanced.
- Output 2** : Problem-solving capacities are enhanced at school, sector, district, and national level.



Project for Supporting Institutionalizing and Improving Quality of SBI Activity

添付 13. DCC/SCC 四半期モニタリング
レポート（2019 年第 1 四半期）

DCC/SCC QUARTERLY MONITORING REPORT

PERIOD: 1ST QUARTER OF 2019

DATE: 23rd – 29th APRIL

I. Introduction

In July 2016, REB requested districts and sectors to establish District CPD Committees (DCCs) and Sector CPD Committees (SCCs) in order to coordinate and support CPD which can maximize efficiency and effectiveness of teaching and learning.

Now that main phase of CBC induction program in 2015/16 to 2017/18 is over, the importance of school-based CPD has increased for teachers to continuously improve their lessons.

Furthermore, the government embarked on strengthening CPD by setting it as Strategic Priority 2 of the ESSP 2018/19-2022/23, formulating National Teacher CPD Framework and having decided at a cabinet meeting that engagement in CPD shall be considered in advancing teachers' career path.

Effective monitoring system is now required for strengthening problem-solving cycle from school to national level. To this end, Teacher Training Unit (TTU) of the REB TDM&CGC Department in cooperation with JICA SIIQS Project developed the "concept note for monthly and quarterly DCC/SCC monitoring".

Pursuant to the concept note, a monitoring team composed of TTU staff and JICA SIIQS Project team members conducted DCC/SCC quarterly monitoring visits for the first quarter of 2019 to investigate their operation status, good practices and challenges. Quarterly monitoring visits were conducted in three districts, namely, Rulindo, Kirehe and Gisagara. These visits were intended to collect qualitative information, which can supplement monthly monitoring that was piloted in these districts in the form of monthly report before approval of the concept note, and to contribute to better understanding of DCC/SCC status in these areas.

This monitoring report mainly compiles monitoring data from the quarterly monitoring with supplementary information from monthly monitoring. The findings in this report will serve in decision-making for both REB and DCCs/SCCs.

II. Background (Findings from an analysis of need assessment survey for the CBC training in 2018/19)

1. Preliminary study

School-based CPD is a cost-effective way of teacher professional development (Iwasaki et al., in press) and effective in improving students engagement in the class (Yoshikawa et al., 2015) and academic achievement (REB, 2015) in Rwanda.

As background information of circumstances surrounding teachers' CPD, the Project analyzed online questionnaires to teachers and SEOs which were collected in March 2019 during the need assessment survey for CBC training. The table below shows sample size. Teachers and SEOs were sampled from all 30 districts.

Table 1 Sample size of the online questionnaire

Target group	Sample size	Coverage
Teachers	4,178	6.0%
Head teachers	497	11.2%
SEOs	87	20.9%

In the questionnaire, teachers were asked how frequently they attended school-based CPD in 2018. If the answer was “never”, they described the reason why. Similarly, SEOs were asked to describe the challenges around CPD. Both were open ended question. Text mining¹ was applied to responses to these questions in order to understand obstacles of CPD.

2. Findings

Out of 414 primary and secondary teachers who never attended school-based CPD, 389 valid responses were gathered. 39 morphemes with high frequency were used to draw co-occurrence network diagram (Figure 1). Morphemes with higher frequency are indicated as bigger circle. Words were automatically grouped and separated by color.

¹ Text mining helps objectively identify words (“morphemes”, the smallest meaningful unit of language) of frequent appearance and visualize intensity of their relationship by classifying them into groups (“communities”).

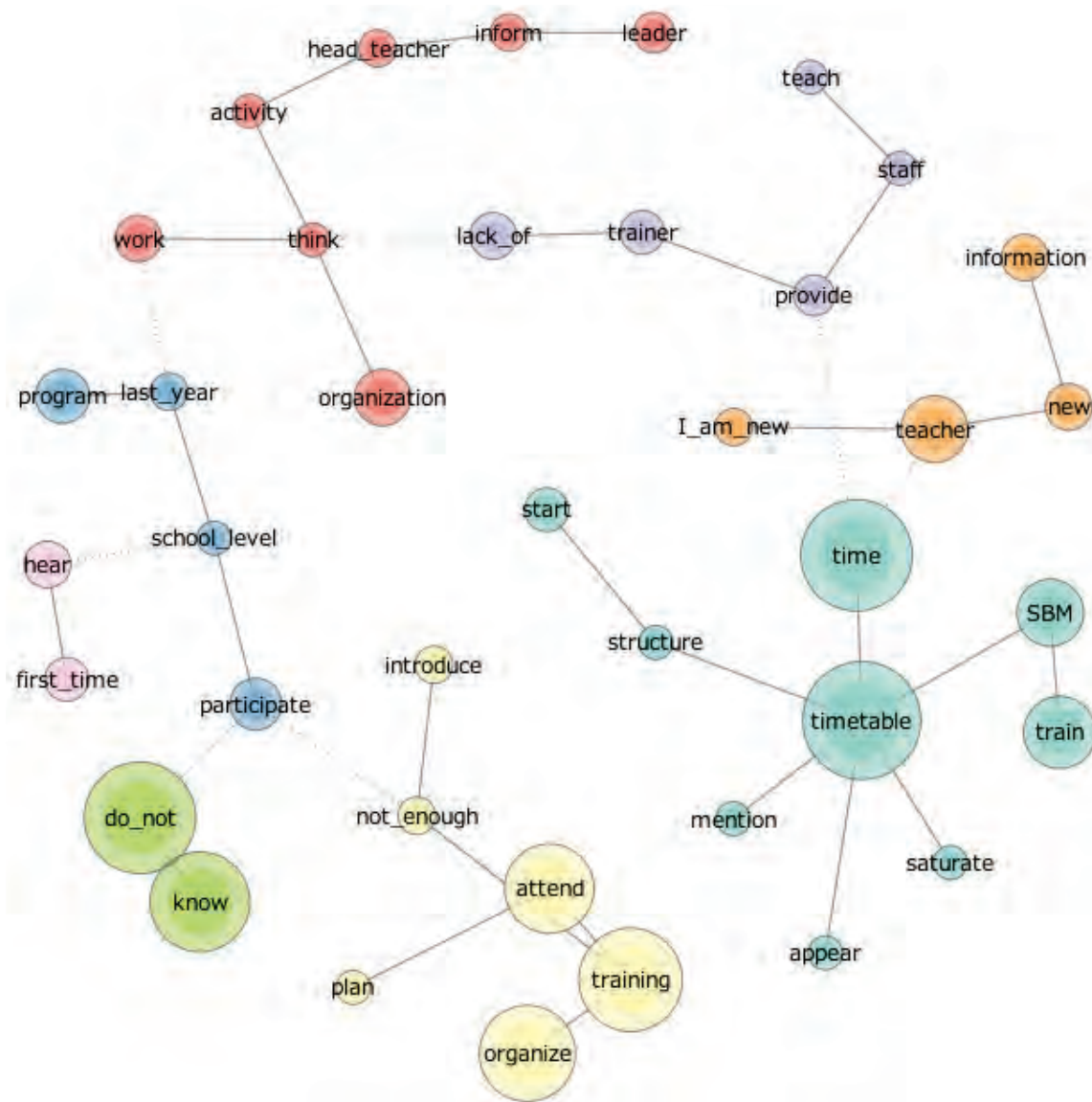


Figure 1 Co-occurrence network diagram of teachers' answers

In this analysis, eight groups were extracted which could be named as follows.

1. Time/timetable
2. Trainers
3. Head teacher/school leadership
4. New teacher
5. Awareness 1 (no knowledge)
6. Awareness 2 (first time to hear)
7. Not planned, organized or introduced
8. Attended last year

As for SEOs, 120 valid responses were also analyzed in the same manner. 30 morphemes with high frequency were used to draw co-occurrence network diagrams (Figure 2).

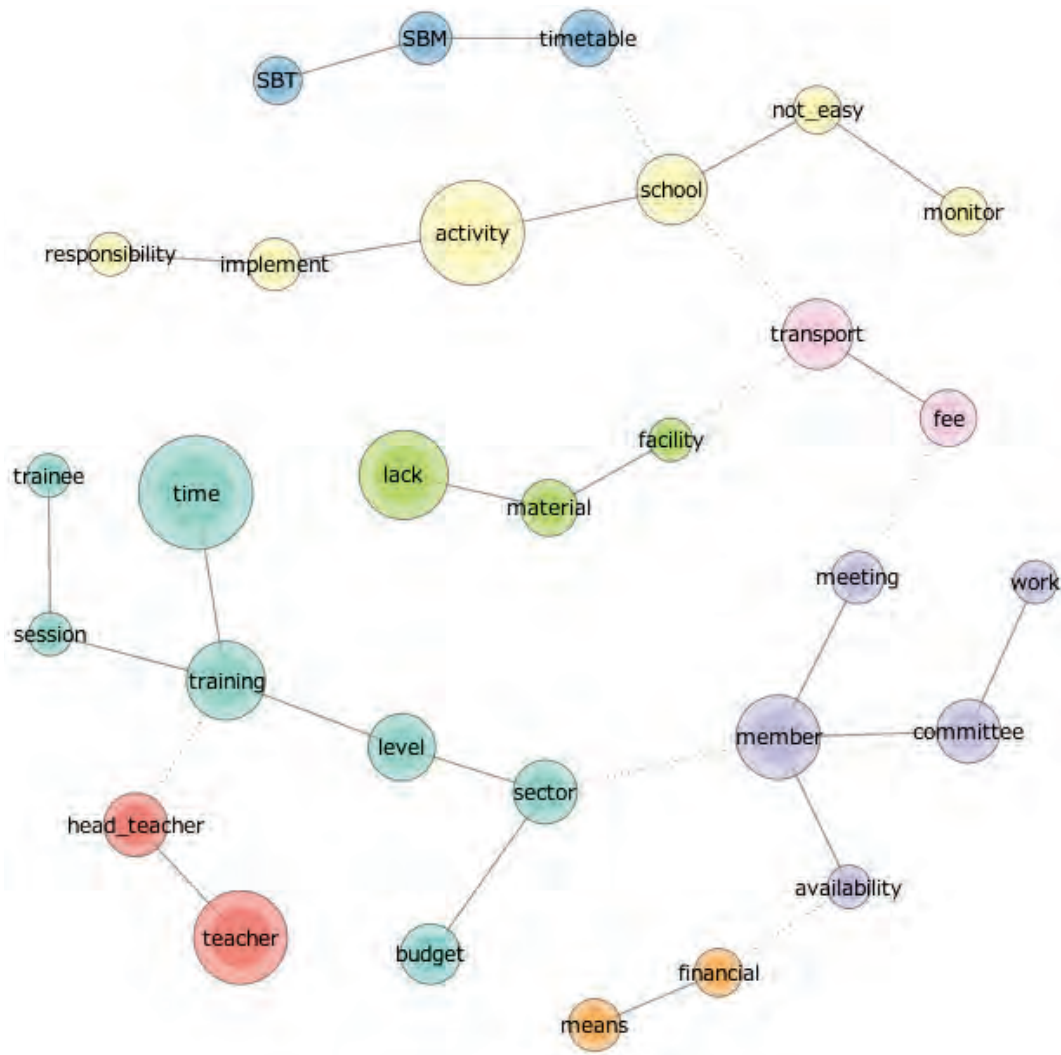


Figure 2 Co-occurrence network diagram of SEOs' answers

In this analysis, eight groups were extracted which could be named as follows.

1. Time and budget
2. Financial means
3. Head teacher
4. Resource persons' timetable
5. Difficulties of monitoring of school-based activity
6. Lack of material and facility
7. Transport fee
8. Availability of committee member

The obstacles which teachers and SEOs perceived in common are;

- Lack of time/Busy timetable
- Lack of resource persons and their capacity
- Unsupportive school leadership

3. Discussion

Lack of time was the largest obstacle. Primary school teachers have more lessons than secondary school teachers on average, hence primary school teachers are more likely to struggle finding the time for CPD. When teachers cannot work with competent resource persons, they also find it difficult to conduct CPD. In addition, school leadership is important not only to create a conducive environment for CPD but also to motivate teachers towards CPD .

On the other hand, the issue of lack of budget appeared at SEO level only. It could be said that teachers do not have to be concerned about budget because most CPD activities take place at their workplace. However, budget to buy materials are still needed.

This preliminary study suggests the importance of establishing a monitoring system. With a robust monitoring system, teachers' CPD status can be assessed and informed to the district and national levels in a timely manner, and actions can be taken accordingly.

III. Methodology

Prior to the quarterly DCC/SCC monitoring, the monitoring team conducted screening by reviewing monthly reports submitted from January to March 2019 by pilot districts to identify DCCs and SCCs which meet the criteria below.

- ✓ Having conducted a DCC (SCC) meeting more than once in the period
- ✓ Having conducted a CPD activity more than once in the period

In addition to the criteria above, their responses including good practices and challenges were considered. Consequently, the following DCCs/SCCs were selected as target for this quarter.

- DCC
 - Not selected
- SCC
 - SCC Mahama (Kirehe)
 - SCC Kisaro (Rulindo)
 - SCC Cyinzuzi (Rulindo)
 - SCC Masoro (Rulindo)
 - SCC Nyanza (Gisagara)

Basically, target persons are DDE or DEO in case of DCC, and SEO in case of SCC. When visiting SEOs, the monitoring team pays a courtesy call on the district office. The quarterly monitoring takes the form of semi-structured interview with target persons at their office so that they can refer

to necessary information or show an evidence for responses. Interview sheets were prepared before, composed of common questions and specific questions that were customized to each sector, based on what they reported through DCC/SCC monthly reports. Where the respondent agreed, video and audio were captured to record as much information as possible.

The schedule of the quarterly monitoring is shown below.

Table 2 Schedule of the Quarterly Monitoring

District	Activity	Names	Function	Date	Meeting venue
Kirehe	Courtesy call	MWANANGU Theophile	DDE	23 rd April, 2019	District office
	Interview	NSENGIMANA Martin	SEO Mahama	23 rd April, 2019	
Rulindo	Courtesy call	NDUWAYO Jean Denys	DDE	23 rd May, 2019	District officeSector office
	Interview	NYIRIMANZI Alfred	SEO Kisaro	23 rd April, 2019	Sector office
	Interview	HABUMUGISHA Jean de la Croix	SEO Cyinzuzi	24 th May, 2019	Sector office
	Interview	MUKAKANANI Marie Josee	SEO Masoro	24 th May, 2019	Sector office
Gisagara	Courtesy call	NYIRARUKUNDO Françoise	DEO	29 th May, 2019	District office
	Interview	NSENGIYUMVA Alexis	SEO Nyanza	29 th May, 2019	Sector office

IV. FINDINGS

One of the objectives of DCC/SCC quarterly monitoring visits is to check on the implementation of CPD through DCC and SCC at ground level.

1. CPD Status

A) SEO's attendance to CBC training in 2018

Almost all SEOs we met have confirmed that they attended CBC training last year, though it should be noted that they meant different trainings organized by different organizers including REB. Some SEOs answered about CBC induction training, and others answered about training on SBMs or training organized by development partners. “I attended CBC training in 2018 at Gisagara district office. The training was organized by the district. Participants were all key resource persons in education” SEO Nyanza (Gisagara district) said. “We have been trained on CBC in 2017. The training last for 3 days. The main objective of that training was to inform us about the new

curriculum which were brought in to replace the Knowledge Based curriculum” SEO Mahama (Kirehe district) confirmed.

B) Sector-based CBC training in 2018

Sector-based CBC training was supposed to be organized by SEOs to train all teachers on CBC in 2018. All visited SEOs confirmed that after the training on CBC held in March 2018, they organized sector-based CBC training. The box below shows examples of the way they organized. The key to successful sector-based training which requires participation of many teachers is likely to be involvement of trainers and head teachers (school leaders) in the planning stage.

SEO’s voice

- I firstly conducted technical meeting with SBTs to identify needs, for instance, what teachers need in terms of CBC implementation, and training facilities (materials, transport, water etc.). Afterward I gathered all HTs to inform them about the training and the support needed from them for trainings to be a success. [SEO Nyanza]
- I had a meeting with Head Teachers and mentors, and we planned the date and the venue for the training. It took place during the weekend and almost all teachers attended the meeting. The host school prepared lunch but it depends on availability of capitation grants [SEO Cyinzuzi]

C) Sector-based training

This year, sector-based training continues in Rulindo. In cooperation with development partners including IEE, Soma Umenye and BLF, they have organized a training for SBMs under SBMP once a month. Compared to CBC training targeting at all teachers in the sector, the target is smaller in the training for SBMs (one teacher per school). This makes it easier for SEOs to mobilize resources, such as trainers (MTs), trainees (SBMs) and materials. There are some good examples as follows.

Good practices

- Conducting the training jointly with the neighbouring sector [SEO Kisaro]
 - Buyoga sector and Kisaro sector take turn in organization of the training.
 - The host school provides lunch from the capitation grant and other schools also contribute financially.
 - Minutes are taken by the trainer of Kisaro sector, when Buyoga sector hosts the training, and vice versa.
- Capitation grant for mission allowances [SEO Cyinzuzi]
 - Rwf 5,000 are given to teachers who travel longest distance. Others get Rwf 2,000 or Rwf 1,000, depending on distance.
- Involving Head teachers in planning [SEO Kisaro]
 - Head teachers' understanding towards the importance of the training is critical in mobilizing resources. After they get involved, they started to provide recourses including capitation grant.

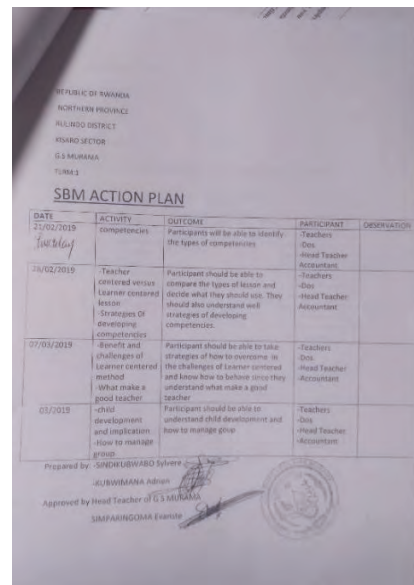
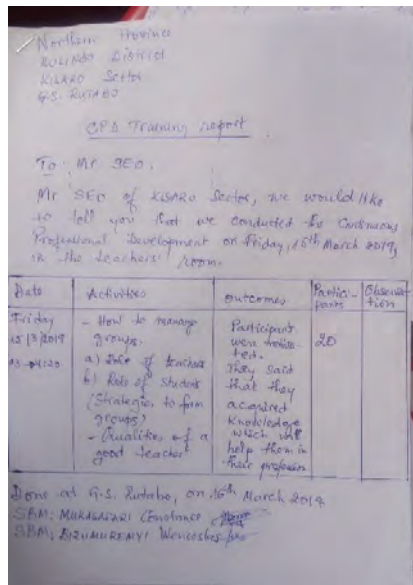


Photo: Example of training report (Kisaro sector)

D) School-based CPD

Conducting school level CPD for teacher is not an easy task. It requires time and it can have a conflict with timetables. One way to avoid time conflict is to conduct CPD in weekends but it also requires some conditions such as having financial means to pay teachers allowance and transport. The alternative way is to conduct it during weekdays by adjusting teachers' timetables so that all

teachers in the same department can meet at the certain time of the week, for example. In Mahama sector, some schools set school-based CPD on every Thursday.

Teachers resistance to CBC can be seen at many sectors. According to SEOs, this is a matter of lack of their understanding, and thus, though training, they have been gradually adapting to CBC. In other cases, there are some teachers who do not attend CPD. In this quarterly monitoring, we were not able to focus on and identify the root causes of teachers' resistance. These should be further investigated in the future in order to take appropriate measures.

2. SCC Operation Status

A) Membership

In most sectors we visited, the membership of SCCs was based on the guideline in the DCC concept note. The case of Rulindo suggests the importance of Mayor and Vice Mayor's leadership. As these leaders are interested in education, they keep on encouraging stakeholders, which has accelerated DCC and SCCs' activities and created favorable environment for teachers' CPD.

On the other hand, parents (SGACs) were less represented in some sectors because of lack of their awareness. In some cases, when SCCs planed trainings for teachers, the SEOs invited those who were relevant only, such as Head Teachers and trainers, to discuss intensively. They adjust participants according to the purpose of meetings.

B) SCC meetings

In general, all SEOs met revealed that SCC members regularly meet to discuss on different challenges that affect learning and teaching practices even if frequency of meeting varies. Some meet every month and others once a term.

“Once a month, SCC members meet to discuss on different issue affecting quality teaching and learning and to plan for CPD activities that will help in mitigating those challenges”, said SEO Nyanza.

“In February SCC organized a meeting in which all HTs were invited plus some DOSs and parents representative to discuss on quality of education in our sector and challenges as well as identifying of what problems teachers are facing in the implementation of CBC. In a participative way and through an open discussion we have figured out that the level of teachers' understanding of CBC is still very low. Together as a team we took some actions including having regular CPD time in each school so that teachers could have time to seat together, discuss challenges in their teaching practices and find out solution to improve own teaching. The last two periods on Thursdays are reserved for CPD”, said SEO Mahama in Kirehe district.

C) SCC's monitoring activities

One of the SCC's responsibilities is monitoring of CPD at school level. SCC Cyinzuzi performs a weekly school visit every Thursday. The team is composed of the executive secretary, SEO, Head Teachers and mentors (sometimes). They use an inspection book and assess teachers' lessons. The team checks if the teachers put advice into practice when visiting the school next time.

V. CHALLENGES

In this quarterly monitoring, the following challenges were found. Most of them coincide with the preliminary study using data of online questionnaires to teachers and SEOs.

A) Coordination between SCCs and DCC

SCC operation is not linked with DCC. The coordination between DCC and SCC still has some gaps. There is no established communication and reporting channels by which all CPD activities at sector and school levels could be streamlined. For improving the coordination between SCCs and DCC, it requires the communication channels by which all stakeholders involved in CPD will have common understanding on CPD issues, share the same vision and objective and strategies to achieve objectives.

B) Allocating CPD time

Time for CPD is still a big challenge for promoting CPD at school level. Timetables are full especially for primary school teachers. Teachers do not have time to meet with fellow teachers. Even when SBMs were trained at the sector level, they are struggling in finding the time to train fellow teachers at their respective schools.

C) Funds for CPD

The cost for CPD is very high especially when participants must travel to the venue, such as for sector-based training. The necessary cost includes the transportation fee for participants, lunch and materials. Capitation grant is allocated to schools, but it has not been automatically disbursed for such event, without school leaders' understanding of the necessity.

D) School leaders' understanding of CBC

Head teachers have not been necessarily trained on CBC since its introduction in 2015. Some SCCs identified the problem of head teachers' low understanding of CBC. They cannot assess lessons in an appropriate manner at the time of lesson observation. This may

adversely influence teachers' ability in lesson delivery based on CBC or hinder their motivation.

VI. RECOMMENDATIONS

A) Establishment of problem solving cycle between SCCs and DCC

DCC should be able to monitor and evaluate all SCCs' activities to enhance a problem solving cycle from school to national level, and take action accordingly. The case in Rulindo also suggest the importance of leadership at district level to create a favorable environment for CPD. This would be also the case in sector level, and the executive secretary should take part in improvement in education.

SEOs should share their SCC plan at the district level and report their activities on time. It is recommended that SCCs develop an annual action plan, and report implementation of activities through monthly monitoring report form provided by REB. Districts should track the progress and give feedback. DCC meetings can serve as a community where members from different sectors share their plans, good practices to learn from each other, and challenges in order to get ideas to solve them. DCC meetings should also take place to discuss items to be coordinated across sectors.

Though MINEDUC is not a line ministry for DCCs and SCCs, REB would be able to monitor and take necessary actions as an executive agency responsible for quality education under MINEDUC, if DCCs and SCCs could report their overall CPD activities in a timely manner.

B) Arrangement of timetables

As recommended in the National Teacher CPD Framework, Head Teachers should include CPD hours in the school timetable for all teachers. Two periods or 80 minutes per week is the recommended minimum. As of March 2019, not all schools allocate CPD hours in the timetable. If finding the time for all teachers to meet, the school may be able to start with allocating CPD time by departmental level. The National Teacher CPD Framework should be disseminated to schools so that they get guidelines on how CPD should be conducted on the ground level.

C) Improvement of capitation grant management

Taking into consideration the current situation that sectors do not have budget even when SCCs plan sector-based trainings, SCCs should share annual action plan with all Head Teachers so that they can plan when and how much they should disburse for what CPD activities at the beginning of the year. In Kisaro sector in Rulindo, SBMs who attended training at the sector level came to receive transportation fee from their own schools after

the SCC involved Head Teachers in the planning. SBMs in Cynzizi sector in Rulindo receive allowance according to travel distance to support those who come from further places.

Another way to solve financial issues related to sector-based CPD is to allocate budget to SCCs. By doing so, SCCs can plan activities in line with financial conditions.

D) Provision of an opportunity to understand CBC for school leaders

The importance of the role which school leaders play in promoting teachers CPD has been revealed in some studies (Mutsinzi, Ono, Sugiyama, Yoshikawa, & Matsuzuki, 2017; Yoshikawa, Sugiyama, Mutsinzi, & Morita, 2015). Various initiatives are ongoing to improve school leaders' competences including knowledge about CBC at the national level. Therefore, it is required that DCCs and SCCs monitor their performance and provide opportunities to improve competencies. For example, SCC Kizaro decided to organize training for Head Teachers as they found the Head Teachers did not have enough knowledge about CBC. Improvement in Head Teachers' understanding of CBC could have a favorable influence in the challenges B) and C) above.

VII. REFERENCE

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Yoshikawa, K., Sugiyama, R., Mutsinzi, A., and Morita, Y. (2015). School-Based In-Service Training in Rwanda Assessing its Effectiveness for Teachers' Professional Development. 59th Yearbook of Teacher Education, International Council on Education for Teaching (ICET), pp365-374, http://www.icet4u.org/docs/Naruto__2015.pdf

Appendix 1. Districts and Sectors which submitted monthly monitoring report in the pilot phase

Districts which submitted a pilot monthly DCC report

- Gisagara
- Kirehe

Sectors which submitted a pilot monthly SCC report

District	Sector
Gisagara	Mukindo, Save, Mamba, Kibilizi, Kansi, Musha, Mugombwa, Gikonko, Kigembe, Nyanza
Kirehe	Kirehe, Gahara, Nyarubuye, Mahama, Mushikiri, Gatore
Rulindo	Bushoki, Buyoga, Cyinzuzi, Kisaro, Kinihira, Masoro, Rusiga, Base, Rukozi, Murambi, Mbogo, Shyorongi

Appendix 2. Photos



Training in Masoro sector



Training in Cyinzuzi sector

添付 14. DCC/SCC 四半期モニタリング
レポート（2019 年第 2 四半期）

DCC/SCC QUARTERLY MONITORING REPORT
PERIOD: 2nd QUARTER OF 2019
MONITORING DATE: 26th AUGUST – 6th SEPTEMBER

I. INTRODUCTION

In July 2016, REB requested districts and sectors to establish District CPD Committees (DCCs) and Sector CPD Committees (SCCs) in order to coordinate and support CPD which can maximize efficiency and effectiveness of teaching and learning.

Now that main phase of CBC induction program in 2015/16 to 2017/18 is over, the importance of school-based CPD has increased for teachers to continuously improve their lessons.

Furthermore, the government embarked on strengthening CPD by setting it as Strategic Priority 2 of the ESSP 2018/19-2022/23, formulating National Teacher CPD Framework and having decided at a cabinet meeting that engagement in CPD shall be considered in advancing teachers' career path. In this regard, in September, 2019, REB has requested that districts include teachers' Continuous Professional Development into their performance contract.

Effective monitoring system is now required for strengthening problem-solving cycle from school to national level. To this end, Teacher Training Unit (TTU) of the REB TDM&CGC Department in cooperation with JICA SIIQS Project developed the "concept note for monthly and quarterly DCC/SCC monitoring".

In accordance with the concept note, a monitoring team composed of TTU staff and JICA SIIQS Project team members conducted DCC/SCC quarterly monitoring visits for the second quarter of 2019 (April-June) to investigate their operation status, good practices and challenges. Quarterly monitoring visits were conducted in eleven districts, namely; Rulindo, Rwamagana, Kayonza, Muhanga, Gisagara, Rulindo, Musanze, Nyabihu, Karongi, Gasabo and Rubavu. These visits were conducted between 26th August and 6th September 2019 by TTU staff and SIIQS project team.

II. OBJECTIVES

The objectives of the 2nd DCC/SCC quarterly monitoring were the following;

1. To check functionality of DCC/SCC and CPD implementation progress at district, sector and school levels
2. Collect good CPD practices in details to be shared with other districts and sectors
3. Investigate challenges encountered by DCCs/SCCs so that REB can take measures in a timely manner
4. Promote understanding of importance of CPD monitoring among DCC/SCC members for establishment of sustainable monitoring system

III. METHODOLOGY

Prior to the quarterly DCC/SCC monitoring, the monitoring team conducted screening by reviewing DCC/SCC need assessment responses conducted in July 2019. The assessment tool was put online as a Google form for collecting information on DCC/SCC operation and on what they really need for monitoring, evaluating and coordinating all CPD-related activities.

Target sectors of the monitoring were sampled according to their responses in the need assessments and the following were main criteria;

- ✓ Having conducted SCC meetings more than once in the period
- ✓ Having conducted CPD activities more than once in the period
- ✓ Having reported achievements attributed to SCC
- ✓ Having a SCC plan
- ✓ Having reported CPD good practices

In addition to the criteria above, some other sectors were sampled. They are where the target schools of SIIQS end line survey are located, which was conducted in June 2019.

The table below illustrates the sampled sectors, reasons why they were selected, and dates of visit. The districts were also visited to understand the situation from district side.

District	Activity	Names	Function	Date
Bugesera	Courtesy call	GASHUMBA Jacques	DDE	26/8/2019
	Interview	NKESHIMANA Vital	SEO/ Ruhuha	26/8/2019
Rwamagana	Courtesy call	RWEMA Moussa	DDE	27/8/2019
	Interview	RUHINGUBUGI Georges	SEO/ Fumbwe	27/8/2019
	Interview	NKERAMUGABA Janvier	SEO/ Kigabiro	27/8/2019
	Interview	NIYONAGIRA Claudine	SEO/ Musha	27/8/2019
Nyabihu	Courtesy call	VUMERA Jean Bosco	DDE	27/8/2019
	Interview	HAKUZWEYEZU Alexis	SEO/ Rurembo	27/8/2019
	Interview	HABARUGIRA James	SEO/ Jenda	27/8/2019
	Interview	SINDIKUBWABO Innocent	SEO /Rambura	29/8/2019
Gisagara	Courtesy call	HARERIMANA	DDE	28/8/2019
	Interview	MUNYAKAZI Boaz	SEO/ Ndora	28/8/2019
Rubavu	Interview	BIKEKA Cyrdion	SEO/ Kanama	28/8/2019
Muhanga	Courtesy call	IBANGARYAYO Emmanuel	DEO	29/8/2019
	Interview	SEMANA Vincent	SEO/ Kibangu	29/8/2019
Musanze	Interview	HAKIZIMANA Innocent	SEO/ Shingiro	29/8/2019
	Interview	HAGUMA Emmanuel	SEO/ Remera	29/8/2019
Rulindo	Interview	NYIRIMANZI Alfred	SEO/ Kisaro	30/8/2019
	Interview	NYIRAMANA Jeanette	SEO/ Bushoki	30/8/2019
Kayonza	Courtesy call	BISANGWA Emmanuel	DDE	3/9/2019
	Interview	TUMUSABIRE Benitha	SEO/ Mukaranage	3/9/2019
Gasabo	Interview	MASENGESHO Cyrdion	SEO/ Gatsata	4/9/2019
Karongi	Courtesy call	HITUMUKIZA Robert	DDE	6/9/2019
	Interview	MWUMVANEZA Bruno	SEO/ Rubengera	6/9/2019

Basically, target persons were DDE or DEO in case of DCC, and SEO in case of SCC. The quarterly monitoring takes the form of semi-structured interview with target persons at their office so that they can refer to necessary information or show an evidence for responses. Interview sheets were prepared before, composed of common questions and specific questions that were customized to each sector, based on what they reported through DCC/SCC need assessment. Where the respondent agreed, the interview was videotaped.

IV. FINDINGS

1. CPD Status

During these monitoring visits, it was confirmed that CPD is implemented in two levels;

A) Sector CPD

All the visited sectors confirmed that sector CPD has been conducted. However, the frequency was different from one sector to another. In the following sectors, sector-based CPD is organized once per month, while in some other once per term or occasionally:

- ✓ Bushoki and Kisaro (Rulindo)
- ✓ Rambura, Rurembo and Jenda (Nyabihu)
- ✓ Shingiro and Remera (Musanze)
- ✓ Musha, Kigabiro, Fumbwe (Rwamagana)
- ✓ Kibangu (Muhanga)
- ✓ Ndora (Gisagara)

Some SEOs clarified that they invited all Head teachers (HTs), Director of study (DOS), school-based Mentors (SBMs) and mentor trainers to attend CPD at sector level. But few of them invited only SBMs for attending CPD. Main activities in CPD also defer from one sector to another but they are mainly around the following;

- Discussion on issues and challenges in teaching and learning practices
- Discussion on CBC implementation key components such as CBC methods and assessment techniques (Bloom's taxonomy)
- Peer learning for school leaders
- Lesson observations for providing teachers with constructive feedback
- School improvement plans
- School CPD plans

The SEO takes lead in organizing sector CPD in collaboration with key resource persons in the sector namely; mentor trainers, SBTs, SBMs and school leaders. In most cases schools provide its resource persons to attend CPD with transport and lunch fees. CPD

team decides the venue, depending on the organized activities. The venues vary from schools to sector office.

Sector CPD resource persons have to share with their fellow teachers what they have acquired during CPD afterwards. HTs and DOS have to make follow on the implementation.

This monitoring has revealed some gaps in reporting and filing of CPD activities. Most sectors did not have filed reports on performed CPD activities at sector level, even if they had some evidence such as pictures and brief report shared in the sector's CPD WhatsApp group. The monitoring team has advised them to have a CPD file (either hard, or both hard and soft) in which all CPD related information can be kept. Nevertheless, a few SEOs have been able to file CPD reports in a safe manner and even share them with districts.

B) School CPD

All visited SEOs confirmed that schools in their respective areas have conducted CPD. For instance in Ndora (Gisagara), each school has two hours per week reserved for CPD, same as Mukarange sector in Kayonza district. In some other sectors such as Remera (Musanze), Bushoki and Kisaro (Rulindo) and Kanama (Rubavu), all schools were requested to conduct CPD once per week. Except in Kisaro and Remera where schools have made their CPD plans, other schools do not have a CPD plan or they have not shared them with SEOs even if they have. Mainly SBMs play key roles in organizing CPD at school level as it was revealed by SEOs. School management also supports CPD by providing CPD time. The monitoring revealed a gap in school CPD management by SCC. SEOs except those aforesaid do not have CPD plans of their respective schools, which would otherwise facilitate them in monitoring and supporting them. Schools do not report on their CPD performance, which would enable the SEO to make follow up accordingly and bring in the support needed. However, some sectors such as Shingiro (Musanze) and Kisaro have taken initiative to encourage schools to have a CPD plan and submit them to the SEOs so that the latter could plan how to support them. CPD plans go hand in hand with CPD reports whereby schools report on CPD performance against planned activities. During the visits, all SEOs were encouraged to work closely with their schools, motivate them to have a CPD plan for a given period (quarterly, biannually or annually) and keep records on CPD as well as reporting.

2. SCC Operation Status

A) SCC establishment

All visited SEOs confirmed that SCCs had been established. Some were established in 2017 and others in 2018. Members were appointed as per the DCC/SCC concept note. SCC members were trained on their roles and responsibilities. However, some members

are not likely to fulfill their responsibilities. These are especially Executive Secretaries of Sectors. Given reasons were that ES have many competing activities in the sectors, that sometimes they do not understand their role in SCC or could have limited knowledge on CPD, and in few case SCC was not a priority for the sector. Other members that are hard to find were the representative of SGACs. Almost all visited SEOs claimed that roles of parents in SCC were not well defined.

B) SCC Plans

Even though SCCs have been established in all visited sectors, SCC plans existed only in half of them. Rurembo developed a SCC plan for the last year (2018) but the committee has not yet developed a plan for this year. Kizaro has a well-elaborated SCC plan which was made considering school CPD plans. SCC Gatsata (Gasabo) has developed its plan of activities that will be validated in the coming SCC meeting in September. SCC Rambura established a plan for 2018-2019. Main outputs were; school improvement plan, raising parents' awareness on their roles in promoting education. Other visited sectors that have SCC plans are; Shingiro and Remera, Kigabiro, Fumbwe and Musha. According to SEOs' responses, SCC plan were developed without referring to the DCC plan. Planning was SCC's initiative but some SEOs shared the plan with DCC through DDE. In all other sectors that were not mentioned above, SCCs do not have plans for operating. Despite non-existence of SCC plans, they had CPD plans. This means that CPD plans were developed by the SEOs and some other resource persons without involvement and engagement of SCC members. The monitoring team advised SEOs to engage all SCC members in CPD planning and SCC activity planning.

C) SCC meetings

In DCC/SCC concept note, it is proposed that the SCCs meet at the end of each term to review the data collected. At this meeting, members discuss challenges faced, and any lack of action or lack of commitment to achieve the objectives of the action plan. The committees can give feedback directly to schools. Remedial actions can be identified and allocated to relevant individuals. In some instances, remedial actions identified in DCC meetings may be for HTs or teachers and would therefore have to be communicated by SEOs at SCC meetings. Except Mukarange, Ruhuha, Bushoki, and Jenda, SCCs have managed to meet at least once per term or every month. For instance, SCC Kizaro members meet every month, SCC Rambura meet every term, so does Shingiro, Kigabiro, Ndora, Fumbwe and Musha. During a SCC meeting, members discuss key challenges for implementing CPD and take key actions to deal with identified challenges.

3. Good practices

The monitoring team found the following good practices.

A) Schools' Audit committees

In Kanama sector, while sitting in SCC and discussing issues in teaching and learning, misusing the school's budget was revealed to be one of causing factors. Sometimes school management could use the school's budget for the activities that are not directly related with teaching and learning. Teachers always claimed not having teaching and learning aids because the school did not provide. It was decided that each school should have an audit committee that will ensure that school budget is mostly used to improve teaching and learning (Kanama sector).

B) Use of fingerprint to manage teachers' punctuality

Managing teachers' punctuality was a big challenge in Gatsata sector. During a SCC meeting, members discussed this issue and concluded that schools would have a fingerprints machine so that HTs would be able to deal with teachers who come to school late based on evidence (data provided by fingerprint). Now three schools already bought and installed these machines and the issue has mitigated (Gatsata sector).

C) CPD planning and reporting

Absence of schools/sector CPD plans and reporting system from schools to sectors was identified by SCC members as a main challenge in managing CPD activities at schools' levels in Kanama, Kisaro and Shingiro sectors. SCC members decided that schools make CPD plan and share them with SEOs so that they make follow up accordingly. This has made it easy for SEOs to monitor, coordinate and give support needed toward promoting CPD (Kanama sector, Kisaro sector, Shingiro sector).

SEO's voice

- Some schools could not report on CPD performance in their schools. Sitting together with other SCC members, we realized that the issue of not reporting is holding back the SCC to coordinate and monitor CPD at school level. The committee decided to instruct all HTs to report on CPD on a monthly basis. This action is being implemented and it will help the committee to effectively monitor and coordinate all CPD activities [SEO Kisaro/ Nyirimanzi Alfred].
- During a SCC meeting, we have realized that the fact that schools do not have a CPD plan, school improvement plans (SIPs), and clear vision and mission is hampering the quality of teaching. The SCC decided to advise all schools leaders to have SIPs, CPD plans, clear visions and mission. The SCC also advised schools to engage all stakeholders (teachers and parents) to participate, so that everyone understands his/ her role in promoting teaching and learning and in achieving school's vision and mission. This resolution has been put into action, and it will have a positive impact on the quality of education in our sector [SEO Kanama/ Bikeka Cyrdion]

RULINDO DISTRICT

KISARO SECTOR

KISARO SCC&CPD ACTIVITIES ACTION PLAN

DATE	ACTIVITIES TO BE PERFORMED	EXPECTED OUTCOME	VENUE	OBSERVATION
Wednesday, 11/09/2019, (13H20)	Assessment specification	Teachers know how to focus an assessment.	GS RUTABO	
Thursday, 19/09/2019, (09H00-15H)	SCC&CPD Peer leaning, CPD on inspection/evaluation sheet	Headteacher, SBM, MT and SEOs will know how to use inspection sheet and give feed back to the teacher	Kisaro& Buyoga Sector in one School of Buyoga Sector	
17/ 9/ 2019	Conduct career guidance	Teacher swill be able to identify learners problems and help them to overcome	GD MURAMA	
Tuesday 24/09/2019	Integration of ICT in teaching and learning	Teachers can use ICT tools in their teaching.	GS RUBONA	
12nd October	Gross cutting issues	Teaching a learner in the way he/she can develop skills which will enable him/her be engaged in different situation	ES KIRENGE	
21/10/2019	SCC&CPD Peer leaning CPD on Qualities of a good teacher	Headteacher, SBM, MT and SEOs will know the implementation of CPD done in previous days. The teachers will be able to show Qualities of a good teacher while teaching and in the community.	Kisaro& Buyoga Sector in Kisaro: EP MUTANDI EAR	
24/10/2019	Inclusive education	Participans will help learners with special needs.	EP MUHHI	
14/11/2019	-Making and using teaching aids	To help learners to learn concepts with ease and efficiency	GS SAYO	
25/11/2019	Kisaro SCC on CPDs Term	HTs will monitor CPD Activities done	ES KIRENGE	

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Approved by
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ES KISARO




Photo: CPD plan (Kisaro sector/Rulindo)

AKAREBA NA MUSANZE UMURENGE WA SHINGIRO

RAPORO Y'IBUKIRANA IBIKORWA RYA CPD PLANS ACTIVITIES N'ISHYIRWA MURIKORWA BYAYO RYAKOZWE NA SCC KUWA KUWA 07 KUGEZA KUWA 14/08/2019

ITARI	IBIGO CYALWE	IBYASHIMWE	IBYANENZE	IBYAKORWA	IBYAKORWA
7/8/2019	GS GICIRO	Gahunda y'ibikorwa (CPD PLAN)	Kudatanga raporo no kudashyira ibi bikorwa muri Action plan y'umwaka y'ikigo	Kwishutira kugeza ku Murenge gahunda y'ibikorwa bya CPD byateguwe n'ikigo cy'amashuri.	Umuyobozi w'ikigo cy'ishuri
		Ikayizi yandikamwo COP zikorwa mu bintu bitandukanye.	Kudatanga raporo	Gukurikira ko gahunda yateguwe ishinnye mu bikorwa kandi hagaragara raporo ku murenge buri kwezi.	Umuyobozi w'ikigo cy'ishuri
		Impinduka zose zigenda zigaragara kubarezi bari muri gahunda ya BLP na SOMA UMENYE.	Kudatanga raporo	Kwishyira ibikorwa bya CPD bitateguwe muri gahunda y'umwaka y'ikigo.	Umuyobozi w'ikigo cy'ishuri
9/8/2019	GS SHINGIRO	Gahunda y'ibikorwa (CPD PLAN)	Kudatanga raporo no kudashyira ibi bikorwa muri Action plan y'umwaka y'ikigo.	Gutanga raporo ku mpinduka zose zigaragara mu mikorere y'abarezi, n'ubwoko n'ubwoko bikigaragara kubara badashyira guhinduka, kugirango hashakwe ingamba zikwirirye.	Umuyobozi w'ikigo cy'ishuri
				Kwishutira kugeza ku Murenge gahunda y'ibikorwa bya CPD byateguwe n'ikigo cy'amashuri.	Umuyobozi w'ikigo cy'ishuri

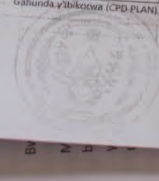


Photo: SCC report (Shingiro sector/Musanze)

D) Allocating time for CPD at school level

It is important to conduct CPD according to the teachers' and learners' needs. School-based CPD can serve as a platform to address them. Some sectors successfully motivated schools to allocate time for CPD at school level.

SEO's voice

- Conducting CPD at sector level is too expensive. The sector cannot afford to bring all teachers together to train and support in implementing CBC. During SCC meeting we decided that teachers had to attend CPD activities at their school and we advised each school to have time of two periods reserved for CPD every week [SEO Ndora/ Munyakazi Boaz]
- One key action taken by SCC during the meeting was that schools should have time for CPD and conduct it on a regular basis [SEO Kigabiro/ Nkeramugaba Janvier]

E) School contribution to sector CPD

One of the challenges in CPD implementation in Bushoki sector is the lack of budget, especially when it comes to organization of CPD at sector level. Sitting together with HTs, mentor trainers and some other stakeholders, they realized that together they can overcome this challenge. They concluded that each school contributes to the needed budget to buy material and pay transport and lunch for participants. Now every month, a monthly CPD is conducted and every teacher is motivated to attend (Bushoki sector).

F) Engaging HTs in CPD at sector level

The big challenge in implementing CPD at school and sector levels in Kisaro sector was that HTs did not understand CPD as school leaders. During SCC meetings, they realized that if they engage school leaders, it would help them overcome many other challenges namely; time for CPD, needed resources and materials and budget to cover expenses related to CPD. Now all HTs understand CPD very well and are willing to give whatever support needed to promote it in their schools (Kisaro sector).

G) Teaching and learning aids week

Teachers in Musha sector were too reluctant to use teaching aids in lessons. These aids include textbooks and others supplementary resources. As a SCC, they planned teaching and learning aids week to encourage and motivate teachers to use them (Musha sector).

4. Challenges

The following are main challenges identified during the 2nd quarter DCC/SCC monitoring.

A) Monitoring from Upper Levels

Many SEOs suggested the importance of monitoring from the upper levels (district and national levels). They understood the importance of SCC for coordinating CPD activities at sector level, but without regular monitoring and supervision from the district, they tend to deal with other burning issues, among their many tasks. They agreed that if the district requested for reporting, they would definitely submit reports. This is also the case for DCCs. DDEs also have many duties including DCC, but there has been little monitoring on DCC from REB. Therefore, they have prioritized other tasks over DCC issues, and have not monitored SCC so often.

B) Collaboration between and DCC and SCCs

The monitoring revealed that there was no collaboration between DCC and SCCs. The coordination between DCC and SCCs still has some gaps. There is no established communication and reporting channels between DCC and SCCs by which all CPD activities at sector and school levels could be streamlined. For improving the coordination between DCC and SCCs, it requires the communication channels for sharing information on both achievements and challenges.

C) Leadership of some key stakeholders

Almost all SEOs visited confirmed that ES of sector has never chaired the SCC meeting. The reasons were that ES were not engaged and made aware of their responsibilities in the committee. Some ES have not been informed on CPD as one of the education sector priorities. Besides, HTs were not trained on CPD and how to coordinate CPD at school level. This is challenging CPD promotion and implementation in schools even if some SCCs managed to train HTs on CPD on their own initiative.

D) Awareness of Committee members

Some SEOs still struggled to engage committee members in SCC activities. They appointed parent representatives to committee members, according to the proposed composition in the DCC/SCC concept note. However, for some parent representatives, teachers' CPD is not something they have a stake in. What they are interested in is their children' attendance or performance. There are even sectors where dropout is the biggest concern and members do not reach the level to concentrate on CPD only. Low awareness of some committee members has made it difficult to discuss CPD collectively in SCC.

E) Time

a) CPD time for teachers

Even if schools make some arrangements to conduct CPD, official time for CPD is still a big challenge for promoting CPD at school level. Timetables are full especially for primary school teachers. SBMs do not have needed time to organize CPD even if were trained at the sector level, they are struggling in finding the time. Teachers do not have time to meet with fellow teachers. Even when SBMs were trained at the sector level, they are struggling in finding the time to train fellow teachers at their respective schools.

b) Time for DCC/SCC members

As with the challenge in CPD, time was the serious problem for DCCs and SCCs. Committee members are engaged in different duties and responsibilities. Having to perform too much unplanned tasks holds SEOs to concentrate on planned activities in general, and to coordinate CPD at sector and school levels. SCCs meetings or planned CPD could be postponed many times due to this issue.

Lack of time is especially the case for DCCs, because its members come from different sectors, which of course have different activities, and they take more time to come up to the venue. To address this problem, one DDE considered putting a few different meetings together at one time to manage time more efficiently.

F) Budget

a) Budget for CPD activities

The cost for CPD is very high especially when participants must travel to the venue, such as for sector-based training. The necessary cost includes the transportation fee for participants, lunch and materials. Some SCCs have managed to overcome this challenge by convincing schools' leaders to bring in contribution to cover CPD related expenses but others have not.

b) Budget for DCC/SCC work

DDEs and SEOs pointed to the problem that they had to call members though they would not pay them for transportation. Thus, DCCs and SCCs have tried to manage activities without budget, or a little budget if any. If DCC/SCC was in district's or sector's performance contract (Imihigo), budget would be properly allocated, and stakeholders also put a priority on the activities.

V. RECOMMENDATIONS

1. Encourage school leaders to promote and implement CPD at school level

The roles of school leaders should not be underestimated. As a matter of fact, where school leaders were trained on CPD, CPD is well organized and implemented. For example, SCC Kisaro decided to organize training for HTs as they found the HTs did not have enough knowledge about CPD. Improvement in HTs' understanding of CPD could have a favorable influence in the challenges above.

2. Redefine use of capitation grant

Budget for CPD is a big challenge especially when a monthly CPD is planned. In some sectors like Bushoki (Rulindo), schools use a small part of capitation grant to cover cost related to CPD, taking into consideration the current situation that sectors do not have budget to conduct sector CPD. Schools provide SBMs, DOS and HTs who participate in sector monthly CPD with transport fees and lunch. Redefining uses of capitation grant could help in resolving the challenge of CPD time.

3. Arrange timetables

As recommended in the National Teacher CPD Framework, HTs should include CPD time in the school timetable for all teachers. Two periods or 80 minutes per week is the recommended minimum. As of March 2019, not all schools allocate CPD time in the timetable. If finding the time for all teachers to meet is difficult, the school may be able to start with allocating CPD time by departmental level. The National Teacher CPD Framework should be disseminated to schools so that they get guidelines on how CPD should be conducted on the ground level.

4. Foster problem solving cycle between SCCs and DCC

DCC should be able to monitor and evaluate all SCCs' activities to enhance a problem-solving cycle from school to national level, and take action accordingly. All the SEOs visited suggested the importance of leadership at district level to create a favorable environment for CPD. This would be also the case in sector level, and the executive secretary should take part in improvement in education.

SEOs should share their SCC plan at the district level and report their activities on time. It is recommended that SCCs develop an annual action plan, and report implementation of activities through monitoring report form to be provided by REB. Districts should track the progress and give feedback. DCC meetings can serve as a community where members from different sectors share their plans, good practices to learn from each other, and challenges in order to get ideas to solve them. DCC meetings should also take place to discuss items to be coordinated across sectors.

添付 15. DCC/SCC 四半期モニタリング
レポート（2019 年第 3 四半期）

DCC/SCC QUARTERLY MONITORING REPORT
PERIOD: 3rd QUARTER OF 2019
MONITORING DATE: 22nd October – 11th December

I. INTRODUCTION

In July 2016, REB requested districts and sectors to establish District CPD Committees (DCCs) and Sector CPD Committees (SCCs) in order to coordinate and support CPD which can maximize efficiency and effectiveness of teaching and learning.

Furthermore, the government embarked on strengthening CPD through various frameworks such as ESSP 2018/19-2022/23, which placed CPD on Strategic Priority 2, National Teacher CPD Framework, Teacher Statute and TDM policy. It also decided at a cabinet meeting in January 2019 that engagement in CPD shall be considered in advancing teachers' career path.

Effective monitoring system is now required for strengthening problem-solving cycle from school to national level. To this end, Teacher Training Unit (TTU) of the REB TDM&CGC Department in cooperation with JICA SIIQS Project developed the "concept note for monthly and quarterly DCC/SCC monitoring".

In accordance with the concept note, a monitoring team composed of TTU staff and JICA SIIQS Project team members conducted DCC/SCC quarterly monitoring visits for the third quarter of 2019 (July-September) to investigate their operation status, good practices and challenges. Quarterly monitoring visits were conducted in six districts, namely; Rutsiro, Rubavu, Ngororero, Ruhango, Huye and Kamonyi. These visits were conducted between 22 October and 11 December 2019.

II. OBJECTIVES

The objectives of the 3rd DCC/SCC quarterly monitoring were the following;

1. To check functionality of DCC/SCC and CPD implementation progress at district, sector and school levels
2. Collect good CPD practices in details to be shared with other districts and sectors
3. Investigate challenges encountered by DCCs/SCCs so that REB can take measures in a timely manner
4. Promote understanding of importance of CPD monitoring among DCC/SCC members for establishment of sustainable monitoring system

III. METHODOLOGY

Target sectors of the monitoring were sampled from the first batch of DCCs and SCCs workshops on planning, monitoring & evaluation, review & learning, reporting and performance feedback in October 2019. Basically, the districts which the Project had not visited for DCC orientation were selected.

The table below illustrates the sampled districts and sectors and dates of visit.

Table 1: Sampled Districts

District	Names	Function	Date
Rustiro	NGENDAHIMANA Jacques	SEO/ Ruhango	24/10/2019
	NTABARESHYA Dieudone	SEO/Nyabirasi	25/10/2019
	BABONAMPOZE Leonidas	SEO/Mushonyi	24/10/2019
	UWIMANA Martin	SEO/Gihango	23/10/2019
Ngororero	TUYISHIME Jean Claude	SEO/Kabaya	28/10/2019
	HABUMUREMYI Theoneste	SEO/ Gatumba	29/10/2019
Ruhango	Eric	Acting DDE	11/12/2019
	NYIRAMFAMAHORO Beata	SEO/Kabagali	30/10/2019
	MUZUNGU Dinah	SEO/ Byimana	29/10/2019
Rubavu	KAYOBOTSI Emmanuel	SEO/Bugeshi	22//10/2019
	BIYINGOMA Turikunkiko Alphonse	SEO/Nyamyumba	24/10/2019
	HABARUGIRA Samuel	SEO/ Mudende	21/10/2019
Huye	MUHIRWE Protegene	DDE	11/12/2019
Kamonyi	KAYIJUKA Diogene	DDE	11/12/2019

Basically, target persons were DDE in case of DCC, and SEO in case of SCC. The quarterly monitoring takes the form of semi-structured interview with target persons at their office so that they can refer to necessary information or show an evidence for responses. Interview sheets were prepared before.

In order to supplement the information from districts and sectors, the Project also conducted a questionnaire for CPD advisors dispatched to each district by IEE. The questionnaire includes the following nine questions.

Table 2: Questions to CPD advisors

No.	Question
1	Has the DCC been established in your district?
2	When did the last DCC meeting happen?
3	What was the main topics at the last meeting?
4	When did the DCC organize a district-based CPD (if any) last time?
5	What was the topic of the district-based CPD activity (if any) last time?
6	How does the DCC manage budget issues? For example, who provides transportation fees for DCC members for meetings or CPD activities? Especially, who provides transportation fees for SEOs? How about necessary materials for meetings or CPD activities?
7	How often do SCCs report CPD activities to the DCC? (monthly, termly, never, every time they conducted activity, etc.).
8	How many SCCs regularly submit such reports to the DCC on average?
9	Has all sectors in your district established SCCs?

Out of 30 districts, 19 CPD advisors responded to the questionnaire.

Table 3: Respondents

Districts whose CPD advisors responded	Nyagatare, Gatsibo, Ngoma, Rwamagana, Nyarugenge, Burera, Gakenke, Musanze, Nyabihu, Rubavu, Ngororero, Karongi, Rutsiro, Nyamasheke, Nyaruguru, Huye, Nyanza, Ruhango, Kamonyi
No response	Kayanza, Kirehe, Bugesera, Gasabo, Kicukiro, Rusizi, Nyamagabe, Gisagara, Muhanga, Gicumbi, Rulindo

IV. FINDINGS FROM QUESTIONNAIRE FOR CPD ADVISORS

1. Establishment of DCCs and SCCs

According to 19 CPD advisors, DCCs have been established in their districts. SCCs have also been in place in many districts. The table below shows the establishment status of SCCs in each district. 232 out of 254 sectors (91.3%) based on valid responses had SCCs.

Table 4: Establishment Status of SCCs

District	SCCs	# of sectors	Rate	District	SCCs	# of sectors	Rate
Nyagatare	14	14	100%	Nyabihu	12	12	100%
Gatsibo	14	14	100%	Rubavu	12	12	100%
Kayonza	No response	12	N/A	Ngororero	13	13	100%
Ngoma	6	14	43%	Karongi	13	13	100%
Kirehe	No response	12	N/A	Rutsiro	13	13	100%
Bugesera	No response	15	N/A	Nyamashoke	15	15	100%
Rwamagana	14	14	100%	Rusizi	No response	18	N/A
Gasabo	No response	15	N/A	Nyamagabe	No response	17	N/A
Kicukiro	No response	10	N/A	Nyaruguru	14	14	100%
Nyarugenge	10	10	100%	Huye	14	14	100%
Gicumbi	No response	21	N/A	Gisagara	No response	13	N/A
Rulindo	No response	17	N/A	Nyanza	10	10	100%
Burera	17	17	100%	Ruhango	9	9	100%
Gakenke	19	19	100%	Muhanga	No response	12	N/A
Musanze	1	15	7%	Kamonyi	12	12	100%
				Total	232	416	55.8%
				Valid responses	232	254	91.3%

2. DCC meetings and district level CPD activities

14 districts conducted DCC meetings in 2019. The recent meeting took place during the 2nd term and 3rd term in eight districts and five districts respectively. The main agenda was roles and responsibilities in many districts. Other districts discussed monitoring tools, annual plan, and training plans.

Regarding the CPD activities at the district level, not many districts conducted it. CPD took place at the sector-level rather than district level with the support from CPD advisors and other development partners (DPs). In most districts, SCCs conducted training of SBMs on a monthly basis.

3. Budget issues

Meetings and CPD activities may need budget such as transportation and lunch for participants. According to the CPD advisors, DCCs and SCCs did not have specific budget for the activities. They sometimes received support from DPs, mainly, Building Learning Foundation (BLF). In general, when there was a CPD activity at schools, SEOs use the budget allocated for monitoring. Schools and SEOs gave mission orders to teachers. In some schools, they were given capitation grant for transportation fees but there were also other schools whose teachers did not receive the fees.

4. Reporting

Even in the case of well-designed CPD, poor monitoring and reporting impede the effectiveness of professional learning and hinder its impact on student learning and achievement. Without a sense of what is functioning and why, it is hard to adopt and implement CPD for teachers that is evidence-based and designed to address potential obstacles. The creation of the online monitoring and reporting system for tracking CPD is underway. However, the system never works without data collection.

The frequency of reporting from SCCs to DCCs varies according to districts. The table below shows the frequency that districts agreed on.

Table 5: Frequency of Reporting

Frequency	# of districts
Monthly	4
Quarterly	5
Termly	1
Every time CPD happened	3
Never established	6

However, actual situation of reporting also depends on districts. 145 out of 254 SCCs (57.1%) have regularly reported their CPD activities to the DCCs in paper-form. There is a gap between the rate of SCC establishment and the rate of SCCs which report regularly.

Table 6: Rate of SCCs that Report CPD Activities Regularly

District	SCCs	# of sectors	Rate	District	SCCs	# of sectors	Rate
Nyagatare	14	14	100%	Nyabihu	12	12	100%
Gatsibo	14	14	100%	Rubavu	12	12	100%
Kayonza	No response	12	N/A	Ngororero	0	13	0%
Ngoma	0	14	0%	Karongi	0	13	0%
Kirehe	No response	12	N/A	Rutsiro	13	13	100%
Bugesera	No response	15	N/A	Nyamasheke	15	15	100%
Rwamagana	5	14	36%	Rusizi	No response	18	N/A
Gasabo	No response	15	N/A	Nyamagabe	No response	17	N/A
Kicukiro	No response	10	N/A	Nyaruguru	14	14	100%
Nyarugenge	0	10	0%	Huye	0	14	0%
Gicumbi	No response	21	N/A	Gisagara	No response	13	N/A
Rulindo	No response	17	N/A	Nyanza	10	10	100%
Burera	13	17	76%	Ruhango	0	9	0%
Gakenke	10	19	53%	Muhanga	No response	12	N/A
Musanze	1	15	7%	Kamonyi	12	12	100%
				Total	145	416	34.9%
				Valid responses	145	254	57.1%

V. FINDINGS FROM MONITORING VISITS

1. SCC Operation Status

A) SCC establishment

All visited SEOs confirmed that SCCs had been established.

B) SCC Plans

Even though SCCs have been established in all visited sectors, SCC plans existed only in four of them.

The table below shows the items that these SCCs planned.

Table 7: Outline of SCC Plans

Sector	District	Planned Items
Kabagali	Ruhango	<ul style="list-style-type: none">- Training- Meeting at school and sector levels- Need assessment- Reporting
Byimana	Ruhango	<ul style="list-style-type: none">- Peer learning lesson observation- School based In service Training- CoP- Professional Learning Communities
Ruhango	Rutsiro	<ul style="list-style-type: none">- Visiting school to help teachers about CPD- Peer learning and dropout eradication

A) SCC meetings

In DCC/SCC concept note, it is proposed that the SCCs meet at the end of each term to review the data collected. At this meeting, members discuss challenges faced, and any lack of action or lack of commitment to achieve the objectives of the action plan.

Out of 11 SCCs interviewed, the number of SCCs which met in the last term was six. It was likely to be hard for other SCCs to meet due to lack of transportation fee and commitment of members.

2. Good practices

The monitoring team found the following good practices.

A) School Visit

In Ruhango sector in Rutsiro district, the SCC monitor and review CPD activities by visiting school and checking the progress of CPD activities among teachers. It helps schools to resolve their problems in CPD implementation. All schools in the sector decided to meet for CPD at school every Friday.

Huye district also found model teachers in some schools and create opportunities for teachers from other schools to visit and observe their lessons on a termly basis. They use projectors to show recorded lessons for post-lesson reflection.

B) Teacher training and reporting mechanism

During a SCC meeting in Byimana sector and Kabagali sector, Ruhango, members discussed lack of training and cooperation of teachers. They concluded that schools should organize the training themselves and conduct communities of practices (CoP). Especially in Kabagali sector, they emphasized on reporting mechanism issue. Now teachers meet and train each other as well as visit other schools to learn from one another. In Byimana sector, they now also have a reporting channel.

C) Budget

Huye district confirmed that SEOs use budget for monitoring and schools use capitation grant when conducting DCC activities. The SIIQS project found that other districts also use these resources to conduct activities.

Ruhango district was going to make the most of time and budget by combining many meetings together at one time. It is an effective and efficient way to use resources.

These examples suggest that even minimal and affordable financing encourages DCC and SCC members to process various CPD initiatives.

3. Challenges

The following are main challenges identified during the 3rd quarter DCC/SCC monitoring.

A) DCC/SCC level

DCC Huye pointed out that involving parents in the DCC activities was a challenge. This challenge is common in many DCCs and SCCs. It is partly because the committees have difficulty in funding budget for the transportation and lunch for parent representatives. Budget is one of the most widespread problems.

Another reason for the low attendance of parents would be that they are not interested in teacher CPD and are busy with other duties.

Lack of time or overlapping of time has been also pointed by many DCCs and SCCs including Gatumba sector in Ngororero district and Nyabirasi sector in Rutsiro district. In the case where key members such as Vice Mayor and DDE (for DCCs) or Executive Secretary of sector and SEOs (for SCCs) place less priority on DCCs and SCCs, they may result in not conducting the activities so often as expected.

B) School level

Challenges raised by visited districts and sectors were almost the same as those mentioned in the previous DCC/SCC quarterly monitoring reports: English proficiency of primary level teachers, insufficient formal training, overloaded timetables at schools, insufficient materials for CPD, lack of meeting rooms to gather, lack of motivation/resistance to change of teachers.

VI. RECOMMENDATIONS

1. Encourage flexible funding

CPD is diversifying in Rwanda now. Various CPD approaches and methods are proposed and the variety definitely promotes active learning. To encourage teachers to be active learners, training providers and coaches should regularly update CPD methods and introduce new ideas in CPD so that teachers can continue CPD without getting burned out. Flexible funding enables such an active learning environment.

2. Harmonize monitoring effort

Driving the “Problem Solving Cycle” from school to national levels should be the key for success to nurture CPD across the country. Considering that more than half of the SCCs submit CPD reports to DCCs according to the questionnaire for CPD advisors, the online monitoring and reporting system that were being established now is likely to function. However, SEOs also submit paper-based monthly reports to MINEDUC which include all education issues in their respective sectors such as school facilities, drop-out rates, school hygiene and CPD. As the report form includes CPD, coordination between REB and MINEDUC to minimize duplication of SEOs’ work and harmonize the system is crucial for effective and efficient monitoring.

添付 16. DCC/SCC
モニタリングフォーム

DCC monitoring tool

I. DCC management and planning

(Under this section, provide information related to the DCC committee meetings and its planning).

1) How often did the DCC meetings happen last term in your district?

Once	Twice	Three times or more	Never
------	-------	---------------------	-------

2) If the meetings happened, what were the points of discussion?

3) If never, why? and what can be done to ensure DCC meetings are always conducted?

4) Is there any evidence of DCC meetings for the last term such as minutes?

Yes	No	No meeting was held
-----	----	---------------------

5) If yes, please upload supporting documents.

6) If no, why? and what can be done to always have evidences of DCC meetings?

7) Does your DCC have an action plan? (annual action plan, termly action plan etc.)

Yes	Still in process	No
-----	------------------	----

8) If still in process, what is the problem? and when will it be complete?

9) If no, why? and what can be done to enable the DCC to develop an action plan?

--

10) Are CPD activities integrated in district annual action plans?

Yes	No
-----	----

11) If no, why? and what can be done to include them in the district annual action plans?

--

12) Are CPD activities integrated into your annual district performance contracts (Imihigo)?

Yes	No
-----	----

13) If no, why? and what can be done to include them in your annual district performance contracts (Imihigo)?

--

14) What were the challenges that you faced while conducting DCC meetings?

--

15) What can be done to solve the challenges that you faced while conducting DCC meetings?

--

16) Did your DCC conduct a CPD needs assessment(s) last term?

Yes	No
-----	----

17) If yes, please provide a summary of the results of the needs assessment(s).

--

18) If no, why?

--

19) Are there reporting mechanisms between SCCs in your district and your DCC?

Yes	No	Other (specify)
-----	----	-----------------

20) What can be done to improve the reporting mechanisms between SCCs and your DCC?

--

II. Implementation of DCC activities

(Under this section, provide information related to the implementation of your DCC's activities).

1) How many times did your DCC organize CPD activities at district level last term?

Once	Twice	Three times or more	Never
------	-------	---------------------	-------

2) If they happened, list CPD activities conducted by your DCC at district level last term.

Title of CPD activity	Venue	Number of days	Target people	Number of participants	Brief description of CPD activity
				M : /F:	
				M : /F:	
				M : /F:	
				M : /F:	

3) Is there any evidence of CPD activities at district level for the last term such as reports or photos?

Yes	No	No activity was held
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4) If yes, please upload supporting documents.

5) If no, why? and what can be done to always have evidences of CPD activities?

6) Provide information related to CPD activities that were conducted in your district by development partners last term.

Name of development partner	Venue	Number of days	Target people	Number of participants	Brief description of the capacity building activities	To what extent is this activity linked to your CPD needs?
				M : /F:		- Extremely - Moderately - Not at all
				M : /F:		- Extremely - Moderately - Not at all
				M : /F:		- Extremely - Moderately - Not at all
				M : /F:		- Extremely - Moderately - Not at all

III. Monitoring and evaluation of CPD

(Under this section, you will be able to provide information related to monitoring and evaluation of CPD activities in your DCC).

1) If you conducted CPD activities, please list challenges you faced during implementation.

2) What can be done to address the challenges mentioned above?

--

3) How many times did the DCC or any of DCC members conduct school visits related to implementation of DCC resolutions last term?

Once	Twice	Three times or more	Never
------	-------	---------------------	-------

4) If never, why? and what can be done to enable the DCC or any of DCC members to conduct school visits?

--

5) List any good practices from CPD implementation at district, sector and school levels last term as a result of DCC resolutions (teaching and learning, school leadership and community involvement.....)?

--

6) In your role of monitoring CPD activities at sector and school levels, are there areas that need improvement?

Yes	No
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7) If yes, mention those areas and what can be done to improve them?

--

IV. Feedback

(Under this section, REB would love to hear from you about what you think should be done to improve on the work of DCC in your district).

- 1) Is there anything you would like to consult with REB about in relation to DCC or CPD activities in your district?

- 2) What kind of technical assistance is needed from MINEDUC, REB and development partners to better implement DCC activities in your district?

- 3) Any other comments

SCC monitoring tool

I. SCC management and planning

(Under this section, provide information related to the SCC committee meetings and its planning).

1) How often did the SCC meetings happen last term in your sector?

Once	Twice	Three times or more	Never
------	-------	---------------------	-------

2) If the meetings happened, what were the points of discussion?

--

3) If never, why? and what can be done to ensure DCC meetings are always conducted?

--

4) Is there any evidence (e.g. minutes, photos.....) of SCC meetings for the last term?

Yes	No	No meeting was held
-----	----	---------------------

5) If yes, please upload supporting documents.

6) If no, why? and what can be done to always have evidences of SCC meetings?

--

7) Does your SCC have an action plan? (annual action plan, termly action plan etc.)

Yes	Still in process	No
-----	------------------	----

8) If still in process, what is the problem? and when will it be complete?

--

9) If no, why? and what can be done to enable the SCC to develop an action plan?

--

10) Are CPD activities integrated in sector annual action plans?

Yes	No
-----	----

11) If no, why? and what can be done to include them in the sector annual action plans?

--

12) Are CPD activities integrated into your annual sector performance contracts (Imihigo)?

Yes	No
-----	----

13) If no, why? and what can be done to include them in your annual sector performance contracts (Imihigo)?

--

14) What were the challenges that you faced while conducting SCC meetings?

--

15) What can be done to solve the challenges that you faced while conducting SCC meetings?

--

16) Did your SCC conduct a CPD need assessment last term?

Yes	No
-----	----

17) If yes, please provide a summary of the results of the needs assessment.

--

18) If no, why?

--

19) Are there reporting mechanisms between schools in your sector and your SCC?

Yes	No	Other (specify)
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20) What can be done to improve the reporting mechanisms between schools in your sector and your SCC?

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21) How often did you report SCC activities to the DCC?

Never	Monthly	Termly	Other (specify)
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22) How often did schools report CPD activities to your SCC last term?

Frequency	Number of school(s)	School name(s)
Never	school(s)	
Monthly	school(s)	
Termly	school(s)	
Other (specify)	school(s)	

II. Implementation of SCC activities

(Under this section, provide information related to the implementation of your SCC's activities).

1) How many times did your SCC organize CPD activities at sector level last term?

Once	Twice	Three times or more	Never
------	-------	---------------------	-------

2) If they happened, list CPD activities conducted by your SCC at sector level last term.

Title of CPD activity	Venue	Number of days	Target people	Number of participants	Brief description of CPD activity
				M : /F:	
				M : /F:	
				M : /F:	
				M : /F:	

3) Is there any evidence (e.g. reports, photos.....) of CPD activities at sector level for the last term?

Yes	No	No activity was held
-----	----	----------------------

4) If yes, please upload supporting documents.

5) If no, why? and what can be done to always have evidences of CPD activities?

--

6) Provide information related to CPD activities that were conducted in your sector by development partners last term.

Name of development partner	Venue	Number of days	Target people	Number of participants	Brief description of the capacity building activities	To what extent is this activity linked to your CPD needs?
				M : /F:		- Extremely - Moderately - Not at all
				M : /F:		- Extremely - Moderately - Not at all
				M : /F:		- Extremely - Moderately - Not at all
				M : /F:		- Extremely - Moderately - Not at all

III. Monitoring and evaluation of CPD & review and learning

(Under this section, you will be able to provide information related to monitoring and evaluation of CPD activities in your SCC).

1) If you conducted CPD activities, please list challenges you faced during implementation.

--

2) What can be done to address the challenges mentioned above?

--

3) Specify the names and number of schools that fall under each of the following categories in your sector.

Category	Number of school(s)	Name of school(s)
Schools that have CPD plans	school(s)	
Schools that are in process of developing CPD plans	school(s)	
Schools that don't have CPD plans	school(s)	
Don't know	school(s)	

4) What can be done to enable all of them to have action plans?

--

5) For each of the following categories, specify the names and number of schools in your sector that include CPD activities into their timetables.

Category	Number of school(s)	Name of school(s)
Schools that include CPD activities into their timetables	school(s)	
Schools that do not include CPD activities into their timetables	school(s)	
Don't know	school(s)	

6) How many times did the SCC or any of SCC members conduct school visits related to implementation of SCC resolutions last term?

Once	Twice	Three times or more	Never
------	-------	---------------------	-------

7) If never, why? and what can be done to enable the SCC or any of SCC members to conduct school visits.

--

8) What types of CPD activities were implemented by schools in your sector last term?

Type of CPD activities	Number of school(s)	Names of school(s)
School Based In-service Training		
Mentorship program		
Community of Practice		
Professional Learning Communities		
Peer Learning		
Self Study		
Lesson Study		
Other (specify)		

9) What types of School-based in Service Trainings did schools in your sector conduct last term?

Type of School Based in Service Training	Number of school(s)	Names of school(s)
Model lessons		
Best practices		
Addressing challenges		
Others (specify)		

10) What types of Mentorship activity did schools in your sector conduct last term?

Mentorship activity	Number of school(s)	Names of school(s)
English		
Teaching methodology		
Others (specify)		

11) What types of peer learning did schools in your sector conduct last term?

Title of peer learning activity	Venue	Number of days	Number of participants	Brief description of peer learning activity
School by school			M : /F:	
			M : /F:	
			M : /F:	
Teacher (s) by teacher (s)			M : /F:	
			M : /F:	
			M : /F:	
Student (s) by student (s)			M : /F:	
			M : /F:	
			M : /F:	
Others (specify)			M : /F:	
			M : /F:	
			M : /F:	

12) What kind of resourceful materials were used in conducting different CPD activities?

--

13) List any good practices from CPD implementation at sector and school levels last term as a result of SCC resolutions (teaching and learning, school leadership and community involvement.....)?

--

14) In your role of monitoring CPD activities at school level, are there areas that need improvement?

Yes	No
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15) If yes, mention those areas and what can be done to improve them?

--

16) Did your SCC provide feedback on CPD implementation to schools last term?

Yes	No	No monitoring was held
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17) If no, why? and what can be done to enable the SCC to always give feedback to schools?

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IV. Feedback

(Under this section, REB would love to hear from you about what you think should be done to improve on the work of SCC in your sector).

- 1) Is there anything you would like to consult with REB about in relation to SCC or CPD activities in your sector?

- 2) What kind of technical assistance is needed from MINEDUC, REB and development partners to better implement SCC activities in your sector?

- 3) Any other comments

添付 17. 第 1 回 JCC 議事録

THE PROJECT FOR SUPPORTING INSTITUTIONALIZING AND IMPROVING QUALITY OF SBI ACTIVITY (SIIQS)

MINUTES OF THE FIRST JOINT COORDINATION COMMITTEE (JCC)

1. **DATE AND TIME:** 23rd March, 2017, 15:30-17:30
2. **VENUE:** TEMPD Meeting Room
3. **ATTENDANCE:** The attendance list is attached as (ANNEX 1)
4. **AGENDA**
 - Welcome Address (REB/JICA)
 - Presentation on Project Work Plan
 - Presentation on Project Management Mechanism (Monitoring Sheet Ver.1)
 - Presentation on preliminary findings of the Baseline survey
 - Issues
 - Question and Answer
 - Closing Remarks

5. OPENING

The meeting was held at TEMPD Meeting Room, on 23rd March, 2017. It started at 15.30 with HoD TEMPD welcoming participants.

6. INTRODUCTION OF CHAIRPERSON

The HoD TEMPD, Mr. Claudien NZITABAKUZE, who was delegated by the Director General, REB, Mr. Gasana I. Janvier, chaired the JCC meeting in his absence.

7. OPENING REMARKS

A welcome speech was made on behalf of the DG/ REB who could not attend the meeting as chair. The delegated Chair, Mr. Claudien Nzitabakuze started by welcoming the participants in the 1st JCC meeting of the Project for Supporting Institutionalizing and Improving Quality of SBI Activity (SIIQS). He presented to the meeting participants the background of the SIIQS Project, and the partnership of REB and JICA that has been existing for about ten years and on behalf of the Government of Rwanda, he expressed his sincere gratitude to the Government of Japan for the support and partnership it has always provided to Rwanda, particularly to the education sector through REB. Mr. Claudien introduced the partnership between REB and JICA and mentioned about the last projects, which have been implemented by REB in partnership with JICA, namely SMASSE and SBCT, and later on he put an emphasis on SBI concept which has been introduced in the later project. He mentioned that, the SBI concept is going to be a channel to the dissemination of the new curriculum (CBC) introduced by REB in 2016, and that the new project SIIQS will be supporting, institutionalizing and improving SBI quality in our schools for

the better dissemination and implementation of CBC. He concluded by wishing all participants fruitful deliberations and invited the JICA Chief Representative to also give his welcoming remarks to the participants.

The JICA Chief Representative, Mr. Hiroyuki Takada started by welcoming participants to the very first meeting of the SIIQS Project, and congratulated all the members for the official launching of the SIIQS Project, which he thinks will be contributing a lot to the implementation of the CBC. He mentioned about JICA support in different core sectors, such as infrastructure, health, water and mostly in education. He mentioned that JICA is supporting education sector in Rwanda not only through the government institutions but also through private companies such as Sakura-sha, which is a Japanese Educational Publishing Company producing a mathematics software. He kept on emphasizing that education is essential to achieve the national millennium goals and vision 2020 and that JICA is glad to support in achieving them. He also introduced the new project SIIQS and the NGO that will be collaborating closely with the project, Umucomwiza school in Kimironko sector. That school introduced SBI through CBC so it is hoped to combine contributions and targets of the project and that local NGO through its school Umucomwiza will be one of the project pilot schools. The JICA Chief Representative concluded by thanking all the participants for responding to the invitation and wished them a fruitful meeting.

The Chair of the meeting invited participants to introduce themselves and then read to them the agenda of the meeting.

8. PRESENTATION ON THE PROJECT WORK PLAN (ANNEX 2)

Mr. Ryuichi Sugiyama, the Team Leader of SIIQS Project presented the Project Work Plan with the project background and the outline of the project. He also mentioned about SIIQS Project brief, with an emphasis on the combination of cascade training and the SBI problem solving cycle and how the DCC is needed for the smooth running of SBI activities. He explained about the two major activities, output 1: Contents development for SBI and Output 2: Quality assurance (M&E). He also mentioned about the project team members of and their assignments. He ended his presentation with suggestion and request: formation of lesson study group for model lesson development and selection of pilot schools.

The Chair of the meeting supplemented that the project focuses on both technical and managerial parts of teachers' continuous professional development and made some comments emphasizing the role of the project and collaboration with other stakeholders: TTC, UR-CE, and all the development partners.

9. PRESENTATION ON PROJECT MANAGEMENT MECHANISM (ANNEX 3)

Ms. Harriet Umurerwa, Teacher training officer: Career Guidance and Counselling presented the project management mechanism using monitoring sheet of the project based on Project Design Matrix (PDM) with reference to the Record of Discussion agreed upon between MINEDUC/REB and JICA. The Project Team and counterparts will continuously monitor the project progress by revising the monitoring sheet and present it at JCC every six months. It will be finally approved

by DG REB and then submitted to JICA. She added that no issues and items to be revised were observed on PDM because the circumstances around the project have not significantly changed until now since after the agreement was signed.

The Chair of the meeting also suggested not to wait for six months before meeting and sharing the progress of the project in the next JCC but to inform the JCC members at the end of every month by email about the progress of the project, the activities conducted, the upcoming activities, the challenges encountered and the project plans.

10. PRESENTATION ON THE PRELIMINARY FINDINGS OF THE BASELINE SURVEY (ANNEX 4)

(1) OUTLINE OF THE BASELINE SURVEY & PRELIMINARY ANALYSIS ON CURRICULUM DELIVERY

Ms. Ruth Mukakimenyi/Teacher training officer: English language presented on the preliminary findings of the baseline survey. She started her presentation with the outline of the baseline surveys such as the objectives, organization, sample size and structure etc; and moved on to its preliminary analysis on curriculum delivery. She pointed out that syllabus and textbooks were not fully delivered to schools and CBC induction trainings were not fully conducted, and that these hinder the fulfilment of first layer of the curriculum: intended curriculum.

(2) THE PRELIMINARY FINDINGS FROM THE LESSON OBSERVATIONS (on the Implemented Curriculum)

After Ms. Mukakimenyi's presentation, Prof. Yumiko Ono, from Naruto University of Education, also presented on the preliminary findings from the lesson observations (on the implemented curriculum). She started by appreciating how the teachers she observed are preparing unit and lesson plans, how they encouraged and motivated learners to work collaboratively in groups, how they recognized students' efforts by clapping, gestures and singing and how some of the teachers try hard to prepare their own teaching aids. However, she noticed lots of issues which still need to be addressed. Among these issues are: 1) the textbooks scarcity is still a big issue for most of the schools, 2) basic knowledge and skills have not been well acquired by students for critical and creative thinking, 3) being asked if they understood, students automatically answer "yes" in chorus even though they don't understand, 4) teachers are jumping into group works without instructions on a given task, 5) there is little individual mastery of basic knowledge and skills for students to be engaged in critical and creative thinking. Prof. Ono recommended the following: Teachers should not be slaves of group work and not to expect to achieve competency in one lesson as its development takes some time. Instead of asking "do you understand?" or "are we together?", they should single out students who still have difficulties in understanding the lessons through careful observation and assessment. She concluded by pointing out the importance of setting clear objectives of the lessons and steps to be taken.

(3) APPROACH TO ATTAINED CURRICULUM IMPACT (ATTAINMENT) SURVEY

After Prof. Ono's presentation and recommendations, Mr. Sugiyama presented on the impact survey and its upcoming activity. He mentioned about JICA's recommendation on organizing Trends in International Mathematics and Science Study (TIMSS) type test to monitor how higher order thinking level changes through CBC implementation. The project would like to conduct such test in some schools in June, and the proposed target number of schools was presented in the meeting. He also informed the participants about the Distance Education and Teacher Education in Africa (DETA) conference which will be held at UR-CE in August 2017, and presented his high interest to the conference and especially to the UR-CE to let the SIIQS present and share the baseline survey findings.

The Chair of the meeting added a comment after the series of presentations. The Chair argued that people should not worry too much about the result of baseline survey because it has not been a long time since CBC started and that current syllabus is well-organized and desired learning approach has been changed from old curriculum. However he pointed out that the problem is how syllabus should be interpreted to actual lessons. According to him, some schools expressed confusion about CBC and struggled with group work because they did not know other approaches to implement it.

Mr. Sugiyama supplemented the presentation by referring to the three layer of curriculum as follow: The first layer, intended curriculum is the one prepared by a national authority (REB) and should be the same in all schools in the country. Implemented curriculum, the second layer, is how teachers put intended curriculum into practice at each school. Attained curriculum, the third layer, is the one acquired by students in the presence of intended and implemented curriculum.

11. DISCUSSION

After all presentations, participants started discussing and asking questions.

Dr. Christine Gasingirwa, DG in MINEDUC in charge of Science and Technology started the discussion and asked about the REB-JICA collaboration in the previous projects in terms of changes the projects have brought, problems they solved, improvement, some weakness from the SBI concept, whether teachers were really convinced and whether they have already started developing critical thinking or problem-solving aspects

Mr. Sugiyama responded to her, referring to teachers' good practices after SBI implementation to schools: sharing culture with colleagues, making teaching aids/materials by themselves and becoming active to solve their problems by themselves. Teachers are now positive and confident to be observed during their lessons, which is different from how they were before implementing SBI, all the way from SMASSE to SIIQS.

Mr. Joseph Rutakamize, Director of Science Unit from CPMD Department, also highlighted the role of Education Quality and Standards Department, and asked where their role is in the project, because the Subject Inspectors and Provincial Inspectors' role seem crucial in the project implementation. He indicated that more collaboration between the Inspectors and DEOs/SEOs is necessary.

Dr. Wenceslas Nzabalirwa, UR-CE, asked about the pedagogical contents knowledge aspects, if the project can help to find an appropriate way to use group work. He also asked about the collaboration between UR-CE, TTC and VVOB to conduct same survey in the TTCs to know the current situation. Other than above, he asked about how the peer-learning can be integrated in the curriculum. Regarding these questions, the SIIQS Project will work together with UR-CE and VVOB in the area of model lesson development. He mentioned about DETA international conference as one of the coordinators in UR-CE. He requested the project to send the abstract of SIIQS presentation for the upcoming international conference as the findings of the survey are really interesting and there is a need to share them with others.

Ms. Vincentie Nyangoma from ICT Department asked about how the project will be organizing model CBC lesson. She appreciated that model lesson videos will enrich digital contents materials in ICT Department. The ICT department would like to hear about the impact in the use of technology in the Rwandan classrooms. This will be discussed later between SIIQS Project and ICT Department.

Ms. Mukakimenyi from TEMP Department suggested that it would be better to have a look at different surveys which have been conducted by REB and development partners regarding the new curriculum so far, so that the findings could be harmonized.

12. CLOSING REMARKS

Mr. Claudien, ended the meeting by thanking all the participants for their great contributions in the meeting and called for their support and collaboration for the smooth running of the project. After giving his closing remarks, he also invited Mr. Shuhei Saikawa, to also give his remarks on behalf of JICA. Mr. Saikawa emphasized on the importance of Prof. Ono presentation that teachers should see if pupils are really following and that education should be learning-centered rather than just learner-centered. He mentioned that collaboration with other departments in REB and all the development partners is very important for the better implementation of the CBC.

The meeting adjourned at 17.30 and the participants shared coffee/ tea and snacks while discussing for the further collaboration.

Done at Kigali, 23rd March 2017,



Claudien NZITABAKUZE
Chairperson of the Meeting,
Head of Department, TEMPD



Berthine GIKUNDIRO
Programme Assistant,
SIIQS Project

添付 18. 第 2 回 JCC 議事録

Minutes of the 2nd JCC Meeting- SIIQS PROJECT

THE PROJECT FOR SUPPORTING INSTITUTIONALIZING AND IMPROVING QUALITY OF SBI ACTIVITY (SIIQS)

MINUTES OF THE SECOND JOINT COORDINATION COMMITTEE (JCC)

1. **DATE AND TIME:** 31st October, 2017, 15:30-17:30
2. **VENUE:** TEMPD Boardroom
3. **ATTENDANCE:** The attendance list is attached as (ANNEX 1)
4. **AGENDA**

15:30 - 15:40	Welcome Address	REB/JICA
15:40 - 15:50	Introduction of JCC participants	
15:50 - 16:00	Introductory video	
16:00 - 16:15	Progress of Output 1	Mr. Ryuichi Sugiyama
	<ul style="list-style-type: none">- Lesson study practice and model lesson development- Training material development for the 3rd phase CBC training	
16:15 - 16:30	Progress of Output 2	Ms. Sayaka Matsuzuki
	<ul style="list-style-type: none">- Problem-analysis workshop and action planning for DCC in pilot districts- Feedback on the action plan	
16:30 - 17:00	Problems and issues in Project Management	Mr. Ryuichi Sugiyama
	<ul style="list-style-type: none">- Prospects and risks based on Baseline survey and monitoring- Way forward to CPD institutionalization	
17:00 - 17:20	Question and Answer	
17:20 - 17:25	AOB	
17:25 - 17:30	Closing Remarks	

5. OPENING

The 2nd Joint Coordination Committee (JCC) meeting was held at the Boardroom of Teacher Education Management and Professionalisation Department (TEMPD), Rwanda Education Board (REB) on 31st October, 2017. It started at 15:30.

6. INTRODUCTION OF CHAIRPERSON

Mr. Claudien Nzitabakuze, Head of TEMPD, who was delegated by Mr. Gasana I. Janvier, Director General (DG) of REB, chaired the JCC meeting in his absence.

7. OPENING REMARKS

A welcome speech was made on behalf of Mr. Janvier who was not able to attend the meeting as chair. Mr. Nzitabakuze, started by welcoming the participants to the 2nd JCC meeting of the Project for Supporting Institutionalizing and Improving Quality of SBI Activity (SIIQS Project). He presented to the meeting participants the background of the SIIQS Project, and the partnership of REB and Japan International Cooperation Agency (JICA) for about ten years now and on behalf of the Government of Rwanda. He expressed his sincere gratitude to the Government of Japan for the support and partnership it has always provided for Rwanda, particularly to the education sector through REB.

He reminded the participants about the background of SIIQS Project which commenced in January 2017, aiming at enhancing teachers' understanding of Competence Based Curriculum (CBC) based lesson implementation and problem-solving capacities at school, sector, district and national level. The 1st JCC was held on 23rd March 2017 and the participants were informed about the project brief, project management mechanism and preliminary findings from the baseline survey. Subsequently, they discussed for better understanding and implementing of the project, and further collaboration.

He mentioned that SIIQS Project helps REB to develop materials for supporting CBC trainings at the national level, outlining challenges and solutions. And he declared that the project achieved several activities in the past six months.

Mr. Tomonori Nagase, Senior Representative of JICA Rwanda Office, who was delegated by Mr. Nobuyuki Takada, Chief Representative, started by thanking REB for its continuous partnership in implementation of SIIQS Project. He mentioned that he was eager and happy to see the progress of the project and gave back the flow to Mr. Nzitabakuze. He invited participants to introduce themselves and then informed to the participants the agenda of the meeting. He then invited SIIQS Project team to start the presentation.

8. INTRODUCTORY VIDEO AND PRESENTATION ON PROGRESS OF OUTPUT 1

Mr. Ryuichi Sugiyama, the Team Leader, started by thanking the participants and introducing himself to the JCC participants. He reminded the participants of the project scope and two key approaches. In order to show the progress of output 1 on teachers' understanding of CBC-based lesson implementation, he proposed them to watch a ten-minute video which was made for the National Career Guidance Summit held on 26th October 2017 at the Kigali Convention Center. The video mainly consisted of the followings three parts.

- Achievement of the previous project, the Project of Strengthening School-Based Collaborative Teacher Training (SBCT Project), which introduced the concept of School Based In-service Teacher Training (SBI) to schools throughout Rwanda and ended in December 2015.
- Activities implemented in SIIQS Project such as introduction of Lesson Study (LS).
- Concept of District CPD Committee (DCC) to ensure quality of CPD which will contribute to learners' achievement.

He then, showed model lesson videos and explained that they were produced as a final product of LS in model schools. He also demonstrated Audio/Visual (A/V) training material which was developed for the 3rd phase CBC training. It embedded model lesson videos as main contents. He put an emphasis on the project's approach, that is, practicality, evidence-based and relevance to the existing issues and challenges to help teachers in schools rather than providing academic theories. He also congratulated the induction of A/V material which opened new training paradigm ensuring training quality with provision of coherent instruction and concrete visual images to all teachers in the country.

9. PRESENTATION ON PROGRESS OF OUTPUT 2

Ms. Sayaka Matsuzuki mentioned about the importance of a CPD support mechanism and the problem solving cycle. She also mentioned the DCC establishment status as of October 2017. Four districts seemed not to be interested in DCC, or did not know anything about it, one district recognized the DCC but was waiting for further direction from REB. Six districts are in preparation and 19 others have already established. Taking account of difference among district status, four pilot districts were selected so that the experience in the pilot districts can inform good practices for institutionalization in each district. The focus of pilot activities was on raising awareness among DCC members about learners' achievement in their own district, and hence the analysis of national exams was provided in the DCC workshops in the districts. The DCCs made action plans and started implementation through different activities.

10. PRESENTATION ON PROBLEMS AND ISSUES

(1) Progress of Deliverables

Before discussing problems and issues, Mr. Sugiyama first informed about deliverables as shown in the table below.

	Deliverable	Status
SIIQS Project	Concept note for CBC induction training phase III	Completed
	Sample lesson videos	Completed
	CBC & CPD training material	Drafted
	Lesson Study Guide (Video)	Drafted
	Concept note for DCC	Discussion is underway among stakeholders
	DCC operation manual	Discussion is underway among stakeholders
	CPD monitoring form	Discussion is suspended
Other Program	SBMP Manual	Reviewed, further discussion will be made to harmonize CPD
	Teacher Development Framework	Reviewing the draft material prepared by UNESCO to properly include CPD
	CPD manual VVOB	Discussion is underway with VVOB to integrate Lesson Study

(2) Risks

Regarding the risks that the SIIQS project identified, the fact that CPD and DCC were incorporated in the draft Education Sector Strategic Plan (ESSP) for 2018/19-2023/24 is a positive risk, in that there is a possibility to expand REB/TEMP's contribution to education.

However, there are also negative risks. Teachers still apply conventional teaching style after two years from introduction of CBC. This was illustrated in the research result based on the baseline survey in March, as a few open questions compared to considerable number of closed questions in lessons. This may have led to unsatisfactory result of the test conducted in the model schools. The percentage of S4 students' correct answers on P4 level or S1 level questions was not significantly higher than that of S1 students. Teaching is not scaffolding learning.

Other risks were delay in textbook procurement, implementation of sector-based training and its quality control, engagement of all teachers in school-based CPD and insufficient use of online monitoring system.

In terms of online monitoring system, there is a need to clarify the situation after the transfer of Education Quality and Standard Department (EQS) to the Ministry of Education (MINEDUC). Mr. Sugiyama also referred to the weakness of current national exam records, which prevented detailed data analysis to inform districts about strengths and weaknesses related to learners' achievement.

(3) Way Forward

As a way forward for institutionalizing CPD, Mr. Sugiyama suggested followings from policy, financial and technical aspects;

- More sensitization and advocacy for Vice Mayors
- Integration of CPD in Imihigo (performance contract) as an enabler of CPD expansion and quality
- Availability of capitation grant for CPD
- Provision of detailed achievement data for CPD planning

11. DISCUSSION

Mr. Nzitabakuze started by thanking for their presentations and welcomed the participants' comments and questions.

He started with a question about the possibility of scale-up of DCC support, rather than starting with four pilot districts.

Mr. Sugiyama replied to him that the SIIQS project had an intention to institutionalize DCC in all districts but it was more important to extract good practices from the pilot districts, considering the fact that not all districts have established DCC after more than one year from the letter from REB requesting establishment. Hence, the project will disseminate the experience in the pilot district to others, taking account of the difference in the status of education sector among districts. Mr. Nzitabakuze confirmed that tools used by the project can be used in other districts too.

In terms of assessment, Mr. Nzitabakuze suggested that next time the project could focus on formative assessment more than national examination.

He mentioned that TEMPD would identify staff members to work with and coordinate discussion on the online monitoring system to find out an appropriate way to operate it.

Dr. Fabien Habimana, Director of Science Unit, MINEDUC, representing the DG of Science, Technology and Research, and Dr. Michael Tusime, Head of EAD, REB, asked the SIIQS Project team about the kind of questions that the project gave to students in the tests.

Mr. Sugiyama answered that they were LARS type tests which included questions from textbooks, Trends in International Mathematics and Science Study (TIMMS) and national exam of other countries.

Dr. Habimana and Dr. Tusime expressed concerns that correct answer rate of P4 level questions were unexpectedly low even among S1 and S4 students, 53.9% and 60.5% respectively. Dr. Mike suggested that this result may be because some parts of the syllabus may have been skipped. They have to carefully compare the test tool and syllabi to fully understand the reason. Dr. Habimana also recommended that the tool should be shared with EAD and Curriculum Pedagogical Materials Production and Distribution Department (CPMD) so that they can find out problems as one institution.

Minutes of the 2nd JCC Meeting- SIIQS PROJECT

Mr. Nzitabakuze concluded that in the future, the project should share test tool with the departments involved such as EAD and CPMD for quality assurance before using them. The factors which attribute to low achievement of learners should be also investigated by the project team and REB together when analyzing the results.

Dr. Tusime also pointed out that Development Partners (DPs) should coordinate and make sure that the DCC is in place in all districts and the same mandate should not be held by any other organization in the districts. He also suggested that DCC's action plan should include quantitative indicators to measure the level of achievement.

Mr. Sugiyama ensured it by referring to the situation that a meeting with DPs concerned was set on the following day of the JCC, and that a clear guidance will be eventually set for districts. He added that there is not any other organization which deals with teachers' CPD at the district and sector levels and that the district education committees mainly discuss issues such as the school infrastructure and drop-out as far as the project investigated. Therefore, TEMPD should play a supervisory role in operationalizing DCCs. Ms. Matsuzuki answered that all the DCC's action plan set objectively verifiable indicators.

Dr. Tusime inferred that the reason why DCCs are not yet active and do not know what to discuss may be because they cannot prioritize issues.

Mr. Shuhei Saikawa, JICA Education Program Advisor, supported the project team's response by referring to his finding that CPD, especially school-based CPD, has seldom been discussed in the district education committee. He stated that, given that different DPs supported education sector at school, sector or district levels throughout the country, DCCs should be a focal point which conduct mapping and coordinate support to optimize the outcome. Ms. Ruth Mukakimenyi added that DPs appreciated and supported CPD (SBI), and coordination among DPs already exist and work together to avoid duplication and maximize their support.

Ms. Anathalie Nyirandagijimana, Pedagogical norms specialist of CPMD, REB, representing the head of department, informed that one CPMD officer is assigned per district to coordinate with districts and so they would assist DCC activities on the ground level. She also appreciated the idea of analyzing national exams in detail and would like to learn more about it.

The documents related to DCC shall be shared with CPMD and EAD later.

12. CLOSING REMARKS

Mr. Nzitabakuze, ended the meeting as a chair by appreciating the activities implemented by the SIIQS project so far and all the participants for their great contributions toward the achievements of the project targets and thus the achievement of teaching and learning. He also thanked JICA for its continuous cooperation and partnership with REB. He invited participants for a health break for more discussions and collaboration. The meeting officially adjourned at 17:30.

Done at Kigali, 31st October 2017,



Claudien NZITABAKUZE
Chairperson of the Meeting
Head of Department, TEMPD

松月さやか

For

Ryuichi SUGIYAMA
Team Leader
SIIQS Project

添付 19. 第 3 回 JCC 議事録

**THE PROJECT FOR SUPPORTING INSTITUTIONALIZING AND IMPROVING
QUALITY OF SBI ACTIVITY (SIIQS)**

MINUTES OF THE THIRD JOINT COORDINATION COMMITTEE (JCC)

I. DATE AND TIME: 14th March, 2018 from 15:30-17:30

II. VENUE: TDM Department Boardroom

III. ATTENDANCE: Annexed

IV. AGENDA

15:30 - 15:40	Welcome Address	REB/JICA
15:40 - 15:50	Introduction of JCC members	
15:50 - 16:05	Progress of Output 1 <ul style="list-style-type: none">• Phase III CBC training for National Trainers• Phase III CBC training for Sector-Based Trainers	Mr. Antoine Mutsinzi Mr. Ryuichi Sugiyama
16:05 - 16:20	Progress of Output 2 <ul style="list-style-type: none">• National DCC Forum• DCC Orientation• Phase III CBC training for DDEs/DEOs/SEOs	Mr. Antoine Mutsinzi Mr. Ryuichi Sugiyama
16:20 - 16:40	The M&E of the project <ul style="list-style-type: none">• JCC membership• Project team• Evaluation• Risk• Upcoming activities and way forward	Mr. Antoine Mutsinzi Mr. Ryuichi Sugiyama
16:40 - 17:00	Questions and Answers	
17:00 - 17:20	Farewell Presentation from Program Advisor of JICA Rwanda Office (Education and Vocational Training)	Mr. Shuhei Saikawa
17:20 - 17:25	AOB	
17:25 - 17:30	Closing Remarks	

1. INTRODUCTION

The 3rd Joint Coordination Committee (JCC) meeting was held at the boardroom of the Department of Teacher Development & Management and Career Guidance & Counselling (TDM&CGC), Rwanda Education Board (REB) on 14th March, 2018 and started at 15:30. The meeting was co-chaired by Ms. Angélique Tusiime, Deputy Director General (DDG) of REB, Mr. Tomonori Nagase, Senior Representative of Japan International Cooperation Agency (JICA).

2. OBJECTIVES OF THE MEETING

Mr. Claudien Nzitabakuze, the head of TDM and the Manager of the Project for Supporting Institutionalizing and Improving Quality of SBI Activity (SIIQS) welcomed the participants and he thanked them for dedicating their time to the 3rd JCC meeting of the Project for Supporting Institutionalizing and Improving Quality of SBI Activity (SIIQS). He introduced to participants the purposes of the meeting namely:

- (1) To report the progress and achievements of the project
- (2) To inform upcoming activities and
- (3) To discuss the problems and issues.

3. OPENING REMARKS

Opening remarks were given by Ms. Tusiime, on behalf of DG who was not able to attend the meeting as chair. She recognised the participants for attending the 3rd JCC meeting of the SIIQS Project. She told the participants that she was very honoured to be part of the programme. She also said that she was really happy for the culture of joint collaboration between JICA and REB. She expressed her sincere gratitude to the Government of Japan for the support and partnership it has always provided for Rwanda, particularly to the education sector through REB. She, especially, thanked JICA/SIIQS Project team for a huge contribution it has been providing in improving the quality of education in Rwanda by providing technical expertise and building capacity of Rwandan teachers for enhancing their understanding on Competence Based Curriculum (CBC).

She reminded the participants that the Government of Rwanda is currently focusing, not only, on the quantity or number of students in schools, but also on the quality of education these children are getting. She also urged the participants to be aware of what is happening inside the classrooms by getting closer to teachers and guiding them in terms of teaching methodology. It is very essential to have education facilities such as building, electricity, textbooks, computers and other teaching materials; however there must be a close follow up of what is happening inside the classrooms in order to reach the quality of education we are striving for.

Mr. Nagase started by thanking REB for its continuous partnership in the implementation of SIIQS Project. He mentioned that he was eager and happy to see the progress of the project and he had no doubt that SIIQS Project would achieve its objectives because Rwandan people are used to understand, and are open to accept the change. He also emphasized on the quality of education and encouraged participants to consider what is happening in classrooms.

4. INTRODUCTION OF JCC MEMBERS

Mr. Ryuichi Sugiyama, the Team Leader of SIIQS Project explained to participants that the JCC is the steering committee of the project that monitors the progress of activities and leads discussions to take necessary actions against the raised issues to keep the project on the right track. Members of the JCC were stipulated under the Record of Discussion of the SIIQS Project, which is a bilateral agreement between REB and JICA. The official members were assigned from both sides. In addition, both sides are allowed to invite person(s) who may contribute to the project, if necessary. Mr. Sugiyama expressed his concerns about the new structure of REB which would affect the JCC membership.

5. PROJECT PROGRESS

Mr. Sugiyama presented to participants the project scope, i.e. the overall goal, the project's purpose and the outputs. SIIQS Project has two outputs that:

- Teachers' understanding of CBC-based lesson implementation is enhanced.
- Problem-solving capacities are enhanced at school, sector, district, and national level.

(1) Progress of Output 1: Teachers' understanding of CBC-based lesson implementation is enhanced

Mr. Antoine Mutsinzi and Mr. Sugiyama shared with participants what have been achieved for output 1.

Phase III CBC training for National Trainers (NT) was conducted from 2nd to 7th November in Bugesera. 141 National Trainers were trained and 100 of them were qualified. The program was developed by joint operation team of TDM/REB, SIIQS and a UNICEF consultant in a harmonized manner. They also served as trainers. Drafted training material (Audio-Visual aid) was tested and reviewed (then revised afterward). Key focus areas for the training were Active learning methods and Meaningful learning tasks and questioning for quality formative assessment.

Phase III CBC training for Sector-Based Trainers (SBT) was conducted from 10th to 17th January in ten training centers. A total of 3,835 SBTs were trained. Joint Operation Committee (JOC) was

formed for each training center, and it was composed of TDM/REB and SIIQS staff (administration), a UNICEF consultant, KOICA volunteers and NTs. Joint Operation Committee (JOC) teams shared information and communicated through WhatsApp (which is one of the most popular Social Networking Services in Rwanda), in centers so that they could solve problems on time. They challenged to overcome difficult situations such as equipment (projector) problems and nursing issues. The positive spirits advanced training modality and opened the training for mothers. Daily JOC reports also improved the overall training quality.

(2) Progress of Output 2: Problem-solving capacities are enhanced at school, sector, district, and national level

Mr. Antoine Mutsinzi and Mr. Sugiyama also shared with participants what have been achieved for output 2.

The National District CPD Committee (DCC) Forum was held on 26th January at Hilltop hotel, sponsored by JICA Rwanda Office and VVOB, aiming at promoting CPD/DCC. The program was developed by joint operation team of TDM/REB, SIIQS Project, and VVOB in a harmonized manner. 147 District Directors of Education (DDE), District Education Officers (DEOs), Sector Education Officers (SEOs), head teachers and School Based Trainers (SBTs) attended as well as development partners. A good CPD practice (Munyaga sector, Rwamagana district) was featured. Staff from REB, JICA, SIIQS, VVOB and BLF and a UNICEF consultant served as facilitators of a group work and roles of stakeholders involved in CPD were discussed.

Kayonza responded to the forum afterward, it officially sent an invitation letter to REB/SIIQS Project for DCC orientation and it was the first district where the project conducted an orientation upon its request. Eleven DCC members in Kayonza attended the orientation. The project also supported an orientation in Nyarugenge district whereby 57 members assembled. Key focus areas for those DCC support are promotion of CPD, capacity building for problem solving and data analysis.

The project introduced a special method for problem solving in orientation. Mr. Sugiyama reported the typical behavior of participants in districts is that they do not specify “whose problem” during problem solving practice and eventually they fail to specify “whose responsibility”. Then they tend to conclude “REB or the Government of Rwanda should address issues”. The method requested participants to find solutions that can be applied by themselves by specifying who, what, where, when, why and how. Participants were eager to know how they could identify educational problems faced in their areas, how they could analyze those problems and how they could proceed to find customized solutions.

As for the phase III CBC training for DDEs/DEOs/SEOs, the program was developed by a joint operation team of TDM/REB and SIIQS. Key focus areas were action planning of sector-based

training, instruction of online monitoring, capacity building for problem solving and capacity building for data analysis. The two-days long training was being conducted in three training centers in sequence, from 8th to 16th March. Trainings in Musanze and Muhanga were completed and it would be held in Rwamagana from the next day. Some Challenges were found in terms of ownership and commitment of districts and sectors. The majority of DDEs/DEOs/SEOs did not bring their laptop PCs even though they were told to bring their laptops to the training center. On the second day, a big number of them did not bring the training materials which were provided on the first day.

6. M&E OF THE PROJECT

(1) JCC Membership and project team

Mr. Sugiyama presented to participants to confirm the new structure of the JCC membership and project implementation as the structures that the Ministry of Education and REB have recently changed.

(2) Evaluation

Mr. Sugiyama told participants that both the overall goal and the project purpose are still premature for being evaluated. But he gave a summary of what have been achieved so far.

(3) Risks

Mr. Mutsinzi and Mr. Sugiyama presented to participants both positive and negative risks that have tangible impacts on implementation of CPD.

Regarding the risks that the SIIQS Project identified, the fact that CPD and DCC were incorporated in the draft Education Sector Strategic Plan (ESSP) for 2018/19-2023/24 is a positive risk, in that there is a possibility to expand REB/TDM's contribution to education. Laptop PCs were distributed to all SEOs as a positive risk but the online monitoring is not being used sufficiently, which is a negative risk. There are also negative risks which are that teachers still apply conventional teaching style after two years of introduction of CBC, teachers are still thinking that group work is the only teaching method in CBC, some textbooks are still being developed and cascade trainings vary in terms of quality and organization.

Mr. Sugiyama emphasized that the urgent risk to consider is the quality control of the sector-based training. He explained results of pre and post evaluations which aimed to check if the trainees' mindset has changed or if their knowledge about the implementation of CBC has increased. Comparing the results of pre and post tests, it has been realized that there was a little improvement for some districts, for instance, Rulindo, Karongi and Kicukiro. For other districts the post test scores showed that there was an improvement even if it was not pleasant except Muhanga district.

The JCC participants wondered why Mr. Mutsinzi responded to them that the reason might be that the selected candidates were not competent enough for being SBTs.

(4) Upcoming activities and way forward

As a way forward for institutionalizing CPD, Mr. Sugiyama suggested the following:

- Integration of CPD in Imihigo (performance contract) which will enable CPD expansion and quality;
- DCCs as a platform of CPD have to be established and function in all districts;
- SIIQS Project will provide all SEOs with an excel sheet which will help them in analyzing national exam results;
- For SBT monitoring, the alternative Google monitoring is being prepared and it will be given to SEOs to monitor SBT activities while the online monitoring is being finalized.

7. QUESTIONS /ANSWER OPEN DISCUSSION

Mr. Nzitabakuze thanked the presenters for their cooperation and welcomed the participants' comments and questions. The following is the summary of discussion.

JCC membership: Mr.Nzitabakuze told participants that this issue will be discussed later.

Ms. Tusiime expressed the following concerns. She had to leave for other duties before the meeting ends and she asked participants to think about her concerns and come up with alternatives in the next JCC.

Training for NT candidates: During the training for NT candidates, only 100 out of 141 were qualified as NTs. The DDG asked what have been the criteria in selecting the qualified and not qualified ones.

Mr. Sugiyama responded to her that all participants were given a test and only those who passed the test were qualified as NTs.

Monitoring: The DDG also expressed her concern about how to monitor activities. How are we going to know what is happening down there, especially how are we going to monitor what is happening inside the classrooms? She encouraged participants to think how best CPD activities should be monitored and evaluated nationwide. This will make it easier for REB and development partners to have a real picture of what is happening and provide supports if necessary.

Mr.Mutsinzi and Mr.Sugiyama responded that the online monitoring is not working and SEOs are not using it. The ICT department is still working on it to make it functional. This makes it not easier to grasp the CPD situation nationwide. It is in this regard that the Google monitoring which is very simple and accessible for all SEOs is being designed. SEOs will use this platform to upload all data

related to CPD activities and REB will be able to access that information, therefore REB will be able to provide any support if needed.

Stakeholders' engagement in CPD: The DDG also expressed her concern about how we are going to make sure SEOs, head teachers and teachers are engaged in CPD. This goes hand in hand with monitoring and evaluation.

Quality of training: About the quality of training, the DDG was surprised with the quality of participants in the trainings which is low at both national and sector levels and she urged to go deep, find out the reasons and thereafter give feedback to districts.

Mr. Mutsinzi responded that during the DDE/DEO/SEO training, the results of evaluation of NTs and SBTs were shared with participants for training quality control. As one of the training items was problem solving, the issue was transferred to them so that they could go on the ground and find out the root causes and possible solutions by themselves.

Plan of Activities: Mr. Nzitabakuze said that he expected to have a plan of activities in JCC but unfortunately not.

Mr. Sugiyama responded to him that SIIQS Project does not have a separate budget for CDP activities. It only provides technical expertise support, therefore the project team and Mr. Nzitabakuze proposed that REB will sit together to make a plan.

8. FAREWELL PRESENTATION FROM PROGRAM ADVISOR OF JICA RWANDA OFFICE

During his presentation, Mr. Shuhei Saikawa asked participants the following question "To whom should we be accountable most?" He said that we should be accountable to the Government of Rwanda when it comes to what have been planned and agreed upon. Referring to Munyaga success stories, he told participants that we should be also accountable to learners' parents. But mostly we should be accountable to learners. He gave four recommendations:

1. Think about whom we are accountable most, "learners". He recommended all the participants to be concerned of what is happening inside classrooms;
2. Refocus on the role of SEOs, they are the ones to push schools to plan and implement CPD activities. It is very effective to focus on them so that CPD activities could be implemented at sector and school levels;
3. Start encouraging teachers to use quick and short question after each session to make sure children have understood what s/he has taught them;
4. Make all teachers competent so that they will think for themselves and identify what they need. CPD is very important to achieve all this.

9. AOB

As he was leaving Rwanda, Mr. Saikawa appreciated Rwanda for good collaboration with Japan and he took this opportunity to say good bye.

10. CLOSING REMARKS

As the DDG had left by the time being, Mr. Nzitabakuze ended the meeting by appreciating the activities implemented by SIIQS Project so far, and all the participants for their great contributions toward the achievements of the project targets and, thus the achievement of teaching and learning. He also thanked JICA for its continuous cooperation and partnership with REB. He invited participants for a health break for more discussions and collaboration. The meeting officially adjourned at 17:30.

Done at Kigali, 14th March 2018



Angelique TUSIIME
Chairperson of the Meeting
DDG, REB



Ryuichi SUGIYAMA
Team Leader
SIIQS Project

添付 20. 第 4 回 JCC 議事録

Minutes of the 4th JCC Meeting- SIIQS PROJECT

**THE PROJECT FOR SUPPORTING INSTITUTIONALIZING AND IMPROVING
QUALITY OF SBI ACTIVITY (SIIQS)**

MINUTES OF THE FOURTH JOINT COORDINATION COMMITTEE (JCC)

I. DATE AND TIME: 23th January 2019 from 15:30-17:30

II. VENUE: TDM&CGC Boardroom

III. ATTENDANCE: Annexed

IV. AGENDA

15:00 - 15:10	Welcome Address	REB/JICA
15:10 - 15:20	Introduction of JCC members	
15:20 - 15:30	Background of the project	Mr. Ryuichi SUGIYAMA
15:30 - 15:45	Progress of Output 1 <ul style="list-style-type: none">• Lesson improvement• Online CPD Course	Mr. Hashituky HABIYAREMYE
15:45 - 16:00	Progress of Output 2 <ul style="list-style-type: none">- DCC Formation	Ms. Clarisse DUSABIMANA
16:00 - 16:40	Annual activity plan of the project <ul style="list-style-type: none">- Outline- Open day- Revision of PDM	Mr. Gerard MURASIRA Mr. Ryuichi SUGIYAMA Mr. Ryuichi SUGIYAMA
16:40 - 16:50	Question and Answer	
16:50 - 16:55	AOB	
16:55 - 17:00	Closing Remarks	

1. INTRODUCTION

The 4th Joint Coordination Committee (JCC) meeting was held at the boardroom of the Department of Teacher Development & Management and Career Guidance & Counselling (TDM&CGC), Rwanda Education Board (REB) on 23th January 2019. It started at 15:30. The meeting was co-chaired by Ms. Angelique Tusiime, Deputy Director General (DDG) of REB, and Mr. Tomonori Nagase, Senior Representative of Japan International Cooperation Agency (JICA).

2. OBJECTIVES OF THE MEETING

Mr. Gerard Murasira, the director of Teacher Training Unit, on behalf of the Head of TDM&CGC and Project Manager of the Project for Supporting Institutionalizing and Improving Quality of SBI Activity (SIIQS Project), welcomed participants and he thanked them for dedicating their time to the 4th JCC meeting of SIIQS Project. He introduced to participants the purposes of the meeting, which were;

- 1) To report the progress and achievements of the project
- 2) To inform upcoming activities
- 3) To discuss the problems and issues

3. OPENING REMARKS

Opening remarks were given by Ms. Tusiime on behalf of DG who was not able to attend the meeting as chair. She welcomed invitees in REB and thanked the participants of the 4th JCC meeting of the SIIQS Project. She appreciated JICA for working closely with REB especially through SIIQS Project that dedicated its efforts on school-based in-service trainings. The DDG pointed out that to be a good teacher, it is clear that CPD is very essential and she appreciated SIIQS for efforts that it has been producing in promoting SBI and CDP in general. Especially she thanked JICA/SIIQS Project team for how it has been bringing a huge contribution in improving the quality of education in Rwanda through providing technical expertise and building capacity of

Rwandan teachers for enhancing their understanding on Competence Based Curriculum (CBC). She called every participant's attention, to be active and engaged in the meeting so that it could achieve its objectives.

Mr. Nagase started by thanking REB for its continuous and good collaboration with JICA and SIIQS project in particular. He reminded participant that SIIQS Project is in its final year and this 4th JCC is a good occasion to consider both progress and challenges that faced the Project in order to take the next steps. "It is important to review the current status of the project and think about the next step", he said. Mr. Nagase emphasized on Continuous Professional Development (CPD) which is now the second priority of the Education Sector Strategic Plan (ESSP 2018-2023) to improve quality of education. He pointed out that, according to the World Bank, Rwandan children on average complete only 3.8 years of learning. This means that average Rwanda children do not graduate elementary education. This is a serious issue and quick response is needed. Among many possible reasons behind this is that learners do not understand lessons. This means that teacher is the person who can change this situation. This necessitates effective CPD.

4. INTRODUCTION OF JCC MEMBERS

Mr. Ryuichi Sugiyama, the Team Leader of SIIQS Project, explained to participants that the JCC is the steering committee of the project that monitors progress of activities and leads discussions to take necessary actions against the raised issues to keep the project on the right track. Members of the JCC were stipulated under the Record of Discussion of the SIIQS Project, which is a bilateral agreement between REB and JICA. The official members were assigned from both sides. In addition, both sides are allowed to invite person(s) who may contribute to the project, if necessary.

5. BACKGROUND OF THE PROJECT

Mr. Sugiyama introduced participants to the background of the project. He cited that changing teachers' classroom practices requires an incremental change over a sustained period, supported by coaching activities of peers, heads of departments and external agencies. A more attention should be given to CPD rather than teachers training. Mr. Sugiyama recalled participants that ESSP 2018-

2023 has also prioritized CPD as one of the strategies to achieving the quality of education through implementing CBC. SIIQS Project was put in place to support and promote CPD at central and grass root levels. He told that the Project was intended to attain two outputs so that CPD could be institutionalized; (1) Teachers' understanding of CBC-based lesson implementation is enhanced, and (2) Problem-solving capacities are enhanced at school, sector, district and national level. SIIQS Project is using two key approaches to contribute to National CPD framework, which are to model CPD through Lesson Study and to establish CPD support mechanism through partnership with local authorities.

Mr. Sugiyama concluded that, given the increased performance of schools where CPD has been practiced, CPD will yield great fruits in terms of implementing CBC and improving the quality of education in general. He emphasized this with tangible facts by giving examples of schools.

6. PROJECT PROGRESS

(1) Progress of Output 1

Lesson improvement through Lesson Study

Lesson Study is one of activities that have been conducted by SIIQS Project to achieve Output 1. Mr. Hahituky Habiyaemye, the Monitoring Officer of the Project, explained participants what Lesson Study is and what have been achieved through it in improving the quality of lessons and schools' performance in general. Lesson Study is a new concept in Rwanda but it has 100-year history in Japan. He explained that Lesson study has been piloted in seven Rwandan schools, namely EP Buhande (Rulindo district), Lycée Notre Dame de la Visitation (Rulindo district), G.S Apagie Musha (Rwamagana district), G.S St Aloys Rwamagana (Rwamagana district), G.S Kabuye Catholique (Gasabo district), G.S Notre Dame des Apôtres Rwaza (Musanze district) and G.S Mukarange Catholique (Kayonza district).

In the schools mentioned above, Lesson Study has significantly contributed to lesson improvement as evidenced by improved performance.

Online CPD course on CBC

The online CPD course on CBC was designed to help teachers to continuously learn anywhere at

any time for improving their classroom practices. This course was designed based on CBC training content of the past three phases with the following main objectives;

- 1) To provide teachers with opportunity to learn and improve their practice toward CBC implementation
- 2) To help teachers review the CBC content and assess themselves
- 3) To facilitate REB in assessing teachers' level of understanding on CBC and monitoring teachers' competences to provide appropriate support on time.

Mr. Habiyaremye explained the structure and the functionality of the platform. The course was made up of four units. Teachers must read through each unit and respond to an assessment question before proceeding to the next unit. The assessment is composed of quizzes and an essay question. A workshop for piloting this course was conducted for two days in November 2018 to check its functionality and collect feedback to make it fit for purpose. 60 teachers from all over the country gathered at Teacher Training College (TTC) Muhanga to try the course and gave feedback. Mainly the teachers appreciated the course and confirmed that it could accelerate CPD. SIIQS Project will develop a rollout plan to be approved by the DG REB and continue to monitor teachers' progress.

(2) Progress of Output 2

Ms. Clarisse Dusabimana, the Programme Officer of the Project presented progress regarding Output 2. Strong coordination, effective planning, monitoring and reporting on CPD activities at sector and school level are essential for CPD to be successful and bear expected results. Since 2017, SIIQS project has been supporting formation of District CPD Committees (DCCs) in 14 districts. The Project support to enhance DCCs' capacity is divided into three areas;

1) DCC orientation workshops

DCC members were explained the concept and membership of DCC. They were also made aware of DCC's key roles and responsibilities which are summarized into four categories; Planning, Monitoring and Evaluation, Review and Learning, and Reporting of CPD related activities in the district.

2) Planning workshops

DCC members developed an action plan through following three steps.

- **Problem Analysis**

DCC members identified and analyzed different problems that were affecting quality of education in their district. DCC members were able to identify their problems and figured out why a problem was happening using a “problem tree”.

- **Objective Analysis**

The objective of this is to examine the solution to the problems identified in Problem Analysis. DCC members capacity to set a core objective and analyze different means and strategies to achieve it was enhanced.

- **Action plan development**

Results from Problem and Objective Analysis were extracted to develop an action plan. Their capacity in setting achievable and measurable objectives and outputs was enhanced.

3) Monitoring

For the purpose of examining achievement from planned DCC activities, SIIQS Project has introduced the Most Significant Change (MSC) as M&E technique. This technique was introduced in Gasabo and Rulindo so far.

SIIQS Project has been working closely with other development partners such as BLF, Wellspring, VVOB, Soma Umenye, IEE, Educate! to promote harmonization in supporting DCC. Through a number of workshops SIIQS Project has contributed to the design of DCC support as common approach among development partners and shared some tools namely; Problem and Objective Analysis tool and Action plan development tool. Together with BLF, a DCC online monitoring system is being developed.

7. ANNUAL ACTIVITY PLAN OF THE PROJECT

(1) Outline of the project work plan

Mr. Murasira presented the Project work plan for 2019, recalling the participants that SIIQS is a three-year project, and this is the third and last year. The Project is divided into three phases and each phase has the duration of one year. Phase one (2017) was particularly for preparation. During this phase different materials were developed, training of core trainers on CBC were conducted and a DCC guideline was developed. Cascade training on CBC were conducted, and DCCs/SCCs were operationalized in phase two (2018). Mr. Murasira emphasized that in phase three (2019), the Project will concentrate its efforts on monitoring and evaluation. The focus will be on;

- 1) Measurement of teachers' and learners' achievements
- 2) Monitoring DCCs/SCCs and
- 3) Sharing good practice

Then Mr. Murasira showed work breakdown for 2019 and the participants appreciated that it was well structured. The participants agreed that the Project Design Matrix (PDM) of the Project would be revised accordingly.

(2) Open day

Mr. Sugiyama informed the participant about the Open Day Demonstration event which is planned for Wednesday 13th February at G.S Kabuye Catholique in Gasabo District. Ms. Tusiime asked for more clarification regarding how an Open Day is conducted in Japan and what motivates teachers to participate in. Mr Sugiyama replied that an Open Day in Japan is very common, schools organize at the beginning of each term and there are National Open Days as well. He also clarified that an Open Day is subject based. Regarding what motivates teachers to attend it, he answered that teachers apply for participation and even pay high fees because the more they participate in and learn from other teachers, the more they become a good teacher and this will be the basis for being promoted. The Open Day event in Rwanda was clearly introduced and favourably received by all the participants.

8. QUESTION AND ANSWER

Mr. Murasira appreciated all the presentations and welcomed the participants' comments and questions. Following is the summary of discussion.

Ms. Tusiime, DDG REB asked how Munyaga sector in particular and other schools practicing CPD have been able to manage CPD activities given common challenges for Rwandan schools such as overloaded timetables, and how CPD can be institutionalized? Mr. Sugiyama responded to her that Munyaga sector had a Sector Education Officer (SEO) who championed promotion of CPD. The SEO had made much effort in encouraging schools to practice CPD. Once CPD outcomes are known and teachers clearly understand how it will contribute to improved school performance, time is no longer a challenge, CPD becomes one of teachers' duties. The schools have organized a wide range of CPD activities. They use free time like early morning before starting class, the free time between the first and the second shift for CPD activities because they know its importance in improving their performance. Mr. Habiyaremye and Mr. Kizito Ndiokubwayo, the other Monitoring Officer of the Project, also illustrated that some schools have been able to explore their timetables and find spare time reserved for CPD.

Dr. Andre Muhirwa, Director of the Centre for Teaching and Learning Enhancement at University of Rwanda College of Education (UR-CE), suggested that both REB and JICA should sit together and see how SIIQS Project can be turned into a sustainable program, given its importance. Mr. Sugiyama clarified that, as Mr. Murasira mentioned, the 3rd year of the project more focuses on analyzing outcome of the Project. After evaluating the CPD model project piloting, findings will be shared and discussed, and stakeholders will see if the Project can be expanded.

9. AOB

There was no AOB.

10. CLOSING REMARKS

Closing remarks were given by Dr. Muhirwa on behalf of UR-CE Principal, Mr. Naganse, JICA Senior Representative, and Ms. Tusiime, DDG REB.

Minutes of the 4th JCC Meeting- SIIQS PROJECT

Dr. Muhirwa greatly appreciated the good initiative and efforts for enhancing teachers' competences to implement CBC through CPD. He offered any support necessary to promote CPD activities as UR-CE and hoped that the Project would be transformed into a long-lasting program.

Mr. Nagase encouraged REB to promote teachers' motivation toward CPD. It is not good to force teachers to do CPD but the key approach to effective CPD is to motivate teachers to see positive sides of practicing CPD and independently think what is better for themselves.

Ms. Tusiime underlined that everyone is talking about quality of education. Quality of education implies quality teachers' CPD. SIIQS Project is much contributing to promotion of CPD. REB appreciated that because whatever development partners are doing is what REB is supposed to do. REB expects that SIIQS Project will give recommendations on how CPD could be made effective for achieving REB's main goal, "improved quality of education". She expressed her gratitude to participants for their attention and engagement in the 4th JCC. The meeting officially adjourned at 17:00.

Done at Kigali, 23rd January 2019



Angelique TUSIIME

Chairperson of the Meeting

DDG, REB



For
Ryuichi SUGIYAMA

Team Leader

SIIQS Project

添付 21. 第 5 回 JCC 議事録

**THE PROJECT FOR SUPPORTING INSTITUTIONALIZING AND IMPROVING
QUALITY OF SBI ACTIVITY (SIIQS)**

MINUTES OF THE FIFTH JOINT COORDINATION COMMITTEE (JCC)

I. DATE AND TIME: 23rd July 2019 from 9:30-11:30

II. VENUE: REB Boardroom

III. ATTENDANCE: Annexed

IV. AGENDA

9:30 -9:40	Welcome Address	REB/JICA
9:40 - 9:50	Introduction of JCC members	
9:50 - 10:05	Revision of Project Design Matrix (PDM)	Mr. Ryuichi SUGIYAMA
10:05 - 10:20	Progress of Output 1 - Lesson improvement in model schools	Mr. Hashituky HABIYAREMYE Mr. Kizito NDIHOKUBWAYO
10:20 - 10:35	Progress of Output 2 - DCC/SCC monitoring	Ms. Clarisse DUSABIMANA
10:35 - 10:50	Preliminary findings of the Endline Survey - Framework of the ELS - Findings - Lessons Learned	Mr. Ryuichi SUGIYAMA
10:50 - 11:00	Upcoming Activities - DCC/SCC monitoring - Project closing seminar	Mr. Ryuichi SUGIYAMA Mr. Gerard MURASIRA
11:00 - 11:20	Question and Answer	
11:20- 11:25	AOB	
11:25 - 11:30	Closing Remarks	REB/JICA

1. INTRODUCTION

The 5th Joint Coordination Committee (JCC) meeting was held at REB boardroom on 23th July 2019. It started at 9:30 and ended at 11:30. The meeting was chaired by Ms. Angelique Tusiime, Deputy Director General (DDG) of REB.

2. OBJECTIVES OF THE MEETING

Ms. Emerthe Kabatesi, TTC Teacher Training officer, welcomed participants and she thanked them for dedicating their time to the 5th JCC meeting of SIIQS Project. She introduced to participants the purposes of the meeting, which were;

- (1) To report the revision of Project Design Matrix (PDM)
- (2) To share the preliminary findings of the end line survey (ELS)
- (3) To report the progress of the project
- (4) To report upcoming activities towards the end of the Project in December
- (5) To discuss the problems and issues

3. OPENING REMARKS

Opening remarks were given by Ms. Tusiime, on behalf of DG who was not able to attend the meeting as chair. She welcomed invitees in REB and thanked the participants of the 5th JCC meeting of the SIIQS Project. Also, special welcome was given to MINEDUC representatives who attended the meeting for the first time. She appreciated JICA for working closely with REB especially through SIIQS Project that dedicated its efforts in lesson improvement. The DDG told participant that JCC meeting is a good occasion for different education stakeholders to learn from what SIIQS Project is doing, what have been achieved so far, challenges, lessons learnt and recommendation for scaling up. She thanked JICA/SIIQS Project team the contribution in improving the quality of education in Rwanda through providing technical expertise and building capacity of Rwandan teachers for enhancing their understanding on Competence Based Curriculum (CBC). She called every participant's attention, to be active and engaged in the meeting so that it could achieve its objectives.

Mr. Shin Maruo, Chief Representative of JICA Rwanda, started by thanking REB for its continuous and good collaboration with JICA and SIIQS Project in particular. In his remarks, he emphasized

that JICA Rwanda is committed in supporting Rwandan education sector especially in basic education. He said that REB and JICA have been collaboratively and jointly implementing different projects for improving teaching and learning practices and consequently improving the quality of education. From Strengthening Mathematics and Science in Secondary Education (SMASSE) project to School-based Collaborative Teacher Training (SBCT) project and from SBCT to SIIQS. JICA is pleased to support Rwanda to achieve its ambitious goal which is to have a knowledgeable and skilled population. He reminded participants that SIIQS Project is near to its close-out and that JICA is ready to receive REB's proposal for the next project by August 2019. The 5th JCC was a good occasion to consider both progress and challenges that the project has faced, in order to take the next steps. "It is important to review the current status of the project and think about the next step", he said. Mr. Maruo emphasized how important the meeting was and that their attention and participation is invaluable.

4. INTRODUCTION OF JCC MEMBERS

Mr. Ryuichi Sugiyama, the Team Leader of SIIQS Project, explained to participants that the JCC is the steering committee of the project that monitors progress of activities and leads discussions to take necessary actions against the raised issues to keep the project on the right track. Members of the JCC were stipulated under the Record of Discussion of the SIIQS Project, which is a bilateral agreement between REB and JICA. The official members were assigned from both sides. In addition, both sides are allowed to invite person(s) who may contribute to the project, if necessary.

5. SIIQS PROJECT APPROACH

Mr. Sugiyama shared with participant the overview of the SIIQS Project and its approach. The main purpose of the project is to institutionalize CPD. The project has two outputs namely;

1. Teachers' understanding of CBC-based lesson implementation is enhanced, and
2. Problem-solving capacities are enhanced at school, sector, district and national level.

Changing teachers' classroom practices is a 4-stage cycle, not a one-shot activity. It has to be continuous. As the first stage (Plan); teachers identify the problems they face in teaching and plan

to overcome them. Problems could be for example; teaching difficult topics or just improving own teaching and improving learning outcomes. In the second stage (Practice), teachers do rehearsals, preparing lessons and materials. In the third stage (Play), teachers do live teaching in classrooms and in the fourth stage (Review), the work done is evaluated against the desired situation and restart the cycle again. Mr. Sugiyama compared this approach with a professional football team which intends to achieve its goals.

Mr. Sugiyama informed participants that the PDM is being revised to be more objectively verifiable and measurable. The Objectively Verifiable Indicators (OVIs) are being revised as shown in the following table. REB and JICA will seat together to agreed on the revised version and approve it.

Narrative Summary	Objectively Verifiable Indicators
Overall Goal	
Students' learning process in classroom is improved.	1) More students in a model school than those in a control school present relevant responses to an open question posed by a teacher. 2) Result of the academic achievement test developed by the Project improves more in model schools compared to control schools.
Project Purpose	
Implementation of CBC-based lesson in the classroom is strengthened through SBI activities.	1) Lesson plans developed by teachers in model schools include all elements specified in Competence 2.1 of the National Teacher CPD Framework. 2) Teachers give more open questions in model schools compared to control schools.
Outputs	
1. Teachers' understanding of CBC-based lesson implementation is enhanced.	1) Post-test results of participants in trainings and workshops including an e-learning course exceed 70%. 2) Self-evaluation of teachers' understanding of CBC-based lessons continues to be 90% or above.
2. Problem-solving capacities are enhanced at school, sector, district, and national level.	1) All sectors implement sector-based CBC training. 2) More than one good practice of school-based CPD is reported quarterly from all DCCs that have been established. 3) The rate of teachers' participation in school-based CPD increases from 75% (baseline) to 90%. 4) More than 50% of DCCs and SCCs submit monitoring reports using a developed form on monthly basis.

6. PROJECT PROGRESS

(1) Progress of Output 1

Lesson improvement through Lesson Study

Lesson Study is one of activities that have been conducted by SIIQS Project to achieve Output 1. Mr. Hahituky Habiyaremye, the Monitoring Officer of the project, explained to participants what Lesson Study is and what have been achieved through it in improving the quality of lessons and schools' performance in general. He explained that Lesson Study has been piloted in six model schools, namely EP Buhande (Rulindo district), G.S APAGIE Musha (Rwamagana district), G.S St Aloys Rwamagana (Rwamagana district), G.S Kabuye Catholique (Gasabo district), G.S Notre Dame des Apôtres Rwaza (Musanze district) and G.S Mukarange Catholique (Kayonza district). In the schools mentioned above, Lesson Study has significantly contributed to lesson improvement as evidenced by improved performance.

School exchange visits and Sharing workshop

SIIQS Project organized a sharing workshop which gathered teachers from all model schools, SEOs of sectors and DDEs of districts where model schools are located. The objective of this workshop was to get them to share their views towards CPD with stakeholders in education sectors and learn from each other. During this workshop, teachers and their leaders proposed having exchange visits among them to learn and share experiences for lesson improvement. Mr. Habiyaremye reported to participants on these exchange visits, which were scheduled on 22nd and 30th June 2019. Teachers from G.S Mukarange Catholique (Kayonza) and EP Buhande (Rulindo) exchanged visits and teachers from G.S APAGIE Musha (Rwamagana) and G.S Notre Dame des Apôtres Rwaza (Musanze) exchanged visits as well. *(See exchange visits scheduled in Lesson Study presentation attached)*

All teachers who participated in these visits appreciated it and confirmed that they have had opportunity to learn from their fellow in terms of lesson improvement.

(2) Progress of Output 2

Ms. Clarisse Dusabimana, the Programme Officer of the project presented progress regarding Output 2. Strong coordination, effective planning, monitoring and reporting on CPD activities at sector and school level are essential for CPD to be successful and bear expected results. Since 2017,

SIIQS Project has been supporting formation of District CPD Committees (DCCs) in 15 districts. The project support to enhance DCCs' capacity is divided into three areas;

1) DCC orientation workshops

DCC members were explained the concept and membership of DCC. They were also made aware of DCC's key roles and responsibilities which are summarized into four categories; Planning, Monitoring and Evaluation, Review and Learning, and Reporting of CPD related activities in the district.

2) Planning workshops

DCC members developed an action plan through following three steps.

- **Problem Analysis**

DCC members identified and analyzed different problems that were affecting quality of education in their district. DCC members were able to identify their problems and figured out why a problem was happening using a "problem tree".

- **Objective Analysis**

The objective of this is to examine the solution to the problems identified in Problem Analysis. DCC members capacity to set a core objective and analyze different means and strategies to achieve it was enhanced.

- **Action plan development**

Results from Problem and Objective Analysis were extracted to develop an action plan. Their capacity in setting achievable and measurable objectives and outputs was enhanced.

3) DCC/SCC Monitoring

Ms. Dusabimana shared what SIIQS Project has been doing in terms of supporting DCC/SCC monitoring and evaluation. SIIQS has designed DCC/SCC reporting forms (Excel form) to be used by DCC/SCC for reporting on CPD activities on a monthly basis in collaboration with TDM&CGC/TTU. REB/TTU distributed the forms to DDEs in mid-April. DDEs were requested to send SCC report form to SEOs and reports were expected to be submitted on 7th of the next month. Apart from monthly reporting, the quarterly monitoring visit was contrived to give feedback and

collect more data especially qualitative and suggestive. The monthly reporting tools were piloted in five districts namely; Rulindo, Kayonza, Gisagara, Kirehe and Rwamagana. The collected information was analyzed to be a basis for the first quarterly monitoring visits. The first quarterly monitoring visits were conducted in five sectors; three sectors from Rulindo district, one sector from Kirehe district and one sector from Gisagara district. These visits revealed that;

- Different CPD activities are being implemented, but there is still a gap in reporting. There is no demand for CPD reports from districts. Sometimes SEOs make reports and send them to district but there is no feedback.
- There are still gaps in the coordination between DCC and SCCs
- CPD time is still a big challenge to implement school-based CPD.
- School management support was also a big challenge for CBC implementation

Since the approval of the DCC/SCC monitoring in end March, no monthly report from SEOs and DDEs was received. This is a big challenge for DCC/SCC to be functioning as well as REB and partners to monitor CPD at ground levels (schools and sectors). In collaboration with other DPs, SIIQS keeps encouraging DCCs and SCCs to monitor and report CPD activities, which will result in effective implementation of CPD programs.

PLERIMINARY FINDINGS OF THE ENDLINE SURVEY

Mr. Sugiyama shared with participants the preliminary findings of the endline survey (*See the endline survey and achievement presentation attached*). The purpose of this survey was (1) to assess change of attainment in math and science, (2) to monitor change of CBC lessons and (3) to collect qualitative information about CBC lesson improvement and implementation of CPD. The target population was in three categories namely; students, teachers and head teachers (HTs). The survey was conducted in eleven schools amongst which six model schools serve as experimental/ treatment and the other five serve as control schools. The tools used for data collection were; Academic Achievement Tests (AAT), lesson plans, lesson observation sheets and video shoot, semi-structured interview and questionnaire.

5,017 students in P6, S3 and S6 sat for AAT math and sciences/SET, 40 lessons were observed and video shot, eleven HTs were interviewed, 101 teachers and eleven HTs questionnaires were

responded and 96 teachers participated in interview.

Mr. Sugiyama told participants that the analysis of end line data is ongoing but so far it has revealed improvements especially in the following;

- **Lesson plan:** Lesson planning was improved, especially in view of elements specified in the National Teacher CPD Framework; (1) clear and measurable objectives and activities to achieve them, (2) learning outcomes and objectives support learners to move from simple and familiar to more complex and sophisticated knowledge and skills, (3) regular revision of learning and assessment, (4) adaptation for specific learners and (5) use a range of teaching and learning resources and vary interaction patterns. The analysis of lesson plans is ongoing but so far it shows some improvement in model schools.
- **Teachers' Questioning:** The baseline data showed that most of the teachers in model schools mostly used closed questions in assessing learners. The end line showed that the way teachers formulate questions keeps changing. Now they try to ask more open questions that can help learners think critically.
- **Students' responses:** The end line revealed that students are now confident to express themselves during a lesson. Be it asking questions to teachers or discussing with their fellow students. Yes /No responses have been decreased.
- **CBC understanding:** Approximately 93% of teachers who participated in the survey confirmed that they really understand the concept of CBC. Though some CBC misconceptions were identified.
- **CPD implementation:** CPD was conducted in all eleven schools that were visited during end line survey. 54% of 101 surveyed teachers said that CPD is on their timetable. 95% of surveyed teachers attended CPD (regularly: 69%, Sometimes: 26%)

7. SIIQS PROJECT'S UPCOMING ACTIVITIES

Mr. Sugiyama shared the upcoming activities to be performed in the project's remaining time.

8. QUESTION AND ANSWER SESSION

Ms. Kabatesi appreciated all the presentations and welcomed the participants' comments and questions. Following is the summary of discussion.

Ms. Tusiime, DDG REB appreciated what have been achieved by the project especially the improvement in teachers' questioning, lesson planning and how CPD is being conducted. She emphasized the role of lesson to improving teaching practices and learning outcomes. She asked to which extent school leaders (HTs and DOS) have been involved and own Lesson Study and CPD in general. Mr. Antoine Mutsinzi, Education Advisor of the project, responded that HTs and DOS in schools where Lesson Study is conducted are very committed to support it. They do their best to motivate teachers to participate and they also provide time.

Ms. Tusiime also asked if Lesson Study could be sustainable after SIIQS Project closes out. Mr. Sugiyama responded that he believes that schools will continue to conduct Lesson Study because school leaders appreciate it and support it. The other key factor to Lesson Study sustainability is that teachers understand it and are aware of what they will get from it. Mr. Sugiyama also said that SIIQS Project is working on Lesson Study guidelines that will help school continue with it, though external resources are still needed to come in and support school. He also emphasized on the role of School-Based Mentor (SBM).

Mr. Norihide Furukawa, Program Adviser for Education and Vocational Training of JICA, emphasized on the revision of the Project Design Matrix (PDM) which is urgent and to be done by REB and JICA. Regarding DCC/SCC monitoring, he informed participants that JICA opened discussion with MINEDUC/Department of Basic Education Quality Assurance to see how CPD can be incorporated in monthly reports to be submitted to MINEDUC by SEOs.

Mr. James Ngoga, HoD of TDM&CGC shared with participants his experience in open day organized by REB, JICA and DCC Gasabo. He said that this event was really a constructive one in terms of improving lessons and teaching practices in Rwandan schools. Mr. Ngoga proposed that Lesson Study be extended to other schools as well. Regarding DCC/SCC monitoring Mr. Ngoga told participants that sometimes SEOs could be confused by several reporting forms from different DPs but through collaboration with DPs, monitoring will be harmonized and SEOs will be oriented and encouraged to effectively monitor CPD activities. He told participants that in collaboration with DPs, REB is planning to a workshop on 1st August,2019 in which users will participate in designing DCC/SCC monitoring tools to be more user friendly.

In accordance with Mr. Ngoga's proposition to extend Lesson Study to other schools, Mr.

Furukawa said that JICA Rwanda is open to discuss the next project with REB.

Mr. Furukawa also asked participants if everyone is happy with the presented upcoming activities to be performed by SIIQS Project. Mr. Ngoga responded that upcoming activities are equally important and hence should be conducted. Also. Ms. Kabatesi said that activities are essential and TTU shall collaborate as usual.

Dr. Andre Muhirwa, Director of the Centre for Teaching and Learning Enhancement at University of Rwanda College of Education (UR-CE), proposed that issues and challenges met in SIIQS Project implementation be highlighted in the end line report.

9. AOB

There was no AOB.

10. CLOSING REMARKS

Mr. Ngoga, on behalf of DDG REB closed the meeting; In his remarks he thanked all the participants and promised continuous collaboration between JICA and REB. The meeting was officially adjourned at 11:30 am.

Done at Kigali, 23rd July 2019



for

Ryuichi SUGIYAMA

Team Leader

SIIQS project



Angelique TUSIIME

Chairperson of the Meeting

DDG, REB



添付 22. ICET 2017 学会発表資料

Bridging the Gap between Policy and Practice: The Case of Competency-Based Curriculum in Rwanda

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Kyoko YOSHIKAWA³ & Sayaka MATSUZUKI³

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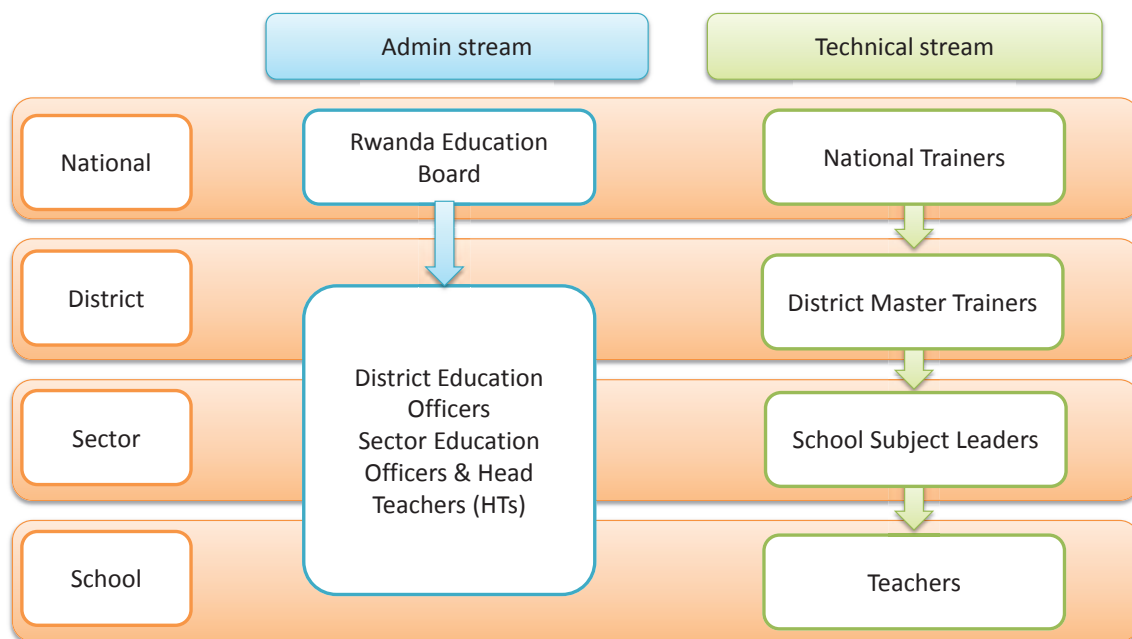
³ PADECO Co. Ltd., Japan

PADECO Co., Ltd.
<http://www.padeco.jp/jp>

Background

- Increasing training needs for teachers, especially after the extension of basic education from 6 years to 9 years (2009) and 12 years (2012) and change of medium of instruction to English in 2008
- Introduction of Competence-based Curriculum (CBC) to all levels of basic education (pre-primary to upper secondary) in 2016
- CBC induction training for all teachers in three phases from 2015 to 2017
- Induction training involves cascading model + school-based trainings
- Rwanda Education Board (REB) & Japan International Cooperation Agency (JICA) implementing a project to support teacher training for CBC (SIIQS Project, 2017-2019).

Training mechanism for CBC induction



3

Objectives of Study

- To assess the implementation status of first phase of CBC induction training
- To provide suggestions / recommendations to ensure all teachers' participation in the future training framework

4

Methodology

- Monitoring survey (Census)
 - Conducted in July 2016
 - Monitoring form to all District Education Officers (30)
- Field Survey (Sampling survey)
 - Conducted in March 2017
 - 1. **Questionnaire:** HTs, teachers and students
 - 2. Focus group interview: HTs, teachers and students
 - 3. Lesson observation: Math and Science

Sample size	No. of schools	Questionnaire			Focus Group Interview			Lesson Observation
		HT	Teacher	Student	HT	Teacher	Student	
TOTAL	20	20	178	985	20	139	530	20

5

Attributes of Samples (Teachers)

	All					Male					Female				
	N	Age		Years of Teaching Experience		N	Age		Years of Teaching Experience		N	Age		Years of Teaching Experience	
		Ave.	SD	Ave.	SD		Ave.	SD	Ave.	SD		Ave.	SD	Ave.	SD
Primary	86	38.8	10.7	15.4	10.5	60	39.5	11.1	16.9	11.0	26	37.1	9.8	11.5	8.2
Secondary	92 (2)	35.3	8.0	9.5	7.5	30	35.2	8.1	10.4	8.2	60	35.4	8.0	9.1	7.2
Total	178 (2)	37.0	9.6	12.3	9.5	90	38.1	10.4	14.7	10.5	86	35.9	8.6	9.8	7.5

Number in the bracket indicates respondents who did not specify gender

Implementation status of induction training

Organization of induction training at school level according to the Monitoring (2016)

District Submitted the Monitoring Form	Number of Schools which Conducted CBC Induction Training	Number of Teachers who Missed the CBC Induction Training
22 (73.3%)	2,790 (88.4%)	2,331 (4.8%)

Organization of induction training at school level according to the HT Questionnaire

	Fully	Partly	Not Organized
Total	11 (55%)	9 (45%)	0 (0%)

Teachers' attendance to induction trainings according to the teacher questionnaire

	Fully attended	Partly attended	Not Attended
Total	82 (47.4%)	64 (37.0%)	27 (15.6%)

7

Characteristics of teachers who didn't attend CBC induction training at school level

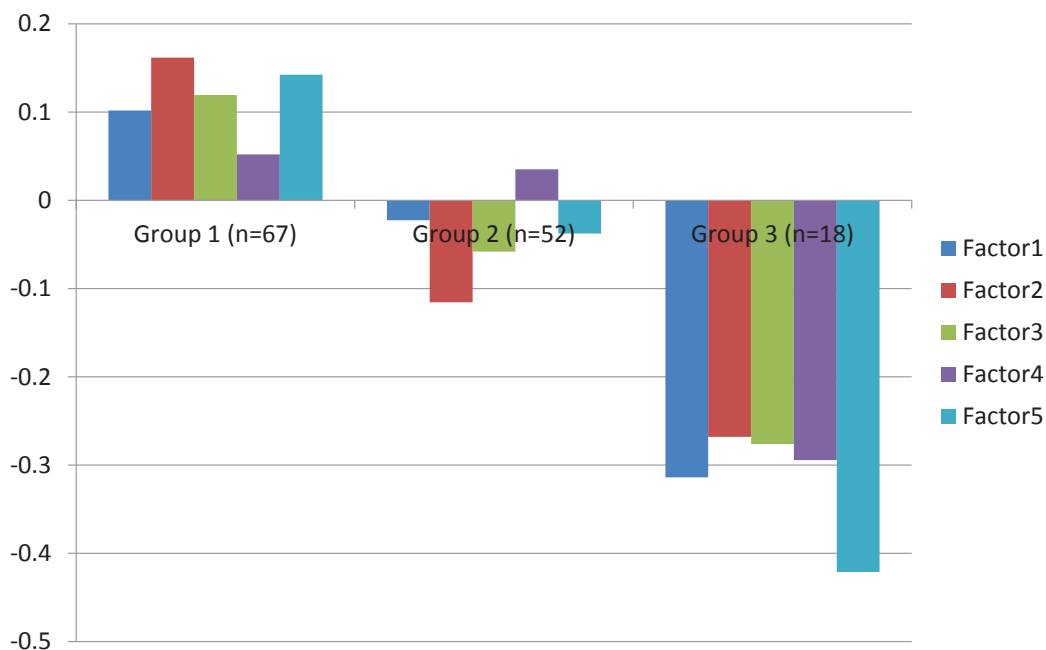
- There were a significant number of teachers who did not attend the CBC induction training at school level.
How can we encourage them to participate?
- Exploratory Factor Analysis was conducted.
- Teachers were divided into 3 groups according to the status of participation in CBC induction training at their schools to compare responses to questions related to Continuous Professional Development.
 - Group 1: Fully attended
 - Group 2: Partly attended
 - Group 3: not attended

8

Results of Exploratory Factor Analysis

		Factor1	Factor2	Factor3	Factor4	Factor5	Communality
Shared school vision	There are clear aims or objectives in my school.	.923	-.062	-.126	.071	-.030	.747
	There is cooperative system among different subjects in my school.	.722	-.112	.185	-.174	.358	.710
	The vision/mission of my school is shared within school community members.	.667	.085	.111	.025	-.097	.608
	The vision/mission of my school is/are clearly stated.	.623	.241	.003	.000	-.125	.576
Participatory school management	My head teacher is supportive in improving teaching and learning in my school.	-.043	.980	.023	.061	-.179	.873
	The school leaders encourage us to give some comments/ ideas to contribute school improvement.	.232	.545	-.038	-.041	.120	.521
	My opinions often contribute to the process of making decision in my school.	-.024	.511	.234	.016	.139	.523
	My students' parents/guardians contact me from their side to talk about students' performance.	.023	.423	.053	-.040	.269	.373
Collegiality for lesson improvement	I often give advice/consultation to my colleagues to improve their teaching.	-.012	.065	.851	-.076	.178	.843
	I often receive advice/consultation from my colleagues to improve my teaching.	-.134	.044	.743	.075	.172	.613
	I am willing to share my good lesson practice with my colleagues.	.135	.083	.648	-.079	-.058	.549
	I use the feedback/advice given by my colleague to improve my teaching and learning process.	.062	-.094	.595	.215	.085	.502
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	I usually contact to my students' parents/guardians from my side to talk about students' performance.	-.018	.015	-.238	.616	.446	.624
	The objectives and plans are achieved successfully in my school.	.153	-.023	.086	.531	-.077	.412
	Results from national examination are analyzed by all teachers together.	.232	.102	-.201	.507	.164	.513
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Resource persons	School-based Mentor (SBM) in my school helps me improve my lesson.	-.018	-.016	.101	.054	.574	.371
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Factor score by participation



Findings and Discussion

- Monitoring survey
 - Most of the schools surveyed seemed to have implemented the CBC induction training. In other words, CBC training framework can be considered effective in reaching teachers at school level.
 - However, a significant number of teachers did not fully participate in CBC induction training.

11

Findings and Discussion

- Field survey
 - Exploratory Factor Analysis extracted 5 factors which can explain the motivation to participate in CBC induction training.
 - The factor scores of Group 1 (fully attended) were all positive, whilst those of the Group 2 (partly attended) were neutral and those of Group 3 (not attended) were negative.
 - This suggests the importance of supporting environment which encourages teachers' participation in school-based professional development activities, such as good school management, collaborative colleagues and effective resource persons. These aspects may be reducing the difficulties around cascade training in reaching all target teachers. Therefore, these should be emphasized in considering future training framework.

12

Challenges

- The quality of training has not been investigated though it may have affected the degree of participation.
- This should be researched for establishing a better teacher training framework in Rwanda.

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THANK YOU FOR YOUR ATTENTION

14

Organization of the field study

	Team A		Team B
AM	School A		School B
	Lesson Observation/Video Shooting		Lesson Observation/Video Shooting
	HT Interview/Questionnaire survey		HT Interview/Questionnaire survey
	Teacher Interview/Questionnaire survey		Teacher Interview/Questionnaire survey
	Student Interview/Questionnaire survey		Student Interview/Questionnaire survey
PM	School C (Primary School*)		District Office
	Lesson Observation/Video Shooting		Interview about DCC and SBI/CPD
	HT Interview/Questionnaire survey		
	Teacher Interview/Questionnaire survey		
Student Interview/Questionnaire survey			

15

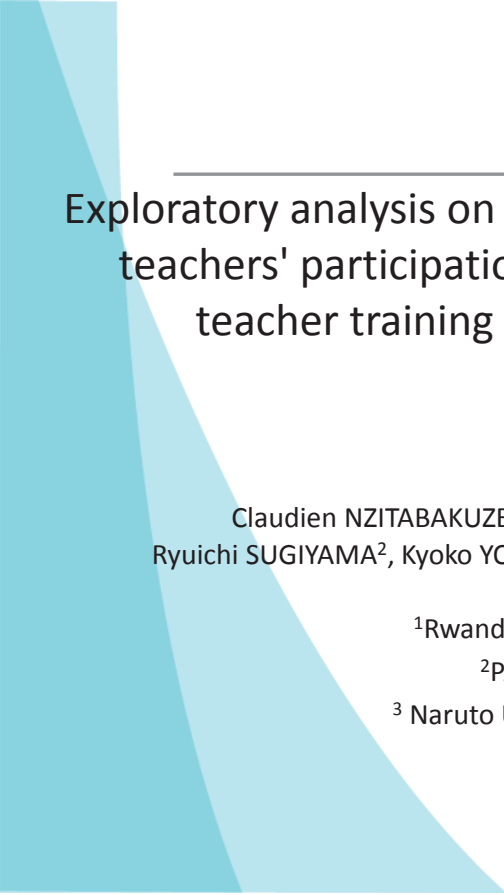
Challenges in conducting CBC induction training at school level

Challenges in conducting CBC induction training at school level according to HT Questionnaire

Category	# of HTs	Examples of comments
Material	8	Lack of teaching materials (e.g. training materials, computers, etc)
Textbook	6	Textbooks for some subjects have not been distributed
Time	5	No time for trainings. Training conducted during the school term disturbed lessons
Motivation/mind-set	3	fear of change
Refresher	3	School Subject Leaders need to be trained regularly
Trainer	3	Lack of School Subject Leaders (in primary)
Allowance	2	Lack of financial autonomy
Syllabus	2	
Involvement	2	Difficult to involve all teachers
Practical knowledge and experience	1	Lack of good lesson plans, ideas for good teaching and learning activities

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添付 23. DETA 2017 学会発表資料



Exploratory analysis on motivational factors influencing teachers' participation to School-Based In-service teacher training (SBI) program in Rwanda

Claudien NZITABAKUZE¹, Antoine MTSINZI¹, Ruth MUKAKIMENYI¹,
Ryuichi SUGIYAMA², Kyoko YOSHIKAWA², Sayaka MATSUZUKI² & Yumiko ONO³

¹Rwanda Education Board, Rwanda,

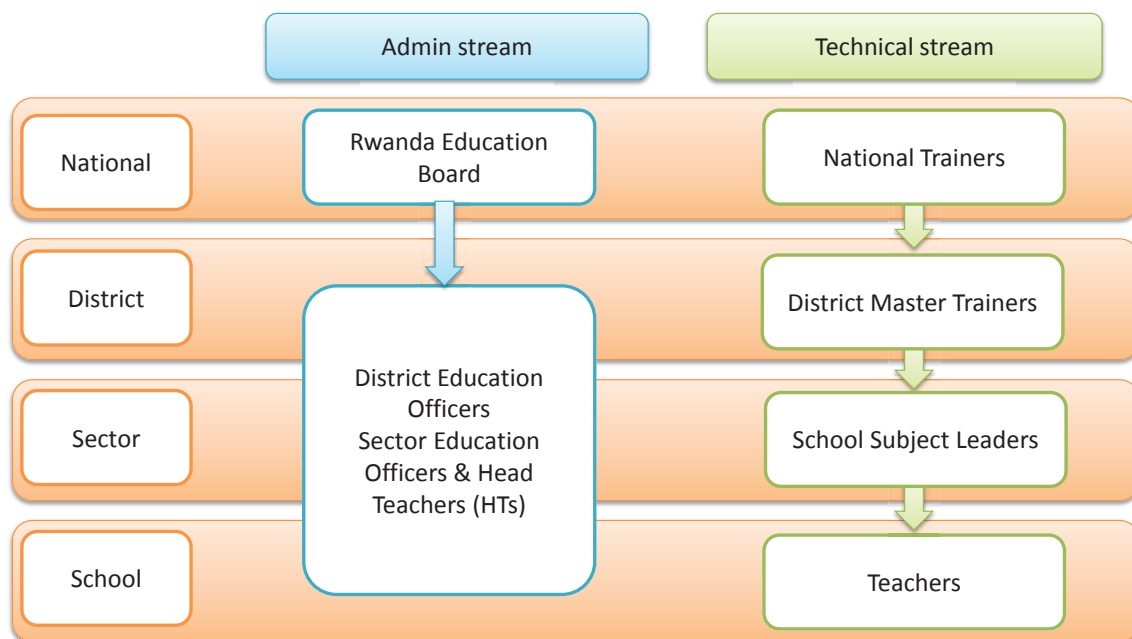
²PADECO Co. Ltd., Japan,

³ Naruto University of Education, Japan

Background

- Increasing training needs for teachers, especially after the extension of basic education from 6 years to 9 years (2009) and 12 years (2012) and change of medium of instruction to English in 2008
- Introduction of Competence-based Curriculum (CBC) to all levels of basic education (pre-primary to upper secondary) in 2016
- CBC induction training for all teachers in three phases from 2015 to 2017
- Induction training involves cascading model + school-based trainings
- Rwanda Education Board (REB) & Japan International Cooperation Agency (JICA) implementing a project to support teacher training for CBC (SIIQS Project, 2017-2019).

Training mechanism for CBC induction



3

Objectives of Study

- To assess the implementation status of first phase of CBC induction training
- To provide suggestions / recommendations to ensure all teachers' participation in the future training framework

4

Methodology

- Monitoring survey (Census)
 - Conducted in July 2016
 - Monitoring form to all District Education Officers (30)
- Field Survey (Sampling survey)
 - Conducted in March 2017
 - 1. **Questionnaire:** HTs, teachers and students
 - 2. Focus group interview: HTs, teachers and students
 - 3. Lesson observation: Math and Science

Sample size	No. of schools	Questionnaire			Focus Group Interview			Lesson Observation
		HT	Teacher	Student	HT	Teacher	Student	
TOTAL	20	20	178	985	20	139	530	20

5

Attributes of Samples (Teachers)

	All					Male					Female				
	N	Age		Years of Teaching Experience		N	Age		Years of Teaching Experience		N	Age		Years of Teaching Experience	
		Ave.	SD	Ave.	SD		Ave.	SD	Ave.	SD		Ave.	SD	Ave.	SD
Primary	86	38.8	10.7	15.4	10.5	60	39.5	11.1	16.9	11.0	26	37.1	9.8	11.5	8.2
Secondary	92 (2)	35.3	8.0	9.5	7.5	30	35.2	8.1	10.4	8.2	60	35.4	8.0	9.1	7.2
Total	178 (2)	37.0	9.6	12.3	9.5	90	38.1	10.4	14.7	10.5	86	35.9	8.6	9.8	7.5

Number in the bracket indicates respondents who did not specify gender

Implementation status of induction training

Organization of induction training at school level according to the Monitoring (2016)

District Submitted the Monitoring Form	Number of Schools which Conducted CBC Induction Training	Number of Teachers who Missed the CBC Induction Training
22 (73.3%)	2,790 (88.4%)	2,331 (4.8%)

Organization of induction training at school level according to the HT Questionnaire

	Fully	Partly	Not Organized
Total	11 (55%)	9 (45%)	0 (0%)

Teachers' attendance to induction trainings according to the teacher questionnaire

	Fully attended	Partly attended	Not Attended
Total	82 (47.4%)	64 (37.0%)	27 (15.6%)

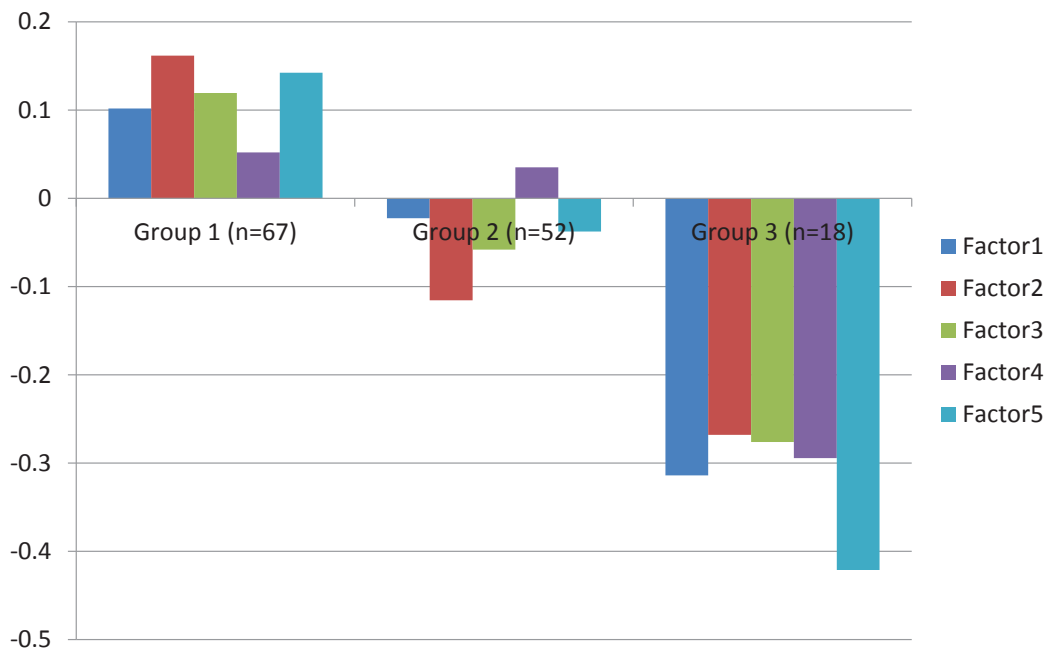
Characteristics of teachers who didn't attend CBC induction training at school level

- There were a significant number of teachers who did not attend the CBC induction training at school level.
How can we encourage them to participate?
- Exploratory Factor Analysis was conducted.
- Teachers were divided into 3 groups according to the status of participation in CBC induction training at their schools to compare responses to questions related to Continuous Professional Development.
 - Group 1: Fully attended
 - Group 2: Partly attended
 - Group 3: not attended

Results of Exploratory Factor Analysis

		Factor1	Factor2	Factor3	Factor4	Factor5	Communality
Shared school vision	There are clear aims or objectives in my school.	.923	-.062	-.126	.071	-.030	.747
	There is cooperative system among different subjects in my school.	.722	-.112	.185	-.174	.358	.710
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	School Subject Leader (SSL) in my school helps me improve my lesson.	-.077	-.019	.280	.053	.553	.425

Factor score by participation



Findings and Discussion

- **Monitoring survey**
 - Most of the schools surveyed seemed to have implemented the CBC induction training. In other words, CBC training framework can be considered effective in reaching teachers at school level.
 - However, a significant number of teachers did not fully participate in CBC induction training.
- **Field survey**
 - Exploratory Factor Analysis extracted 5 factors which can explain the motivation to participate in CBC induction training.
 - The factor scores of Group 1 (fully attended) were all positive, whilst those of the Group 2 (partly attended) were neutral and those of Group 3 (not attended) were negative.
 - This suggests the importance of supporting environment which encourages teachers' participation in school-based professional development activities, such as good school management, collaborative colleagues and effective resource persons. These aspects may be reducing the difficulties around cascade training in reaching all target teachers. Therefore, these should be emphasized in considering future training framework.

添付 24. WALS 2017 学会発表資料

World Association of lesson study 2017 in Nagoya November 26th , 2017

Implementation of Competence-based Curriculum (CBC) in Rwanda: The Case of Mathematics

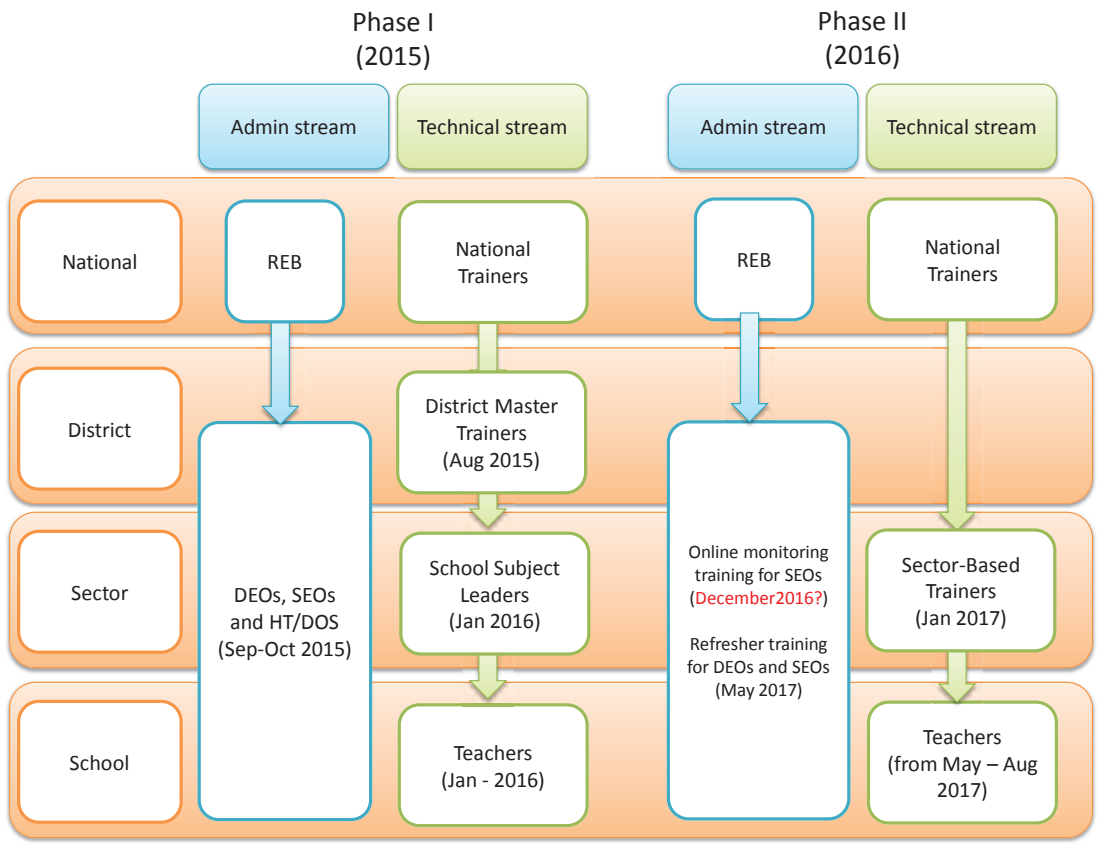
Antoine Mutsinzi^a, YAMASHITA Kana^b ABE Tateo^c
ONO Yumiko^d SUGIYAMA Ryuichi^e MATSUZUKI Sayaka^e

^A Rwanda Education Board ^bNaruto University of Education (M2) ^cTohoku Bunkyo College
^dWaseda University Institute of Teacher Education ^ePADECO Co., Ltd.)

Background

- Since 2016 a new competence-based curriculum (CBC) has been introduced in primary and secondary schools in Rwanda
- This reform is a significant shift from objective and knowledge-based learning because CBC emphasizes no longer on passive acquisition of knowledge, but on the development of skills and attitudes required to ensure the learner is competent in the application of knowledge
- Project for Supporting Institutionalizing and Improving Quality of SBI Activity (SIIQS Project) launched in Jan 2017 to strengthen support implementation of CBC curriculum in classrooms

Structure of training conducted to support Teacher to implement CBC



- The first and second phase of CBC training took different cascading structures.
- The figure shows the training structure and implementation schedule for the first and second phases of the CBC training.

Research Objectives

- To explore how Rwandan change the mind in terms of the understanding their role in school management, the role of resource person to support each other to improve the lesson, after introduction of CBC and the first phase of induction training.
- To understand how teachers transmit knowledge and skills learned from the training to improve classroom practice by critically analyze mathematics lessons before and after intervention from SIIQS project

Research Questions

1. How do teacher change their mind set after the first phase of training?
2. How has the lesson changed after the project supported lesson study?

5

Methodology for Research Question 1: Change of Teachers' Mindset

I. Monitoring survey (Census)

- Conducted in July 2016
- Monitoring form to all District Education Officers (30)

➡ Number of school: 3,156
 Number of teachers: 48,562

II. Field Survey (Sampling survey)

- Conducted in March 2017
- 1. Questionnaire: HTs, teachers and students
- 2. Focus group interview: HTs, teachers and students
- 3. Lesson observation: Math and Science

Sample size	No. of schools	1. Questionnaire			2. Focus Group Interview			3. Lesson Observation
		HT	Teacher	Student	HT	Teacher	Student	
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6

Quantitative data: Implementation status of induction training

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22 (73.3%)	2,790/3,160 ~ (88.4%)	2,331/48,562 (4.8%)

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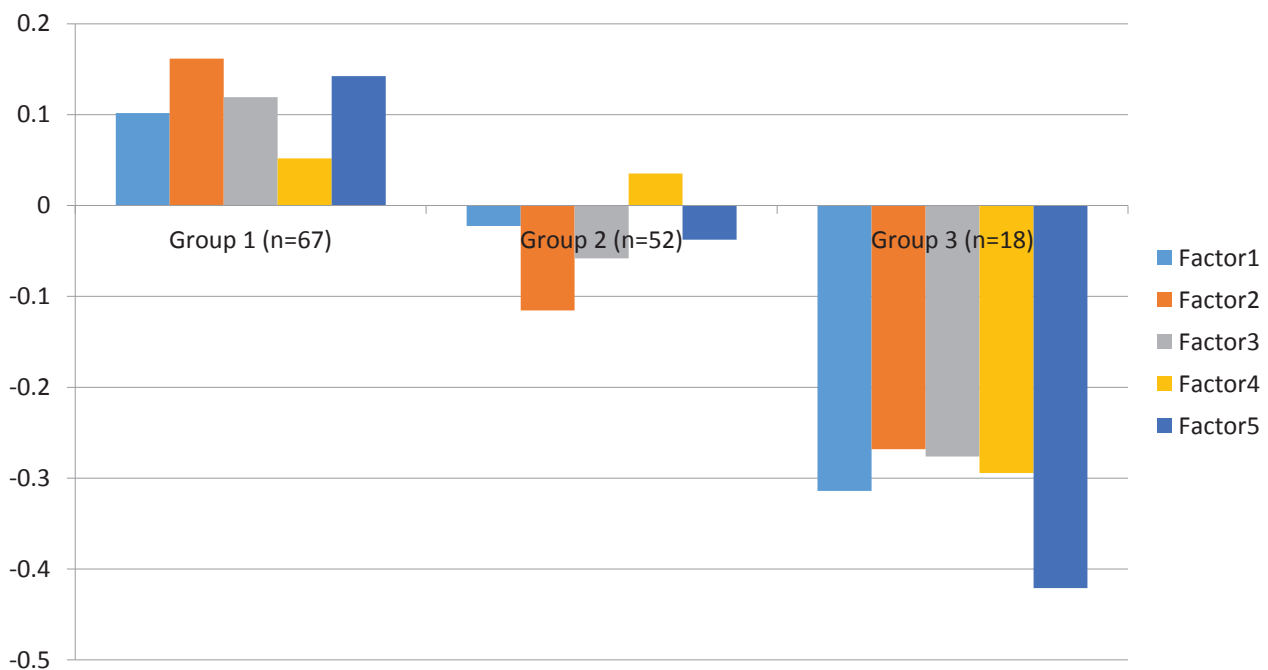
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Factor score by participation



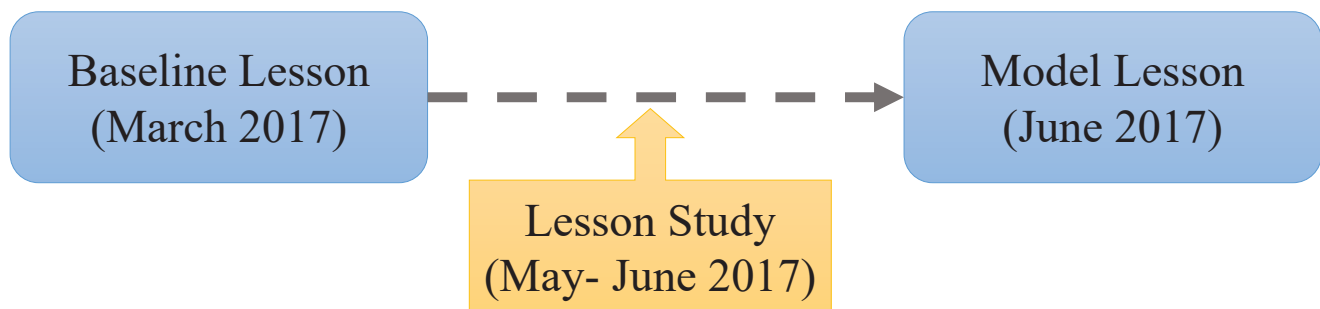
Methodology for Research Question 2: Change of Lessons

I. Qualitative analysis

Comparison of actual lessons with lesson plans, ongoing curriculum (CBC)

II. Quantitative analysis

Discourse analysis and teachers' questions analysis



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Target schools

• Outline of Baseline Survey

Survey Period: March 14, 2017- March 17, 2017 (4 days)

Place: 5 primary and secondary in northern and western provinces

School	Primary A	Primary B	Primary C	Primary D	Secondary E
School category	P1-6	P1-6	P1-6	P1-6	P1-S3
Grade	P4	P4	P5	P5	S2
Unit	Positive and negative integers	Mathematical operation on the whole number	Addition of positive and negative integers	Equivalent fractions and operations	Polynomials functions
Topic	Meaning of positive and negative integers	Division of 2 digit number without remainder	Ordering integers	Comparing fractions	Quadratic equation
Teacher	Female	Female, middle aged	Female	Male, middle aged	Male

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Summary of baseline survey analysis

- Yamashita et al. (2017) transcribed five mathematics lessons from baseline survey for a quantitative and a qualitative discourse analysis
 - Teachers make lesson plan according to CBC
 - In actual lessons, “Closed questions” is predominant and teacher centered
 - There were few learning activities and questions for nurturing mathematical thinking or attitudes

Result (1)

Qualitative Analysis of Baseline Survey

- Teachers write lesson plan according to CBC (Yamashita et al.,2017)

Form	Date	Subject	Class	Unit	Lesson	Duration	Class size
4 th	16/03/2017	Mathematics	Grade 2	2	1	40 min	17
Type of special educational needs to be catered for in this lesson are number of learners in each category		one learner is disabled physically in one class one learner is lame but the other is normal.					
Unit title		Positive and Negative Integers					
Key Unit Competence		Learners should be able to solve problems of compare, order and finding distances between positive and negative integers.					
Title of the Lesson		Meaning of positive and negative integers					
Instructional objective		By the end of this lesson learners will be able to say number of integers on number line to draw integers on number line to draw distance of negative and positive integers in the classroom outside in the classroom					
Plan for this lesson		30 mins, maps, ruler, flipchart, line					
Learning materials for all learners		Mathematics for learners primary school, paper, map, flip chart, ruler, line					
Reference		CBC					
Stage of lesson	Description of teaching and learning activity	Teacher's activities	Learners' activities	Generic Competence and Cross-cutting issues to be addressed			
5 min	Teacher says to the learners to draw a number line on the board.	Teacher says to the learners to draw a number line on the board.	Learners copy the number line on their papers.	Communication in official language.			
25 min	Teacher asks the learners to draw a number line on the board and to draw a number line on their papers.	Teacher asks the learners to draw a number line on the board and to draw a number line on their papers.	Learners draw a number line on their papers.	Communication in official language.			
5 min	Teacher asks the learners to draw a number line on the board and to draw a number line on their papers.	Teacher asks the learners to draw a number line on the board and to draw a number line on their papers.	Learners draw a number line on their papers.	Communication in official language.			

Key Unit Competence:

Learners should be able to solve problems to compare, order and finding distances between negative and positive integers

Instructional Objectives:

By the end of this lesson learners will be able to say number of integers on number line to draw integers on number line to give distance of negative and positive integers

Generic Competences and Cross-cutting Issues to be addressed + short explanation:

- Learners cooperate by saying warm up.
- Communication in official language.
- Develop a clear logical and coherent reasoning.
- Develop initiative and imaginative ability of mind.
- Working together and developing skills.
- All learners participate in peace and harmony.

Result (1) Quantitative Analysis of Baseline Survey

Teachers' utterance by code (Yamashita et al.,2017)

Code	A (%)	B (%)	C (%)	D (%)	E (%)
Closed Question	94 (41.6)	40 (26.0)	92 (43.4)	39 (28.3)	171 (47.0)
Open Question	3 (1.3)	2 (1.3)	0 (0.0)	1 (0.7)	2 (0.6)
Instruction	25 (11.1)	32 (20.8)	23 (10.8)	14 (10.1)	47 (12.9)
Confirmation	0 (0.0)	15 (9.7)	22 (10.4)	29 (21.0)	22 (6.0)
Explanation	27 (12.0)	8 (5.2)	7 (3.3)	13 (9.4)	43 (11.8)
Ask Agreement	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Point student	35 (15.5)	16 (10.4)	33 (15.6)	14 (10.1)	1 (0.3)
Encouragement	9 (4.0)	15 (9.7)	12 (5.7)	12 (8.7)	10 (2.8)
Justification	20 (8.9)	8 (5.2)	19 (9.0)	15 (10.9)	48 (13.2)
Others	4 (1.8)	12 (7.8)	4 (1.9)	0 (0.0)	14 (3.9)
Clap	0 (0.0)	6 (3.9)	0 (0.0)	0 (0.0)	0 (0.0)
Impossible to listen	9 (4.0)	0 (0.0)	0 (0.0)	1 (0.7)	6 (1.7)
Total	226	154	212	138	364

- In Zambia's case study, "Instruction" (25.26%) and "Closed Question" (23.52%) are Predominant (Nakawa 2011)

Result (1) Quantitative Analysis of Baseline Survey

Teachers' questions by category (Yamashita et al.,2017)

Category	A (%)	B (%)	C (%)	D (%)	E (%)
Presentation of task	97 (100.0)	42 (100.0)	84 (91.3)	39 (97.5)	173 (100.0)
Asking knowledge and skills	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Asking how students thinking	0 (0.0)	0 (0.0)	4 (4.3)	0 (0.0)	0 (0.0)
Asking attitude	0 (0.0)	0 (0.0)	4 (4.3)	1 (2.5)	0 (0.0)
Total	97	42	92	40	173

- Teachers try to change their lessons interactive and creative
- In real lessons teachers' utterances are predominant and there were few considered essential for nurturing mathematical thinking or attitudes

Outline of Lesson Study Intervention

- Lesson study at primary C

Date and time	Stage	Contents
May 30, 2017 (Tue.) 9:00-11:20	Stage 1	Orientation (Explanation on lesson study, Problem identification)
Jun 6, 2017 (Tue.) 9:00-11:00	Stage 2	Lesson Planning (Developing lesson plan by a team of math teachers themselves)
	Stage 3	Micro-teaching (Developing lesson plan with project members)
Jun 13, 2017 (Tue.) 9:00-11:15		Micro-teaching (Lesson practice, Feedback)
Jun 20, 2017 (Tue.) 9:00-11:00	Stage 4	Model lesson development (Lesson practice in the class room, Feedback)
Jun 27, 2017 (Tue.) 8:05-12:30		Model lesson development (Video shooting, Over all comments)

(Source: PADECO Co., Ltd)

Before lesson study: Baseline Lesson (Primary C) 【Lesson C】

Grade & Subject	P5 Mathematics
Title of the lesson	Ordering integers
Lesson objective	Using number line, learners will be able to order integers in ascending and descending order in a given time
Lesson form	Group work, Question and answer
Step	Ask integers Ordering integers on number line (Group work) Ordering temperatures on number line (Group work)

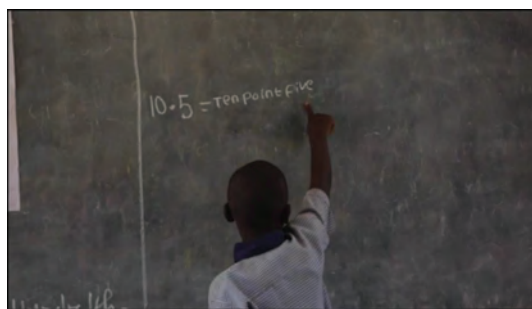
After introduction of LS: Model Lesson (Primary C) 【Lesson C'】

Grade & Subject	P4 Mathematics
Title of the lesson	Reading and Writing decimal numbers
Lesson objective	To read and to write decimal number correctly
Lesson form	Group work, Question and answer, Number line and place value table on manila paper
Step	Reading and writing of integers Filling out fraction numbers on number line Explanation on how to read and write decimal number with use of place value table Practice of reading and writing decimal numbers (Individual work → Group work)

Result (2)

Qualitative Analysis of Model Lesson

- Teacher teach learning contents with good explanations
- Students' utterances were increased, for example, students read numbers in front of black board or all the class members practice pronunciation of numbers



- Learning activities in model lesson are helpful to achieve lesson objectives and competency written in the lesson plan

Result (2)

Quantitative Analysis of Model Lesson

Teachers' utterance by code

Code	Model lesson C' (%)	Baseline lesson C (%)
Closed Question	123 (25.7)	92 (43.4)
Open Question	0 (0.0)	0 (0.0)
Instruction	109 (22.8)	23 (10.8)
Confirmation	51 (10.7)	22 (10.4)
Explanation	90 (18.8)	7 (3.3)
Ask Agreement	0 (0.0)	0 (0.0)
Point student	38 (7.9)	33 (15.6)
Encouragement	23 (4.8)	12 (5.7)
Justification	32 (6.7)	19 (9.0)
Others	12 (2.5)	4 (1.9)
Clap	0 (0.0)	0 (0.0)
Impossible to listen	0 (0.0)	0 (0.0)
Total	478	212

Students' utterance by code

Code	Model lesson C' (%)	Baseline lesson C (%)
Yes/No answer to teacher	47 (24.7)	30 (20.3)
Yes/No answer to student	0 (0.0)	0 (0.0)
One term answer to teacher	12 (6.3)	53 (35.8)
One term answer to student	0 (0.0)	0 (0.0)
Question to teacher	1 (0.5)	0 (0.0)
Question to student	0 (0.0)	0 (0.0)
Opinion to teacher	0 (0.0)	0 (0.0)
Opinion to student	0 (0.0)	0 (0.0)
Incomplete answer	0 (0.0)	0 (0.0)
Repeating or just reading	79 (41.6)	12 (8.1)
Silent to teacher	0 (0.0)	4 (2.7)
Silent to student	0 (0.0)	0 (0.0)
Point student	0 (0.0)	0 (0.0)
Clap	0 (0.0)	3 (2.0)
Writing or gesture to teacher	0 (0.0)	14 (9.5)
Writing or gesture to student	0 (0.0)	0 (0.0)
Impossible to listen	0 (0.0)	3 (2.0)
Others	51 (26.8)	29 (19.6)
Total	190	148

Result (2)

Quantitative Analysis of Model Lesson

Teachers' questions by category

Category	Model lesson C' (%)	Baseline lesson C (%)
Presentation of task	122 (99.2)	84 (91.3)
Asking knowledge and skills	1 (0.8)	0 (0.0)
Asking how students thinking	0 (0.0)	4 (4.3)
Asking attitude	0 (0.0)	4 (4.3)
Total	123	92

- The type and quality of teachers' questions are not changed, but increase of students' utterance indicates students use more time to think in their minds
- **The Teacher has a clear point in her explanations**

Conclusion

- Lesson study input by SIIQS Project may help change lessons to CBC lessons little by little
- Conducting just one cycle of lesson study cannot change quality of questions from a teacher
- Without improving quality of teacher questions, the nexus of teaching and learning, difficult to build competency among learners
- SIIQS Project must support creating and institutionalizing a mechanism to sustain lesson study at school level

Further research is needed

- 1) How will lessons be changed through continuous lesson study
- 2) Relations between change of lessons and change of teachers' view/perception of lessons

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添付 25. WALS 2018 学会発表資料

Improvement of Teachers' Questioning Skills in Mathematics and Students' Higher Order Thinking Skills through Lesson Study in Rwanda

WALS 2018

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1

Outline of the Presentation

1. Background of this study
2. Outline of Lesson Study
3. Analysis of the Assessment Questions
 - ✓Categorization of assessment questions
 - ✓Result of categorization and findings
4. 2018 Lesson Study
 - ✓Objectives
 - ✓Discourse Analysis
 - ✓Pre and Post Test
5. Result of Pre and Post Test
6. Conclusion

2

Background

- Since 2016 a new competence-based curriculum (CBC) has been introduced in primary and secondary schools in Rwanda
- This reform is a significant shift from objective and knowledge-based learning because CBC emphasizes no longer on passive acquisition of knowledge, but on the development of skills and attitudes required to ensure the learner is competent in the application of knowledge
- JICA Project for Supporting Institutionalizing and Improving Quality of SBI Activity (SIIQS Project) launched in Jan 2017 to strengthen implementation of CBC curriculum in classrooms
- The Project Team develop model lessons that show concrete examples of CBC by using Lesson Study so that teachers can refer, imitate and improve by themselves from 2017 with five model schools

3

Research Questions

- To explore;
 - how Rwandan teachers understand level of questions (Bloom's Taxonomy)
 - how much skills teachers have to set suitable level of questions
 - how teachers improve questioning skills through Lesson Study
 - how students improve their higher order thinking level through lessons

4

Outline of Lesson Study

2017

- Select 5 model schools and formulate the Lesson Study Group for mathematics and science lessons
- Introduce and implement Lesson Study
- Develop model lesson for CBC implementation

2018

- Select 4 model schools and set objectives for Lesson Study
- Implement and evaluate Lesson Study in mathematics

Stage	Contents
Stage 1	Orientation (Explanation on lesson study, Problem identification)
Stage 2	Lesson Planning (Developing lesson plan by a team of math teachers themselves)
Stage 3	Micro-teaching (Developing lesson plan with project members)
	Micro-teaching (Lesson practice, Feedback)
Stage 4	Model lesson development (Lesson practice in the classroom, Feedback)
	Model lesson development (Video shooting, Overall comments)

5

Categorization of Assessment Questions

- Sector Based Trainers (SBTs) set questions for assessment of each topic in each grade in mathematics from lower level to higher level equally based on Bloom's Taxonomy.
- Developed questions were not equally developed in each level as SBTs thought.

P4

Difficulty	Level 1 (Knowledge)	Level 2 (Comprehension)	Level 3 (Application)	Level 4 (Analysis)	Level 5 (Synthesis)	Level 6 (Evaluation)
Advanced	0	1	0	0	0	0
Intermediate	9	4	0	0	0	0
Basic	15	10	2	1	0	0
Total	24	15	2	1	0	0

P5

Difficulty	Level 1 (Knowledge)	Level 2 (Comprehension)	Level 3 (Application)	Level 4 (Analysis)	Level 5 (Synthesis)	Level 6 (Evaluation)
Advanced	0	0	2	0	0	0
Intermediate	5	5	6	1	0	0
Basic	5	11	11	1	0	0
Total	10	5	17	2	0	0

P6

Difficulty	Level 1 (Knowledge)	Level 2 (Comprehension)	Level 3 (Application)	Level 4 (Analysis)	Level 5 (Synthesis)	Level 6 (Evaluation)
Advanced	0	0	0	1	0	0
Intermediate	2	4	13	0	0	0
Basic	4	10	28	0	0	0
Total	6	14	41	1	0	0

Total (%)

Level 1 (Knowledge)	Level 2 (Comprehension)	Level 3 (Application)	Level 4 (Analysis)	Level 5 (Synthesis)	Level 6 (Evaluation)
29.0	24.6	43.5	2.9	0.0	0.0

6

Findings from Categorization of Assessment Questions

- About 97% of questions lower than application level
- Most questions categorized Knowledge Level in Grade 4, and Application Level in Grade 5 and 6
- SBTs may have difficulty in setting Higher Order Thinking level of questions
- Teachers also have same challenges
- To improve teachers questioning skills is essential to improve students Higher Order Thinking Skills

7

Lesson Study (2018)

- Objective: To improve teachers' questioning skills in order to develop and use suitable questions (level) for mathematics lesson
- Two primary school selected to collect data and analyze improvement of questioning skills

School A	It is located about 45 km from Kigali. It has 14 classes and 11 teachers. It was selected as the backdrop for the pilot school-based CPD and regular monitoring because it is average and typical in achievement and location (rural).
School B	A 12-year school comprised of primary and secondary level. It is located about 75 km from Kigali. It has 33 classes and 45 teachers.

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Discourse analysis of a math Lesson (school A)

Grade:	P6	Number of students:	43	Duration	40 min
Key Unit Competence:	To be able to work out simple interest and solve problems involving saving.				
Title of the lesson:	Problems solving simple interest.				
Instructional objective:	Using students will be able to solve simple interest confidently in groups and in required times (original)				
Suggestion by the team	Teacher gives more oral questions to check students' prior knowledge and deepen their understanding before introducing a new activity.				
Classroom Discourse:	<p>Teacher (T): Yes you are ok! Then you are going to study mathematics, ok!</p> <p>Student (S) Ss: Yes</p> <p>T: <u>What did we learn yesterday?</u> (Twice)</p> <p>T: Fabrice!</p> <p>S (Fabrice): Simple interest</p> <p>T: Yesterday we have seen simple interest (Ls: Interest)</p> <p>T: Gabriel! <u>What have you studied yesterday?</u></p> <p>S (Gabriel): Simple interest</p> <p>T: We have studied simple interest</p> <p>T: Everybody <u>what did we learn yesterday?</u></p> <p>Ss: Simple interest</p> <p>T: We studied simple ...</p> <p>Ss: interest</p> <p>T: Follow here</p> <p>T: <u>Who can read this question?</u></p> <p>T: <u>Who can try to read this question on chalk board?</u></p> <p>S (Cynthia): (Read the question) Calculate simple interest given principle equal Four hundred thousand Frw, rate equal five percent and time equal one year.</p> <p>T: <u>The principle equal how many?</u></p> <p>S: (Answer the question) Forty thousand, forty thousand, four hundred thousand.</p> <p>T: (Answer the question and ask the student to repeat) Four hundred, four hundred, four hundred thousand. Repeat!</p> <p>Ss: (Repeat the answer) Four hundred thousand.</p> <p>T: <u>Who can you go on the chalkboard and try to solve this question?</u></p> <p>T: <u>Who can try to find the simple interest there?</u></p> <p>T: (Appoint one student)</p> <p>S: Principle equal four hundred thousand.</p> <p>T: <u>Principle equal to how many?</u></p> <p>S: (Answer the question) Four hundred thousand Frw.</p> <p>T: (Repeat the answer) Principle equal to Four hundred thousand Frw</p> <p>S: (Solve the question on the chalkboard)</p>				

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Discourse analysis of a math Lesson (School B)

Grade:	P6	Number of students	46	Duration	40 min
Key Unit Competence:	To be able to solve real life problem that involving finding time intervals and conversation units.				
Title of the lesson:	Adding hours and minutes				
Instructional objective:	Using the given different units of time and real-life situation, the peoples will be able to add units of time correctly				
Suggestion by the team	Teacher use the clock effectively to have students deeper understanding of time interval practically.				
Classroom Discourse:	<p>Teacher (T): ahaah!! Let us start, look at this, all of you, have you seen?</p> <p>Student (S): yes</p> <p>T: <u>what is this?</u></p> <p>S: it is 11h:00"</p> <p>T: I asked, "what is this" (showing a wall clock)</p> <p>S: this is time</p> <p>T: no any other?</p> <p>S: it is a watch</p> <p>T: loudly please!</p> <p>S: it is a watch</p> <p>T: what is this?</p> <p>S: I didn't understand</p> <p>T: repeat again</p> <p>S: it is a watch</p> <p>T: again</p> <p>S: it is a watch</p> <p>T: what is this?</p> <p>S: it is a watch</p> <p>T: you speak slowly, not loudly, loudly please! What is this?</p> <p>S: it is a watch</p> <p>T: it is a watch, <u>what is the use of a watch? Who has a watch here?</u></p> <p><u>Give it to me, is this a watch?</u></p> <p>S: yes, no</p> <p>T: <u>who says yes, put up your hands, this is a watch also and I asked you what is the use of watch.</u></p> <p>S: to see time</p> <p>(After these communications, to read the time the following the following interaction were organized between a T and L.)</p> <p>T: the watch is used to see time; <u>look at here what time is it?</u></p> <p>Abantu bose barareba? (Is everyone seeing?) <u>What time is it?</u></p> <p>S: it is 10 hours 11 minutes 6 seconds</p> <p>T: <u>what time is it?</u></p> <p>S: it is 10 hours 55 minutes</p> <p>T: correct?</p> <p>S: no</p> <p>T: others</p> <p>S: 3 hours 55 minutes</p> <p>T: others</p> <p>S: 9 hours 55 minutes</p> <p>T: let us discuss on this, <u>what is the correct time?</u></p> <p>S: correction, 9 hours 54 minutes.</p> <p>T: <u>what is the correct answer?</u></p> <p>S: 9 hours 55 minutes.</p> <p>T: let us continue, <u>after 1 hour it will be which time?</u></p> <p>S: 6 minutes.</p> <p>T: after one hour? We are at 9 h 55 minutes.</p> <p>S: 60 minutes.</p> <p>T: nababajije nyuma y'isaha biraba ari ryari? Ninde uzi kuregera ngo aze atwereke nyuma y'isaha? (I asked <u>what will be the time after one hour?</u> Who does know to regulate so that he/she shows us after one hour?)</p> <p>S: 10 hours 0 minutes.</p> <p>T: other?</p> <p>S: 10 hours 55minutes.</p> <p>T: watch to you to..., <u>to tell time, which unit to use to tell time?</u></p> <p>S: we use 2.</p> <p>T: it is 2 but unit to tell time it is this time. It is ummm, we use unit which? Ingero, ni iki ukoresha kugirango ngo uvuge igihe? (Examples, <u>what do you use to tell time?</u>)</p> <p>S: hours, seconds, minutes.</p> <p>T: 1 hour equal how many minutes?</p> <p>S: 60 minutes.</p> <p>T: 1minute equal how many seconds?</p> <p>S: 60 seconds.</p>				

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Qualitative Analysis of Teacher and Students' Utterances by code (School A)

Teacher

Code	Baseline lesson March 2017(%)	Model lesson June 2017 (%)	Model lesson June 2018
Closed Question	92 (43.4)	123 (25.7)	19 (27.1)
Open Question	0 (0.0)	0 (0.0)	0
Instruction	23 (10.8)	109 (22.8)	27 (38.6)
Confirmation	22 (10.4)	51 (10.7)	5 (7.1)
Explanation	7 (3.3)	90 (18.8)	3 (4.3)
Ask Agreement	0 (0.0)	0 (0.0)	0 (0.0)
Point student	33 (15.6)	38 (7.9)	5 (7.1)
Encouragement	12 (5.7)	23 (4.8)	5 (7.1)
Justification	19 (9.0)	32 (6.7)	1 (1.4)
Others	4 (1.9)	12 (2.5)	5 (7.1)
Clap	0 (0.0)	0 (0.0)	0 (0.0)
Impossible to listen	0 (0.0)	0 (0.0)	0 (0.0)
Total	212	478	70

Students

Code	Baseline lesson March 2017(%)	Model lesson June 2017 (%)	Model lesson June 2018 (%)
Yes/No answer to teacher	30 (20.3)	47 (24.7)	15 (37.5)
Yes/No answer to student	0 (0.0)	0 (0.0)	0
One term answer to teacher	53 (35.8)	12 (6.3)	4 (10.0)
One term answer to student	0 (0.0)	0 (0.0)	0
Question to teacher	0 (0.0)	1 (0.5)	0
Question to student	0 (0.0)	0 (0.0)	0
Opinion to teacher	0 (0.0)	0 (0.0)	0
Opinion to student	0 (0.0)	0 (0.0)	0
Incomplete answer	0 (0.0)	0 (0.0)	0
Repeating or just reading	12 (8.1)	79 (41.6)	9 (22.5)
Silent to teacher	4 (2.7)	0 (0.0)	0
Silent to student	0 (0.0)	0 (0.0)	0
Point student	0 (0.0)	0 (0.0)	0
Clap	3 (2.0)	0 (0.0)	0
Writing or gesture to teacher	14 (9.5)	0 (0.0)	7 (17.5)
Writing or gesture to student	0 (0.0)	0 (0.0)	0
Impossible to listen	3 (2.0)	0 (0.0)	0
Others	29 (19.6)	51 (26.8)	5 (12.5)
Total	148	190	40

Pre and Post-Test

- A quiz with four questions were developed to see how students improve their thinking skills through the lesson.
- Four questions consist of 2 questions to check necessary knowledges and skills for the lesson, 1 question to check understanding of the lesson and 1 question to check students higher order thinking level.
- In School A, the result of one question for checking necessary knowledges and skills for the lesson increased drastically from 63.2% to 97.4%. On the other hand, the result of one question for checking students' higher order thinking skill was not so remarkable and increased from 50.0% to 55.3%.
- In school B, the result of one question for checking understanding of basic contents of the lesson increased from 18.9% to 45.9%. On the other hand, the result of one question for checking students' higher order thinking skill decreased from 10.8% to 8.1%.

Pre and Post-Test



- After the lesson, students' performance of the same type of question what they learnt in the lesson was drastically improved at both schools.
- On the other hand, there are no significant improvement on the higher order thinking level of question.

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Conclusion

- Teachers' questioning skills is not enough to set suitable levels of questions according to the students' understanding level.
- Conducting just one or two cycles of Lesson Study cannot change quality of questions from a teacher
- Improving quality of teachers' questioning skills is essential to improve students learning
- Continuous support and implementation of Lesson Study is necessary to improve teachers' and students' Higher Order Thinking Skills

14

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添付 26. CIES 2019 学会発表資料

Decentralizing and Contextualizing Teacher Continuous Professional Development in Rwanda

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Japan International Cooperation Agency (JICA) provided data on
Project for Supporting Institutionalizing and Improving Quality of SBI Activity for this study.

Background

- Rwanda introduced new Competence-based Curriculum (CBC) in 2015.
- Introduction of CBC called for a change in instructional approaches. The role of teachers was transformed from delivering subject content to facilitating students learning.
- To equip teachers with the new instructional approach, Rwanda Education Board conducted a 3-year induction program for all 69,600 teachers from pre-primary to upper secondary education from 2015/16 to 2017/18.
- This program combined a cascade model with school-based CPD to transform theories into classroom practice.
- Rwanda Education Board was responsible for training of trainers in cascade training while sectors and schools organized teacher professional development under the supervision of districts.

Achievement and challenges of CBC induction program (Iwasaki et al, in press)

The program reached almost all teachers and disseminated school-based CPD culture across the country.

- The program trained 32,500 local trainers in three years.
- As of 2019, 96% teachers have attended some kind of CBC induction program since the launch of the curriculum.
- In 2018, **more than 80%** of the teachers have attended a school-based CPD regularly at least once a term.
- Teachers tried to make lessons more interactive using group work, singing and clapping. Lessons we observed were different from traditional “chalk-and-talk” type lessons.

However, training coverage was limited and quality of school-based trainings is barely known.

- The program were unable to ensure all teachers are trained.
- In 2018, **12% of teachers never attended school-based CPD.**
- Post-training test conducted to local level trainers found out that the level of understanding of some trainers was worrisome.
- Class discourse analysis found that application of the instructional approaches teachers learned in the induction program remained superficial.

3

Research question and method

- Now that main phase of CBC induction program is over, it is important to make sure that all teachers engage in school-based continuous professional development (CPD) and continuously improve their lessons.
- It has been suggested that school-based CPD is a cost-effective way of teacher professional development (Iwasaki et al., in press) and effective in improving students engagement in the class (Yoshikawa et al., 2015) and academic achievement (REB, 2015) in Rwanda.
- In CBC induction program, while 80% of teachers attended school-based CPD at least once a term, 12% have never attended one.
- What are the obstacles for these teachers to attend CPD? What is needed to remove these obstacles?

4

Factors that influence teachers' participation to school-based CPD

Mutsinzi et al (2017) identified following five factors which influence teachers' participation to school-based CPD in Rwanda by applying exploratory factor analysis. We grouped teachers into three by their participation to school-based CPD, 1) fully attended, 2) partly attended and 3) not attended and compared responses to questions related to CPD.

- Shared school vision
- Participatory school management
- Collegiality for lesson improvement
- Evidence-based school planning
- Resource persons

5

Outline of the survey

Items	Description
Survey objectives	<ul style="list-style-type: none">• Evaluate understanding of CBC concept of teachers, HTs, other education beneficiaries, practitioners and stakeholders.• Evaluate the impact of CBC induction program• Assess needs and analyze gaps in the implementation of CBC to inform next steps
Target area	Nationwide (90 among 416 sectors in all 30 districts)
Target group	Teacher, Head teachers, Sector Education Officers (Local education officers), District Director of Education (DDEs)
Methods	Sampling survey using online questionnaire (Google form)
Sampling method	3 schools from each district were selected from the list of schools where the government installed an internet connection with the following criteria. <ul style="list-style-type: none">- Schools are in different sectors.- Schools are in different levels (pre-primary, primary, secondary) * Teachers and head teachers in these schools and neighboring schools were also invited.

6

Sample size

Target group	Plan	Actual	Coverage against target	coverage against all
Teachers	6,266	4,178	66.7%	6.0%
Head teachers	1,369	497	36.3%	11.2%
SEOs (Local education officers)	90	87	96.6%	20.9%
DDEs	30	22	73.3%	

Note: "Coverage against all" for teachers and head teachers are based on number of teachers (69,602) and head teachers (4,412) in 2017 Education Statistics (MINEDUC, 2018)

7

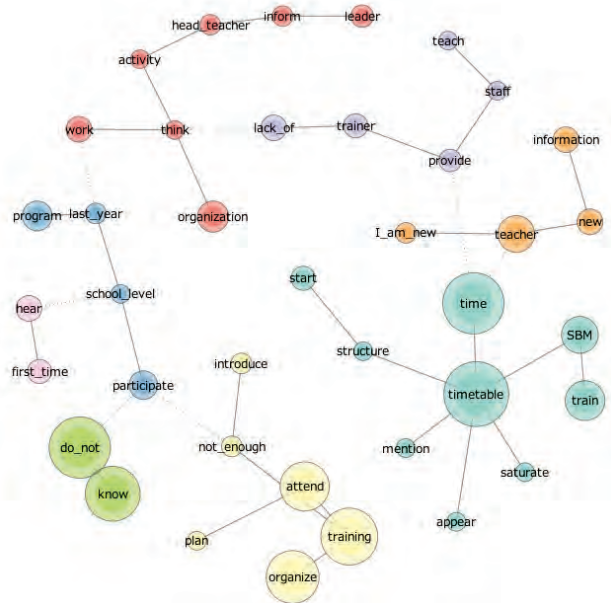
Analytical procedure

- In the online questionnaire, teachers were asked how frequently they attended school-based CPD in 2018. If the answer is "never", they describe the reason why. Similarly, local education officers were asked to describe the challenges around CPD. Both were open-ended question.
- To understand obstacles of CPD, we applied text mining to responses to these questions. A free software called KH Coder was used for this analysis.
- Text mining helps objectively identify words ("morphemes", the smallest meaningful unit of language) of frequent appearance and visualize intensity of their relationship by classifying them into groups ("communities").

8

The intensity of co-occurrence relationships among morphemes 1: Challenges of CPD by teachers who never attended CPD this year.

Primary and secondary teachers who never attended school-based CPD ($N=414$) described reasons why they never attended. Among them, 389 had valid responses were analyzed. 39 morphemes with high frequency were used to draw co-occurrence network diagram (below). Morphemes with higher frequency are indicated as bigger circle. Words were automatically grouped and separated by color.



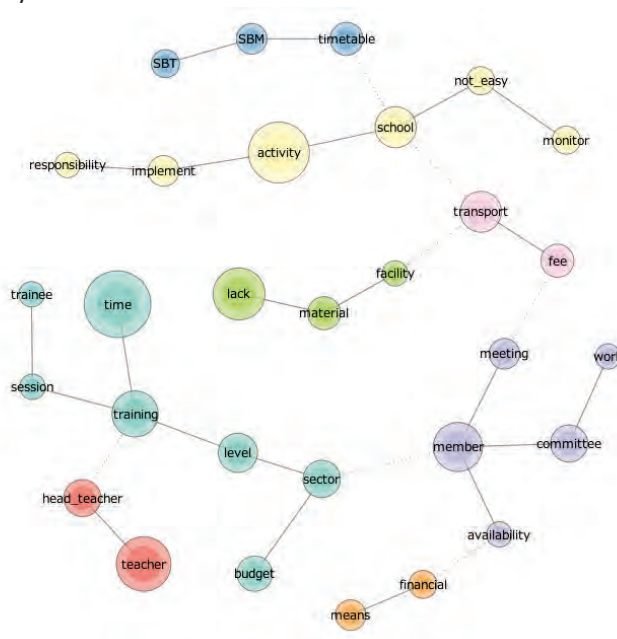
Eight groups were extracted which can be named;

1. Time/timetable
2. Trainers
3. Head teacher/school leadership
4. New teacher
5. Awareness 1 (no knowledge)
6. Awareness 2 (first time to hear)
7. Not planned, organized or introduced
8. Attended last year

9

The intensity of co-occurrence relationships among morphemes 2: Challenges of CPD by Local Education Officers

After the initial screening, 120 valid responses from local education officers were used for this analysis. 30 morphemes with high frequency were used to draw co-occurrence network diagrams. Morphemes with higher frequency are indicated as bigger circle. Words were automatically grouped and separated by color.



Eight groups were extracted which can be named;

1. Time and budget
2. Financial means
3. Head teacher
4. Resource persons' timetable
5. Difficulties of monitoring of school-based activity
6. Lack of material and facility
7. Transport fee
8. Availability of committee member

10

Obstacles for CPD

Co-occurrence network diagrams suggest following are the obstacles of CPD perceived by teachers and local education officers. Bold letters indicate common obstacles perceived by both teachers and local education officers.

Teachers

- **Lack of time/Busy timetable**
- **Lack of resource persons and their capacity**
- **Unsupportive school leadership**
- Lack of awareness

Local Education Officers

- **Lack of time**
- **Lack of resource persons and their capacity**
- **Unsupportive school leadership**
- Unable to monitor school-based activities
- Lack of budget
- Lack of transport means and fees
- Insufficient materials
- Unable to coordinate at sector-level

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Discussion (1)

Obstacles perceived both by teachers and local education officers

- **Lack of time is the biggest obstacle.**
 - Double-shift for primary school teachers.
 - Average lessons per week: 44 for primary and 34 for secondary teachers (REB, 2018)
 - Some good practices have been observed to arrange timetable so that teachers in the same department can have CPD in a specific day of the week (REB, 2015).
- **Unavailability and insufficient capacity of resource persons**
 - Distribution of scores of post-training test in CBC induction program suggested some trainers performed extremely poorly (Iwasaki, et al. forthcoming).
 - No systemic ongoing support, follow-up or community of practice existed for these trainers.
- **Unsupportive school leadership**
 - Results of this study confirmed the findings of previous studies (e.g. Mutsinzi et al, 2017, Yoshikawa et al, 2015) that suggest importance of supportive school leadership and good school management to create conducive environment for school-based CPD.

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Discussion (2)

Obstacles perceived by local education officers

- **Budget is one of the obstacles for CPD for local education officers but not teachers.**
 - Currently no budget is available at school level to buy materials for CPD, or to pay for transport to go to other schools for CPD after re-centralization of this part of capitation grant (Williams, 2017).
 - However, teachers don't feel lack of budget is the obstacle, which confirms one of the benefits of school-based CPD, i.e. low cost.
- **No functional monitoring system due to inherent challenge of decentralization**
 - In the CBC induction program, a comprehensive monitoring system was planned for but not fully implemented
 - Local education officers who are supposed to perform this task are not accountable to the Rwanda Education Board (Honeyman, 2017). They were given this task without proper institutional, technical and financial support from the central level (Iwasaki et al., forthcoming).
 - Due to lack of monitoring, teachers' needs for professional development is not systemically assessed and informing policy level.
 - Incoherent use of terminologies (e.g. CPD, peer learning, school-based training, etc) brings confusion and makes monitoring difficult.

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Conclusion

- Findings from this study confirmed importance of effective resource persons and supportive school leadership, as suggested by previous studies. Community of practice for resource persons should be established. Reasons behind unsupportive school leadership should be further investigated.
- They also suggest lack of time is the major obstacle for teachers' attendance to CPD. Mitigating the teaching load for primary school teachers will be the key. Interestingly absence of financial incentives is not an obstacle for teachers, but the costs incurred by school-based CPD (e.g. to buy materials and/or pay for transport for monitoring) should be compensated. Administrative arrangement that enables local education officers to conduct monitoring is also necessary.
- Establishing truly conducive environment for CPD requires a systemic reform. These obstacles (i.e. time, budget and monitoring) can be mitigated only by altering administrative or financial arrangement within the government. This includes abolishing double shift for all grades in primary schools, re-decentralizing capitation grant for teacher CPD and rearranging reporting line of local education officers.
- Some of the factors that are identified in this study coincide with model of effective professional development proposed by Darling-Hammond, Hylar and Gardner (2017). This suggests that these factors are important not only to encourage teachers' participation but also to improve the quality of CPD.

14

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添付 27. ICET 2019 学会発表資料

STRENGTHENING TEACHERS' QUESTIONING SKILLS IN MATHEMATICS AND STUDENTS' HIGHER ORDER THINKING SKILLS THROUGH LESSON STUDY IN RWANDA

Yumiko Ono, Waseda University
Antoine Mutsinzi, Sakura Group, Ltd
Sayaka Matuszuki, PADECO Co., Ltd



OUTLINE OF THE PRESENTATION

1. Background of the study
2. Lesson Study as Professional Development Model
3. Lesson Study in SIIQS project
4. Research Questions
5. Tentative results
6. Discussion
7. Tentative Conclusion



BACKGROUND

- In 2016 Competence-based Curriculum (CBC) introduced in primary and secondary schools in Rwanda
- A significant shift from objective and knowledge-based learning: CBC emphasizes on the development of skills and attitudes required to ensure the learner is competent in the application of knowledge
- Three year CBC induction program (2016-2018)
- JICA Project for Supporting Institutionalizing and Improving Quality of SBI Activity (SIIQS Project) launched in Jan 2017 to strengthen implementation of CBC curriculum **in classrooms**



EVERY TEACHER IS ENCOURAGING AND MOTIVATING LEARNERS TO WORK COLLABORATIVELY IN GROUPS.



S2 Biology Class



P4 Mathematics Class



TEACHERS ARE RECOGNIZING EFFORTS OF STUDENTS BY CLAPPING, GESTURES AND BY SINGING. THEY ARE FRIENDLY AND SUPPORTIVE.



JCC@03232017



SOME TEACHERS PREPARE OWN TEACHING AID.



JCC@03232017



OBSERVED ISSUES IN “CBC” LESSONS

(BLS, 03/2017)

- Jump into group work without instruction or meaningful task.
When is Group work or group discussion effective and helpful?
- Individual mastery of basic knowledge and skills is a prerequisite for students to be engaged in critical and creative thinking, but NOT emphasized or achieved.
- Students are expected to answer “Yes” to teachers’ questions: “Do you understand?” “Are you together?”
- Group activity is NOT closely linked to the lesson objective.
- Every lesson shows a same structure: Introduction, group work, exercise questions for assessment, homework.
- Questions are at low cognitive level, no thinking or no meaningful learning.

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LESSON STUDY AS EFFECTIVE PROFESSIONAL DEVELOPMENT MODEL

Seven Characteristics of Effective PD

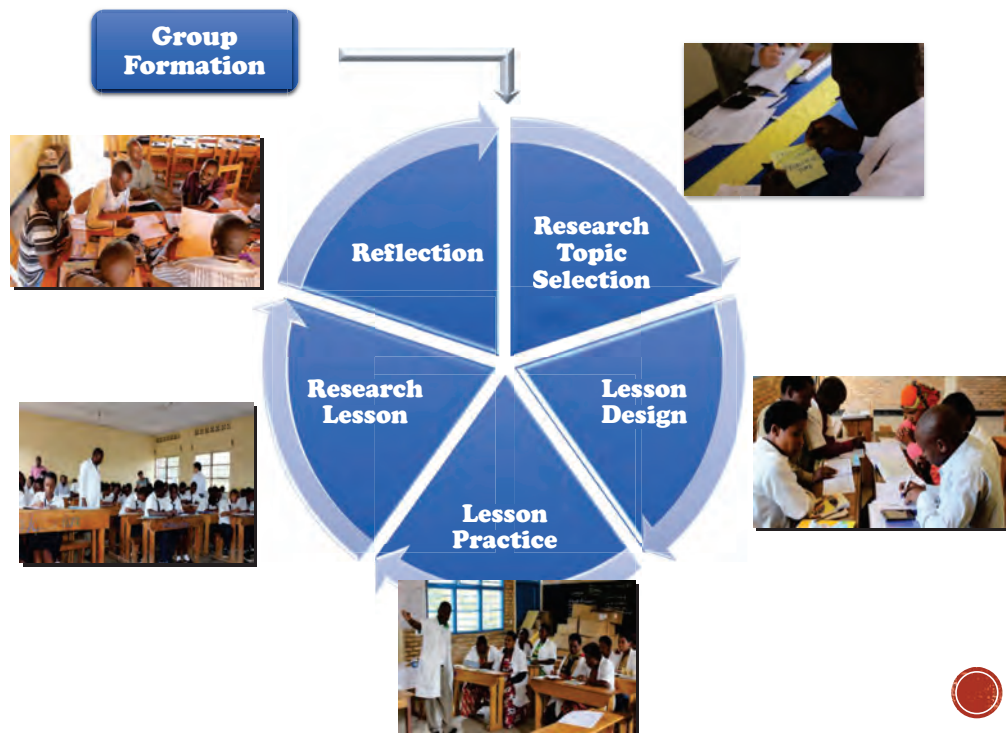
(Darling-Hammond et al, 2017)

1. Is **content focused**
2. Incorporates **active learning** utilizing adult learning theory
3. Supports **collaboration**, typically in **job-embedded contexts**
4. Uses **models and modeling** of effective practice
5. Provides **coaching and expert support**
6. Offers opportunities for **feedback and reflection**
7. Is of **sustained duration**

These are what Lesson Study is.



LESSON STUDY CYCLE



LESSON STUDY IN MODEL SCHOOLS

- 2017**
 - Select 5 model schools and formulate the Lesson Study Group for mathematics and science lessons
 - Introduce and implement Lesson Study
 - Develop model lesson for CBC implementation
- 2018**
 - Select 4 model schools and set objectives for Lesson Study
 - Implement Lesson Study and evaluate the effects
- 2019**
 - Select 5 models schools and set unit for research lesson
 - Implement lesson study and evaluate the effects

1 LS cycle is 4-5 weeks, once a term, one session is 60 to 90 minutes.

RESEARCH QUESTION: WAS THE LESSON STUDY (PROJECT) EFFECTIVE?

- Was it effective in strengthening teachers' questioning skills?
 - **Discourse analysis**
 - **Teacher interview**
- Was it effective in improving students' higher order thinking skills?
 - **Pre/Post test analysis**



JOSEPHINE (PSEUDONYM) IN MODEL SCHOOL A

Female, P4-6 Math teacher, 17 years of experience. School is located about 45 km from Kigali. It has 14 classes and 11 teachers. Average achievement and typically rural.

2017	<ul style="list-style-type: none">• 03/2017 Baseline survey• 06/2017 Lesson Study
2018	<ul style="list-style-type: none">• Member of LS group, but• No research lesson
2019	<ul style="list-style-type: none">• 02/2019 Lesson Study• 06/2019 Lesson Study:



TENTATIVE RESULTS OF DISCOURSE ANALYSIS

Teacher

Code	Baseline lesson March 2017(%)	Model lesson June 2017 (%)	Model lesson June 2018	Model lesson Feb. 2019
Closed Question	92 (43.4)	123 (25.7)	19 (27.1)	73 (28.7)
Open Question	0 (0.0)	0 (0.0)	0	2 (0.7)
Instruction	23 (10.8)	109 (22.8)	27 (38.6)	72 (28.3)
Confirmation	22 (10.4)	51 (10.7)	5 (7.1)	46 (18.1)
Explanation	7 (3.3)	90 (18.8)	3 (4.3)	35 (13.8)
Ask Agreement	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.7)
Point student	33 (15.6)	38 (7.9)	5 (7.1)	6 (2.3)
Encouragement	12 (5.7)	23 (4.8)	5 (7.1)	7(2.8)
Justification	19 (9.0)	32 (6.7)	1 (1.4)	2 (0.1)
Others	4 (1.9)	12 (2.5)	5 (7.1)	9 (3.5)
Clap	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Impossible to listen	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	212	478	70	254

TENTATIVE RESULTS OF DISCOURSE ANALYSIS

Students

Code2	Baseline lesson March 2017(%)	Model lesson June 2017 (%)	Model lesson June 2018 (%)	Model lesson Feb 2019(%)
Yes/No answer to teacher	30 (20.3)	47 (24.7)	15 (37.5)	37(17.1)
One term answer to teacher	53 (35.8)	12 (6.3)	4 (10.0)	117(54.2)
One term answer to student	0 (0.0)	0 (0.0)	0	0
Question to teacher	0 (0.0)	1 (0.5)	0	0
Question to student	0 (0.0)	0 (0.0)	0	0
Opinion to teacher	0 (0.0)	0 (0.0)	0	4(1.9)
Opinion to student	0 (0.0)	0 (0.0)	0	0
Incomplete answer	0 (0.c0)	0 (0.0)	0	3(1.4)
Repeating or just reading	12 (8.1)	79 (41.6)	9 (22.5)	4(1.9)
Silent to teacher	4 (2.7)	0 (0.0)	0	0
Silent to student	0 (0.0)	0 (0.0)	0	0
Point student	0 (0.0)	0 (0.0)	0	0
Clap	3 (2.0)	0 (0.0)	0	2(0.9)
Writing or gesture to teacher	14 (9.5)	0 (0.0)	7 (17.5)	0
Writing or gesture to student	0 (0.0)	0 (0.0)	0	0
Impossible to listen	3 (2.0)	0 (0.0)	0	0
Others	29 (19.6)	51 (26.8)	5 (12.5)	49(22.7)
Total	148	190	40	216

MODEL LESSON ON FEB. 2019

- More students' talk (216:254) e.g.(148:212) 03/2017
- Emergence of a probing question and student's answer by sentence
 - *T: Why is 284 divisible by 2?*
 - *S: Because a number divisible by 2 when it ended by 4.*
- **BUT it was reteaching.**

Why did you decide to reteach the same lesson?

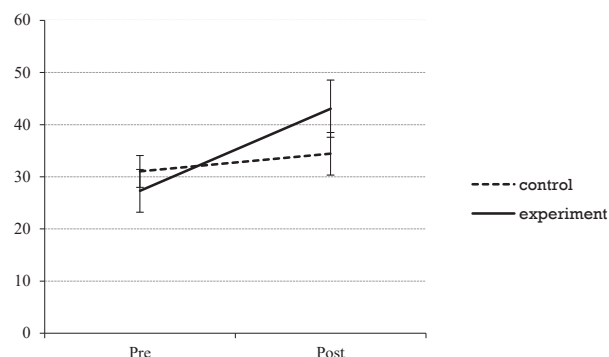
- *The specific lesson, I taught for the first time but without more focus.Second, I also repeat the lesson to help learners to be familiar with rules and know how to apply.*

(Translated from KinyaRwanda)



PRE/POST TEST ANALYSIS (06/2019)

	School A (n=34)	School B (n=61)
Pre-test	27.3 (9.2)	31.0 (13.3)
Post-test	43.1 (14.3)	34.4 (17.6)



Control (B)-Pre/Post: $F(1,93) = 2.667$

Experimental (A)-Pre/Post: $F(1,93) = 32.003^{**}$

** $p < .01$



DISCUSSION

- The teacher is positive about Lesson Study and she believes her teaching has been changed since the introduction of LS.
- Questioning skills of Josephine did not show a significant difference between the baseline and the endline
- Against effective PDM, some conditions were not met: providing coaching and expert support, sustained duration
- Proficiency level of English seems a challenge: learners understood English very little, teacher poses and repeats low level closed questions.



(CONT)

- The problem of textbooks: teachers' guide does not provide useful/helpful model/suggestions to develop questions requiring higher order thinking.
- Textbooks is organized from abstract (definition) to concrete so that learners remember the rules without understanding.
- Students absenteeism, little family or community support



TENTATIVE CONCLUSION

- Was it effective in strengthening teachers' questioning skills?

Not confirmed in the case study. Project related issues (frequency of professional support, and duration) and teacher and learner related issues (language).

- Was it effective in improving students' higher order thinking skills?

It depends on teacher questions. Students' language level, textbook organization may have negative effect.



TENTATIVE CONCLUSION

- Improving quality of teachers' questioning skills is essential to improve students learning.
- Level of Students' talk in classrooms are influenced by teacher questions and instructions.
- Students' level of English proficiency may affect question types.
- Conducting one or two cycles of Lesson Study cannot change quality of teacher questions.
- More frequent and sustained professional support is critical, more input/support at planning stage.
- Continuous support and implementation of Lesson Study is necessary to improve teachers' and students' Higher Order Thinking Skills



ACKNOWLEDGEMENT

- JICA granted a permission to use the data from SIIQS project for this presentation. Interpretations are ours and any errors are the responsibility of the authors.



添付 28. WALS 2019 学会発表資料

A CASE STUDY OF TEACHER LEARNING AND TEACHER CHANGE THROUGH LESSON STUDY AS SCHOOL-BASED CPD

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- Kizito Ndiokubwayo, REB/SIIQS
- Antoine Mutsinzi, Sakura Group, Ltd
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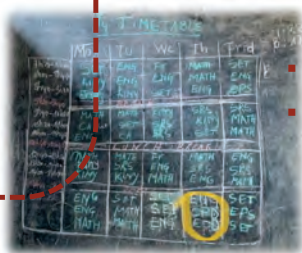
1. BACKGROUND

- In 2016 Competence-based Curriculum (CBC) introduced in primary and secondary schools in Rwanda
- A significant shift from objective and knowledge-based learning: CBC emphasizes on the development of skills and attitudes required to ensure the learner is competent in the application of knowledge
- Three-year CBC induction program (2016-2018:Yoshikawa et al, 2019)
- JICA Project for Supporting Institutionalizing and Improving Quality of SBI Activity (SIIQS Project) launched in Jan 2017 to strengthen implementation of CBC curriculum **in classrooms**

SIIQS APPROACH – DEVELOP CLASSROOM TEACHERS AND ESTABLISH ENABLING ENVIRONMENT

Component 1: Develop Competent Teacher

- Effective implementation of CBC lessons
 - **Plan**
 - **Lesson Planning**
 - Practice
 - **Play (Facilitation)**
 - **Questioning**
 - Reflect (assess)



Component 2: Establish CPD support framework

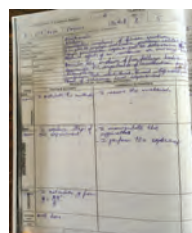
- Consolidate Professional cycle
 - Plan
 - Practice
 - **Engage teachers in CoP through DCC/SCC**
 - **Install CPD time in schools**
- Play (Facilitation)
- Reflect (assessment)
 - **Monitoring CPD/CoP through DCC/SCC**

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OBSERVED ISSUES IN “CBC” LESSONS (BLS, 03/2017)

Code	Baseline, lesson March 2017(%)
Closed Question	92 (43.4)
Open Question	0 (0.0)
Instruction	23 (10.8)
Confirmation	22 (10.4)
Explanation	7 (3.3)
Ask Agreement	0 (0.0)
Point student	33 (15.6)
Encouragement	12 (5.7)
Justification	19 (9.0)
Others	4 (1.9)
Clap	0 (0.0)
Impossible to listen	0 (0.0)
Total	212

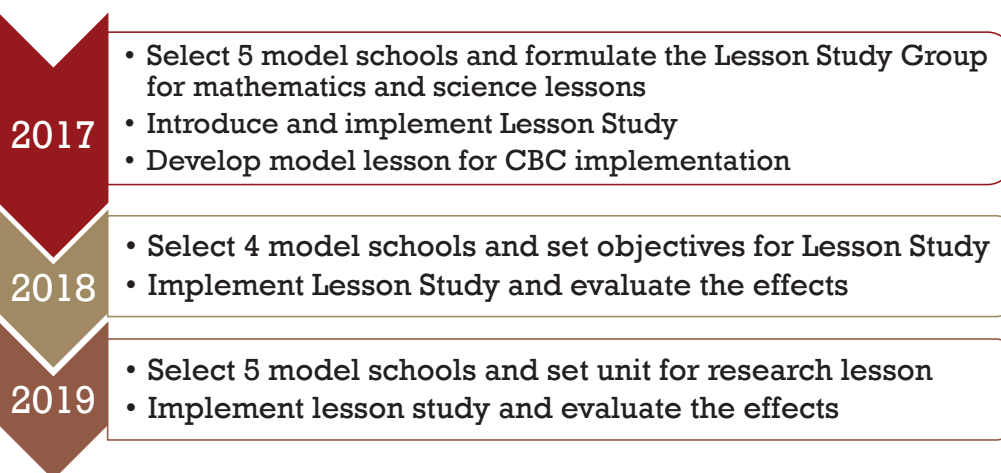


- Every lesson shows a same structure: Review of previous lesson, group work, exercise questions for assessment, homework.
- Jump into group work without instruction or meaningful task.
- Group activity is NOT closely linked to the lesson objective.
- Questions are at low cognitive level, no thinking or no meaningful learning.
- Students are expected to answer “Yes” to teachers’ questions: “Do you understand?” “Are you together?”
- Individual mastery of basic knowledge and skills is a prerequisite for students to be engaged in critical and creative thinking, but NOT emphasized or achieved.

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2. LESSON STUDY IN SIIQS PROJECT

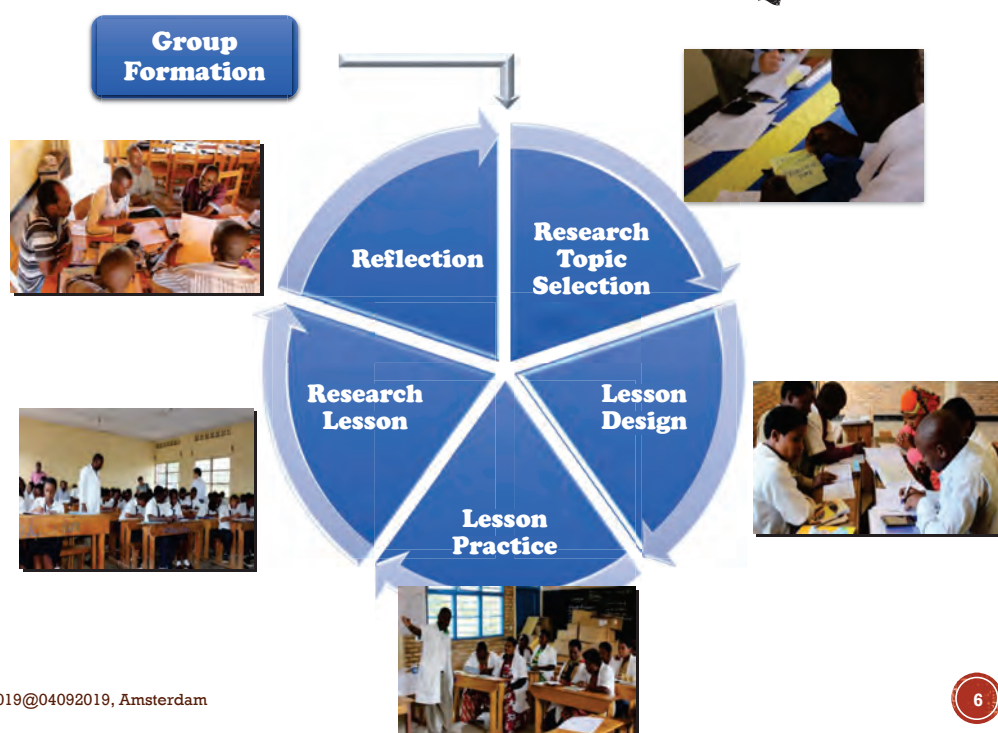


1 LS cycle is 4-5 weeks, once a term, one session is 60 to 90 minutes.

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LESSON STUDY CYCLE IN SIIQS



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3. RESEARCH QUESTIONS

- What did teachers learn from LS experience?
 - **Lesson plan**
 - **Teacher questionnaire**
 - **Focus group interview**
- What did a teacher learn and how did she change in her lesson presentations over three years?
 - **Discourse analysis**
 - **Teacher questionnaire**
 - **Teacher interview**

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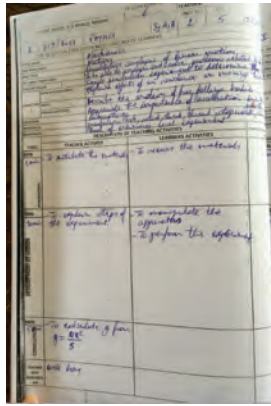
RQ1: WHAT DID TEACHERS LEARN FROM LS EXPERIENCE?



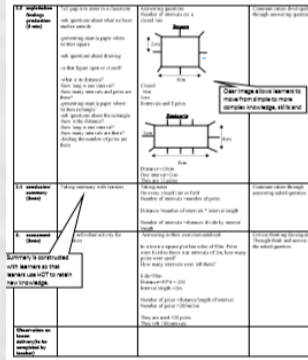
Collect data from 6 Experimental Schools (LS Model Schools) and 5 Control Schools (comparable in location, community organization and national test results) for comparison

- ✓ Lesson plan
- ✓ Teacher Questionnaire Survey
- ✓ Focus group interview

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Topic	Area	Level	Year	Unit	Lesson	Day
Area of a circle	Area	Year 7	Area	Area of a circle	1	15/11/19



LESSON PLAN

- Clear objective
- concrete guiding questions to achieve the objective
- Clear visual materials helping learners from simple to complex questions
- Small steps to achieve the objectives
- Summary constructed with learners

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LESSON PLAN

Elements specified in National Teacher CPD FW:
0: None, 1: Poor, 2: Fair, 3: Good

Group	Level	N		Clear and measurable outcomes and objectives and activities to achieve them.				How key knowledge and skills develop over time.		Regular revision or learning and learning assessments.		Adaptions for specific learners.		Plan to use a range of TLRs and interaction patterns within and between different lessons.	
		BLS	ELS	BLS	ELS	BLS	ELS	BLS	ELS	BLS	ELS	BLS	ELS	BLS	ELS
EXP	PS	14	6	1.3	3.0	0.9	2.3	0.0	0.5	0.7	2.0	0.1	0.3	1.1	2.0
	Math	10	3	1.3	3.0	0.6	2.7	0.0	0.0	0.4	2.3	0.0	0.7	0.8	2.0
	Science	4	3	1.3	3.0	1.8	2.0	0.0	1.0	1.5	1.7	0.3	0.0	1.8	2.0
	O' Level	4	10	1.3	3.0	1.5	2.3	0.0	0.5	1.3	1.4	0.3	0.5	1.5	2.0
	Math	1	4	1.0	3.0	1.0	2.3	0.0	0.0	1.0	1.5	0.0	1.0	1.0	2.0
	Science	3	6	1.3	3.0	1.7	2.3	0.0	0.8	1.3	1.3	0.3	0.2	1.7	2.0
	A' Level	4	7	1.8	3.0	1.5	2.3	0.8	0.3	0.8	1.4	0.0	0.4	1.8	2.0
	Math	3	4	2.0	3.0	1.7	2.0	1.0	0.0	1.0	1.8	0.0	0.3	2.0	2.0
Science	1	3	1.0	3.0	1.0	2.7	0.0	0.7	0.0	1.0	0.0	0.7	1.0	2.0	
Average	22	23	1.4	3.0	1.1	2.3	0.1	0.4	0.8	1.6	0.1	0.4	1.3	2.0	
CTR	PS	12	2	2.3	3.0	2.3	2.0	0.0	0.0	1.3	0.5	0.2	0.5	1.2	2.0
	Math	9	1	2.2	3.0	2.2	2.0	0.0	0.0	1.4	0.0	0.1	0.0	0.8	2.0
	Science	3	1	2.3	3.0	2.3	2.0	0.0	0.0	0.7	1.0	0.3	1.0	2.3	2.0
	O' Level	6	3	1.7	1.7	1.5	2.0	0.5	0.0	0.7	0.3	0.0	1.3	0.5	2.0
	Math	1		3.0		3.0		0.0		0.0		0.0		0.0	
	Science	5	3	1.4	1.7	1.2	2.0	0.6	0.0	0.8	0.3	0.0	1.3	0.6	2.0
	A' Level	4	1	1.8	3.0	1.5	3.0	0.0	0.0	0.8	0.0	0.0	1.0	0.5	2.0
	Math	1	1	1.0	3.0	1.0	3.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.0
Science	3		2.0		1.7		0.0		1.0		0.0		0.7		
Average	22	6	2.0	2.3	1.9	2.2	0.1	0.0	1.0	0.3	0.1	1.0	0.9	2.0	
EXP		22	23	1.4	3.0	1.1	2.3	0.1	0.4	0.8	1.6	0.1	0.4	1.3	2.0
CTR		22	6	2.0	2.3	1.9	2.2	0.1	0.0	1.0	0.3	0.1	1.0	0.9	2.0

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BETTER UNDERSTANDING OF CBC LESSONS?

1: strongly disagree, 2: disagree, 3: agree, 4: strongly agree

	N=55 EXP	N=46 CTR
(a) CBC should always include groupwork.	2.47	2.92 *
(b) Lesson conclusion should be given by teacher.	2.40	2.68
(c) Blackboard writing should be erased when students solve assessment question at the end of a lesson.	2.33	2.74 +
(d) When a student gives a wrong answer, teacher should call another student to get correct answer immediately.	2.09	2.13
(e) When students do not understand a concept, it is because students do not study harder.	1.76	1.92
(f) When students do not understand a concept, it is because the teacher did not use effective strategies.	2.58	2.68
(g) Teachers should rely on students' oral responses than students' face expressions and behaviors for formative assessment.	2.20	2.63 *
(h) To treat learners equal, teachers should provide the same instruction to all learners regardless of their understanding.	3.04	2.95
(i) Calling on students purposefully who make mistakes is good learning opportunities for the class.	2.91	2.87
(j) I encourage my students to explain why they reached a certain answer in my class.	3.56	3.50
(k) I give students enough time to think before they answer a question.	3.51	3.61
(l) I encourage my students to apply their learning to real life situations.	3.67	3.76
(m) Good questions should have only one correct answer.	2.27	2.24
(n) Students should respond to questions immediately.	2.04	2.24
(o) Lesson should introduce one particular and standard solution only.	2.29	2.18

N=101

* $p < .05$, + $p < .10$

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FOCUS GROUP INTERVIEW

- “Lesson study is one of the most appropriate CPD model that have helped us to improve our classroom practice” (teachers of EP Buhande at the ELS)
- “LS has been a good opportunity for teachers to sit together to discuss issues in teaching and learning process, challenge one another and learn from each other. LS is helping much in transforming curriculum to competences.” (HT of GS Mukarange at the Workshop with model schools)
- “Teachers' attitudes and behaviors have gradually changed and we can attribute this change to LS. Through the course of LS, teachers have been able to open and reveal their weaknesses and welcomed their fellow teachers for support” (DOS of APAGIE Musha at the Workshop with model schools)

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RQ2: WHAT DID JOSEPHINE LEARN AND HOW DID SHE CHANGE IN HER LESSON PRESENTATIONS OVER THREE YEARS?

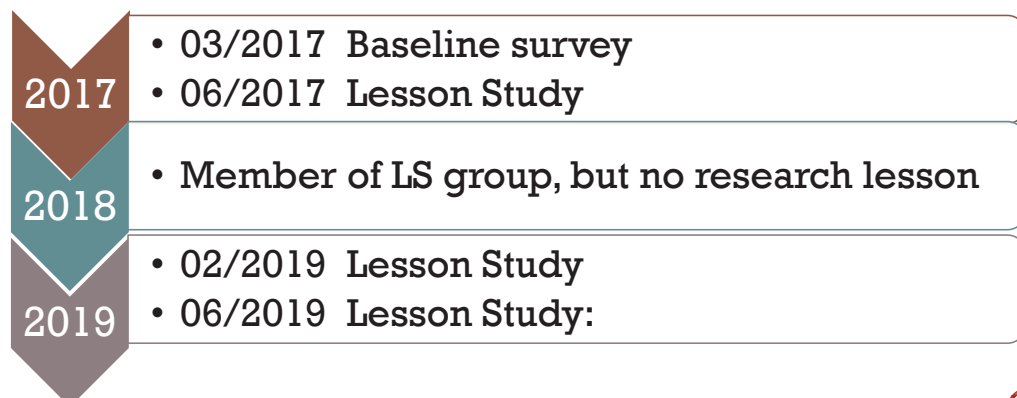
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- ✓ Discourse analysis of video recorded lessons
- ✓ Teacher interview
- ✓ Teacher Survey questionnaire

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JOSEPHINE (PSEUDONYM) IN MODEL SCHOOL A

Female, P4-6 Math teacher, 17 years of experience. School is located about 45 km from Kigali. It has 14 classes and 11 teachers. Average achievement and typically rural.



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PRELIMINARY RESULTS OF DISCOURSE ANALYSIS

Teacher

Code	03/2017	06/2017	06/2018	02/2019	06/2019
Explanation	7(3.3)	75(18.0)	6(7.6)	35 (13.8)	18(8.7)
Closed Question	92(43.2)	89(21.4)	13(16.5)	73 (28.7)	73(35.3)
Open Question	1(0.5)	0 (0.0)	0 (0.0)	2 (0.7)	2(1.0)
Rephrase teacher	0 (0.0)	1(0.2)	9(11.4)		18(8.7)
Rephrase student	0 (0.0)	0(0.0)	5(6.3)		7 (3.4)
Call attention	0 (0.0)	36(8.7)	2(2.5)		20 (9.7)
Point student	33(15.5)	37(8.9)	15(19.0)	6 (2.3)	20 (9.7)
Confirmation	22(10.3)	49(11.8)	5(6.3)		13 (6.3)
Instruction	23(10.8)	81(19.5)	19(24.1)	72 (28.3)	13 (6.3)
Encouragement	12(5.6)	37(8.9)	3(3.8)	7(2.8)	14 (6.8)
Justification	19(8.9)	0 (0.0)	2(2.5)	2 (0.1)	0(0.0)
Clap	0(0.0)	0 (0.0)	0(0.0)	0 (0.0)	0(0.0)
Inaudible	0(0.0)	0 (0.0)	0(0.0)	0 (0.0)	0 (0.0)
Others	4(1.9)	11(2.6)	0(0.0)	9 (3.5)	9(4.3)
Total	213	416	79	254	207

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PRELIMINARY RESULTS OF DISCOURSE ANALYSIS

Students

Code	03/2017	06/2017	06/2018	02/2019	06/2019
Yes / No answer to teacher	30(20.3)	48(25.3)	5(13.5)	37(17.1)	8(9.4)
Yes / No answer to another student	0(0.0)	0(0.0)	0(0.0)	0(0.0)	1(1.2)
One term answer to teacher	53(35.8)	90(47.4)	15(40.5)	117(54.2)	48(56.5)
One term answer to another student	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Question to teacher	0(0.0)	0(0.0)	0(0.0)	0(0.0)	2(2.4)
Question to another student	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Opinion to teacher	0(0.0)	0(0.0)	0(0.0)	4(1.9)	7 (8.2)
Opinion to another student	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Incomplete answer	0(0.0)	0(0.0)	3(8.1)	3(1.4)	0(0.0)
Repeating or just reading	12(8.1)	0(0.0)	8(21.6)	4(1.9)	3 (3.5)
Silent to teacher	4(2.7)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Silent to another student	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Point student	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Presentation	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Clap	3(2.0)	0(0.0)	0(0.0)	2(0.9)	1(1.2)
Writing or gesture to teacher	14(9.5)	2(1.1)	6(16.2)	0(0.0)	0(0.0)
Writing or gesture to another student	0(0.0)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Inaudible	3(2.0)	1(0.5)	0(0.0)	0(0.0)	1(1.2)
Others	29(19.8)	49(25.8)	0(0.0)	49(22.7)	14(16.5)
Total	148	190	37	216	85

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IN DEPTH INTERVIEW MARCH 2017: FIRST VISIT

How did you feel?

*That time you surprised me and I was even **frustrated**. I was **trembling**. (Why?) Do you know about seeing white people coming to your classroom, that time head teacher told me about that visit just in morning, we did not know which materials we have to use, **I failed and I really got ashamed**.*

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JUNE 2017: FIRST LESSON STUDY

Oh my God! But it is so long I may get difficulty in remembering.

In that time, in 2017 I tried my best though I did not know what Lesson Study is.

(Suggestions during lesson planning and in post lesson discussion)

*I remember one; **I talked more than learners**, others I do not remember*

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JUNE 2018: SECOND YEAR OF LESSON STUDY

Why Nyiraneza, not you, taught research lesson?

*I claimed to give opportunity to another one so **that I also get opportunity to observe how other people do.***

*Another reason is that we wanted to change class. I was in P4 and P5 both in 2017 and 2018, so we put it in P6 because **learners in P6 at least can try English.***

*It was step by step of lesson development from CBC. **She did not talk much instead she gave opportunity to learners to work.***

FEB 2019: RETEACHING A SAME LESSON

In divisibility test, I planned, after we planned we sent to you and you gave feedback, we again planned.

It (reteaching) is not allowed I know but from microteaching, we got how we can improve. ... Anyway, since I repeated the lesson, as the learners already saw it, therefore they well understood in the second lesson.

You cannot hesitate to repeat the lesson. When you see learners do not understand, what can you do? If you are a teacher, what can you do? (repeat?) not only repeat. We have also to find materials.

*(helpful suggestion?)**some time we were asking normal questions, but from that time we started to ask learners "why" question***

JUNE 2019: OUTSIDE ACTIVITY, CAMERA CREW

I planned that learners will measure using decameter, but that day, they failed. We already learnt line, they knew object, but the mixed up everything on spot. Anyway, they did what they can do as children. You see, in the playground outside the classroom, the learners mixed up the work. Some who were supposed to measure rectangle measured the square and vice versa. We skipped the presentation. Since the data were mixed up, I saw it may cause confusion and I chose to present myself.

(If you teach again, how?)

Maybe I can put it in 2 periods. (Why?) The activities taken place outside classroom took time and I should give learners enough guidelines

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JUNE 2019: OBSERVATION OF LESSON IN OTHER MODEL SCHOOL

Before observation, they gave us lesson plan, so they requested us to look at the methodology, teacher activity, and learners activities.

(Suggestion to the teacher) *The teacher was good but there was no new knowledge. I suggested that teacher should have something new in the lesson. I also figured out that the teacher repeated the lesson. Learners knew everything. Therefore, I suggested teaching a new lesson.*

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LEARNING THROUGH LESSON STUDY

(a few things you learned until now) *first, I am confident. For example, even at my school, other than those who took initiative to teach, others it is difficult to teach in front of observers as we did.*

CBC implementation, planning a lesson with instructional objectives and prepare materials for it.

MOST IMPORTANT STAGE OF LS

*So, all of them are important but **problem identification** is more important than the rest. (Why?) because **you cannot teach learners if you do not know their problem.***

DO YOU SEE ANY IMPROVEMENT IN STUDENTS' LEARNING?

Not much. (why?) There are many reasons. Imagine a learner in P5 during divisibility test of 2 lesson, and that learner does not know the multiplication table of 2, what will happen?

(basic knowledge?) *Lack of basic knowledge is still a problem. Again, if you have 45 learners, among them in P2 only 5 of them master multiplication table of 2, when they shift to P3, they learn multiplication table of 3, and you find among the 5 learners who knew multiplication table of 2 remain 3. You can see what will happen in P4 and P5.*

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LS AND TEACHER CHANGE MODEL

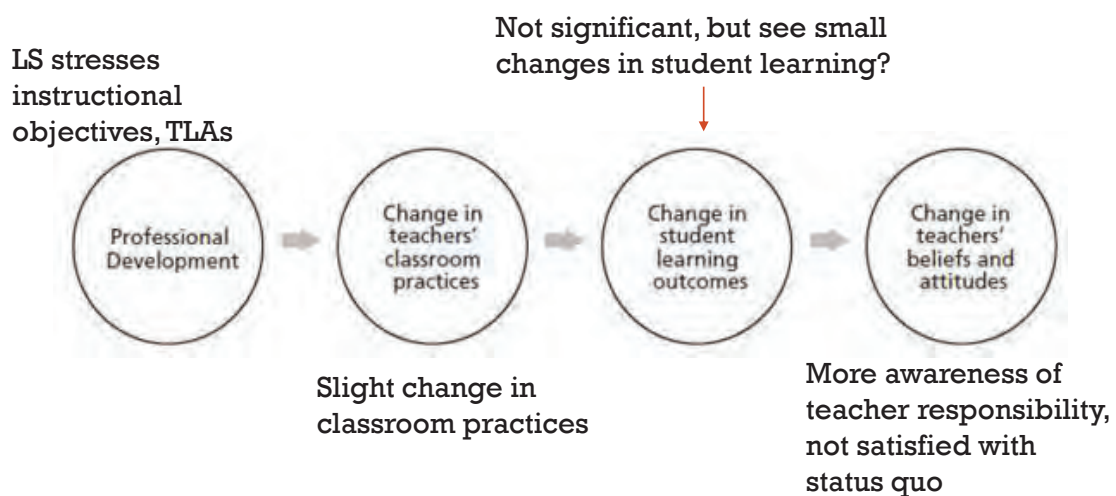
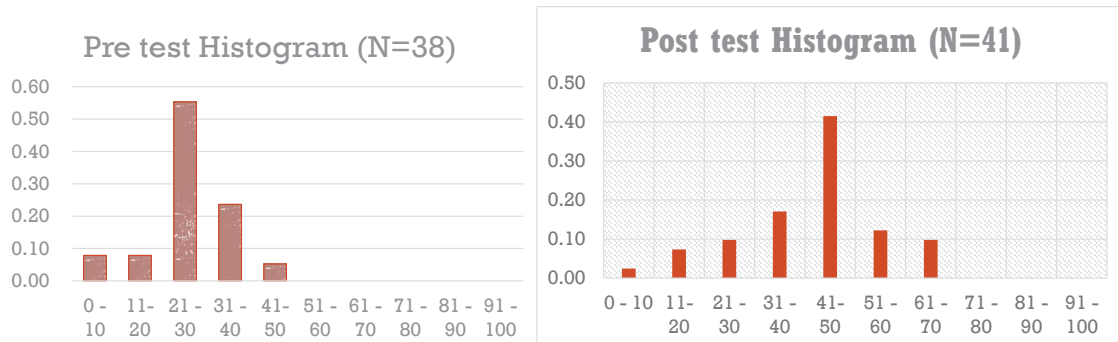


Figure 1: Guskey's model of teacher change. (Guskey, 1986, p7)

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Second term (June 2019) Pre-Post Test Score Distributions P5 Math (Josephine's class)



Class Average Score from 28% to 42%



4. SUMMARY

- General perception of teachers on LS is positive and an improvement can be observed in lesson plan writing.
- A case study revealed more attention and care on learners and some signs of further improvement if LS is sustained and professional support is provided (researching on content, sequence of content presentation, material development, etc: See Darling-Hammond et al, 2017)
- She is aware of the need of early intervention: poor basic skills in early grade become an impediment for later learning.
- Well coordinated efforts for improvement is necessary for positive impact on students' learning: curriculum organization, textbook and teacher support materials development, administrative support.

ACKNOWLEDGEMENT

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