Continuous Professional Development Certificate in Educational Mentoring and Coaching for STEM Teachers (CPD-CEMCMT)

STUDENT MANUAL

Volume 1

MODULE 1: COACHING, MENTORING AND COMMUNITIES OF PRACTICE

Module code: PDM1141

UNIVERSITY OF **RWANDA**

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REB Rwanda Education Board

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Student Manual

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LIST OF ACRONYMS

BLF	Building Learning Foundations
CBC	Competence Based Curriculum
CoP	Community of Practice
CPD	Continuous Professional Development
DCC	District Continuous Professional Development Committee
DDE	District Director of Education
DHT	Deputy Head Teacher
ESSP	Education Sector Strategic Plan
GRROW	Goal Reality Resources Options Will
HOD	Head of Department
HT	Head Teacher
NT	New Teacher
PP	Policy Priority
PDSI	Plan Do See & Improve
REB	Rwanda Education Board
SBI	School Based In-service Training
SBM	School Based Mentor
SBMF	School-Based Mentorship Program Framework
SEO	Sector Education Officer
SSL	School Subject Leader
STEM	Science, Technology, Engineering and Mathematics
TDMP	Teacher Development and Management Policy
TPACK	Technological Pedagogical and Content Knowledge
TTC	Teacher Training Centre
UR-CE	University of Rwanda – College of Education

GENERAL INTRODUCTION AND PURPOSE OF THE PROGRAMME

A pillar of Rwanda's Vision 2020 is the development of skilled people for the further socio-economic development of the country (MINECOFIN, 2012). This pillar stresses the importance of education and training for producing citizens who have the knowledge, skills and attitudes that enable them to be entrepreneurial in their learning, thinking and doing. From this perspective, improving the quality of education and training is one of the overarching goals of the Ministry of Education as reflected in the Education Sector Strategic Plan 2013-2018 (MINEDUC, 2013).

The quality of education depends on many factors, but teachers and school leaders are the two most critical actors (Day & Leithwood, 2007; Leithwood, Seashore, Anderson, Wahlstrom, & others, 2004). Therefore, priority is given to teacher development and management. Evidence shows that teacher development improves teaching and learning, and that effective school leadership is required for the professional development of teachers (Glewwe & Muralidharan, 2015; Hattie, 2009; Leithwood, Harris, & Hopkins, 2008; Robinson, Lloyd, & Rowe, 2008).

"Teachers are responsible for 75% of the variation in school results. The effect of teachers is bigger for children who come from disadvantaged backgrounds."

(Muijs & Reynolds, 2010)

The introduction of a **Competence-Based Curriculum (CBC)** in Rwandan schools calls for comprehensive change and new thinking on instructional approaches in teaching and learning, focusing on a learner-centred approach. Therefore, teachers need to master a variety of methodologies to increase the quality of their teaching. Improving the quality of teaching is a career long process: it is not finished when teachers graduate or after one training session. To institutionalize this ongoing process of improving teachers' knowledge,

skills and attitudes after initial training, the Rwanda Education Board (REB) has designed a **School-Based Mentorship Program Framework (SBMP)**. Within this framework, REB aims at strengthening the implementation of the CBC and the use of English as medium of instruction. To facilitate the SBMP implementation, a School-Based Mentor (SBM) has been selected under the guidance of the (deputy) head teacher in each public and government aided school (SBMP Framework, 2017-2022).

Various researchers have explored **teacher collaboration** and mutual support as agents in raising teacher performance (Beatty, 2000; Day, Hadfield, & Kellow, 2002; Veenman, Laat, & Staring, 1998). Moreover, the provision of opportunities for teachers to reflect on their teaching and engage in dialogue about it with other teachers helps building motivation and commitment (Day et al., 2002). Teachers learning from each other - through observing lessons, working together on real school improvement problems, drawing on best practice in developing solutions, feedback, taking part in coaching and mentoring- is considered by many teachers as the most effective way to improve their practice (Hampton, Rhodes, & Stokes, 2004). So, focusing on **coaching, mentoring and peer-networks** are considered as valuable ways in raising the effectiveness of professional development, in ensuring the embedding of changed practice and enhancing the impact of professional development within the classroom experience of learners (Guskey, 2003).

> *"The quality of an education system cannot exceed the quality of its teachers and school leaders, since student learning is ultimately the product of what goes on in classrooms."*
>
> PISA 2009: What Makes a School Successful?

Many teachers still work largely in isolation from colleagues. This isolation can be especially difficult for new teachers, who, on arriving in a school, are often left on their own to succeed or fail within the confines of their own classrooms—often likened to a "sink or swim" experience (Ingersoll & Strong, 2011). Research (Ingersoll & Strong, 2011; Wang, Odell, & Schwille, 2008) has shown that quality **induction** of newly qualified teachers has a positive impact on:

- their motivation and commitment;

- their job satisfaction;

- their teaching practices;

- the achievement of learners taught by NTs;

This, in turn, will lead to lower turnover by new teachers. Teaching has relatively high turnover compared to many other professions and teacher turnover is especially high in the first years on the job. Several studies have calculated that between 40% and 50% of new teachers leave within the first 5 years of entry into teaching (e.g. Ingersoll, 2003).

The programme "Educational Mentorship and Coaching for STEM Teachers (CPD-CEMCMT)" has **two main goals**. The first one is to provide SSLs in STEM subjects with competences needed for guiding and organising CPD for their colleagues (teachers) and for promoting reflective practice in their respective schools in order to advance the CBC implementation. This goal is in line with policy priority 4 of the draft Teacher Development & Management Policy in Rwanda (TDM): "*Require all teachers to undertake and record Continuous Professional Development, and ensure that an effective system for appraisal, mentoring, support, assessment, and re-licensing for all teachers is put in place to support it*" (MINEDUC, 2015).

Furthermore, according to policy priority 3 of the draft TDM policy, CPD activities will be needs-based and therefore different for New Teachers (NTs) junior, master or senior teachers: "*Introduce a high-quality induction year for newly qualified teachers (…)*". To ensure this needs-based approach support, REB and UR-CE have planned to develop certification programmes to equip NT-mentors (SSLs or DHTs in Charge of Studies) and other stakeholders involved in CPD of teachers with competences that enable them to fulfil their responsibilities (REB, 2016). This programme "Educational Mentorship and Coaching" is one of those CPD certificate programmes. This partnership between REB and URCE emphasizes on linking more closely pre- and in-service teacher training. The involvement of pre-service teacher training institutions in the induction of NTs is an additional way to improve this link. NT mentors in school will provide school-based mentoring and NT mentors from pre-service will monitor the performance of NTs during their first year of teaching. Through this monitoring, pre-service NT mentors will also coach NTs mentors in schools in their mentoring.

The second goal of this programme is to strengthen competences of SSLs in teaching STEM subjects. The programme provides a wide overview of techniques and methods to equip

STEM subject leaders with the knowledge and skills to support colleagues in the teaching of STEM subjects.

"Mathematics has been notorious over the centuries for the fact that so many of the population fail to understand what a small minority regard as being almost trivially simple" (Gray & Tall, 1994). In Rwanda, many learners fail to achieve basic skills in numeracy (REB, 2017). This will limit them in their possibilities during their life. Although some people do not need or use highly technical mathematics in their daily jobs, the complexity of daily life requires that we all can reason with numbers (National Research Council, 2002).

To equip SSLs and SBMs involved in CPD of teachers with competences that enable them to fulfil their responsibilities, REB and UR-CE have been developing certification programmes (SBMP Framework, 2017-2022). "**Educational Mentorship and Coaching for STEM Teachers**" (CPD-CEMCMT) is one of those CPD certificate programmes. This partnership between REB and URCE emphasizes on linking more closely pre- and in-service teacher training. The involvement of pre-service teacher training institutions in the induction of NTs is an additional way to improve this link. NT mentors in school will provide school-based mentoring and NT mentors from pre-service will monitor the performance of NTs during their first year of teaching. Through this monitoring, pre-service NT mentors will also coach NTs mentors in schools in their mentoring.

> *"Mathematics has been notorious over the centuries for the fact that so many of the population fail to understand what a small minority regard as being almost trivially simple." (Gray & Tall, 1994)*

Activity 1

Think individually about the following questions and write down your ideas:

What do you expect from this CPD Programme?

On which aspects of teaching science or mathematics would you like more support?

Programme Learning Outcomes

By the end of this programme, participants should be able to:

- Explain principles and theories of mentoring, coaching and Communities of Practice,

- Understand the theory and principles of the Competence-Based Curriculum for science and mathematics in all its aspects: content knowledge, teaching methodologies, teaching resources and assessment of learning;

- Explain key concepts in STEM instruction, such as technological, pedagogical content knowledge, learner-centred pedagogy and mathematical literacy and understand their impact on primary mathematics instruction;

- Recognize and address gender stereotypes associated with STEM teaching;

- Select and develop appropriate and inclusive teaching and learning materials for STEM;

- Integrate daily life situations in the teaching and learning of STEM;

- Use ICT (animations, simulations) improve the quality of STEM teaching;

- Apply coaching and mentoring techniques to support fellow teachers in teaching mathematics effectively;

- Apply teaching methods that strengthen learners' proficiency and literacy in STEM;

- Manage different resources and materials for teaching and learning STEM;

- Make studying STEM subjects enjoyable for girls and boys;

- Help creating a culture of ongoing reflection and learning for improvement within the school;

- Take up a leading role in the teaching and learning of mathematics within the school;

- Reflect on one's professional practice for continuous improvement;

- Organize professional development activities for STEM teachers, including providing effective feedback to peers, coaching and mentoring, communities of practice and lesson study;

- Promote social justice within and beyond the school;

- Recognize the importance of setting high expectations for all learners in studying STEM;

- Be aware of, respect and use the diversity in learners' backgrounds, skills and interests in the teaching of STEM;

- Appreciate the variety in teaching and learning techniques for STEM.

Programme Structure

This programme consists of 2 modules of 10 credits. The title of module 1 is "Coaching, Mentoring and Communities of Practice". Essential skills for subject leaders such as observing, giving constructive feedback and coaching and mentoring are introduced and practiced. Module 2 is called "Technological, Pedagogical and Content Knowledge (TPACK) in STEM Education". In this module, you will engage with a wide range of aspects of technological pedagogical content knowledge for STEM. Through examples and exercises, you will learn how to apply the various concepts and methods in your lessons and help your peers, especially new teachers, to use them as well. You will get opportunities to try out techniques through micro teaching sessions and practical assignments.

The programme consists of 4 face-to-face sessions of 2 days. In between sessions, you will engage in practice-based assignments (A1-A4) (Figure 1).
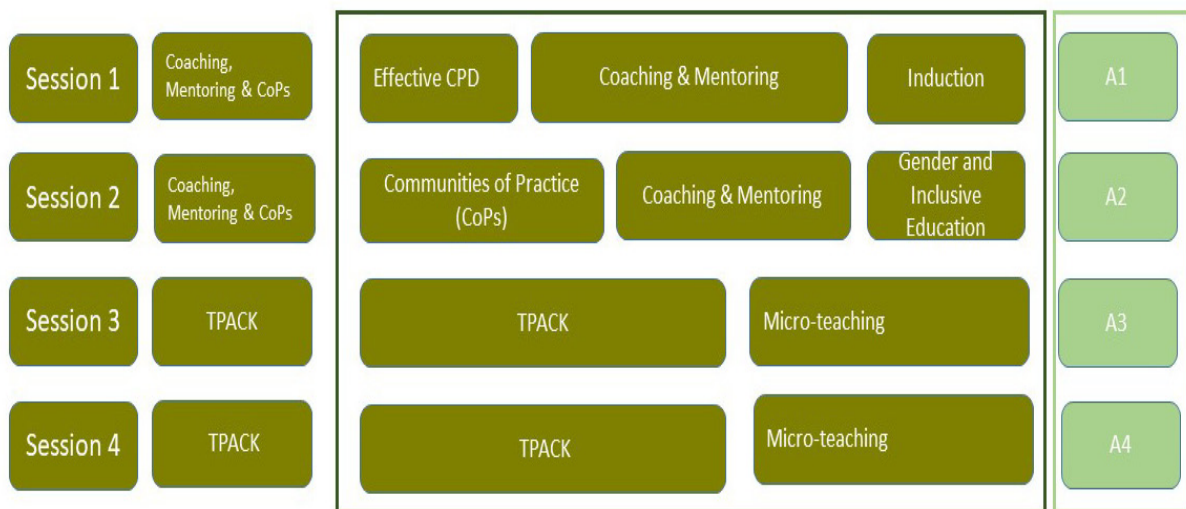
Figure 1: CPD-CEMCMT Programme Structure

Programme Assessment

Programme assessment is competence based and consists of a combination of practical assignments and an end-of-course assessment (Figure 2). There will be an assignment at the end of each session. These assignments will enable you to try out in your school what we cover in the programme. You will also reflect on these try-outs and identify ways to further improve your teaching with your peers. For every assignment, you find detailed information on what is required and how the assignment will be evaluated. These assignments will count towards your continuous assessment grade, together with in-training activities and a field assessment. This field assessment will allow you to demonstrate some of the concepts of the programme and engage in a constructive feedback discussion. An end-of-programme assessment will be organized after the fourth session.
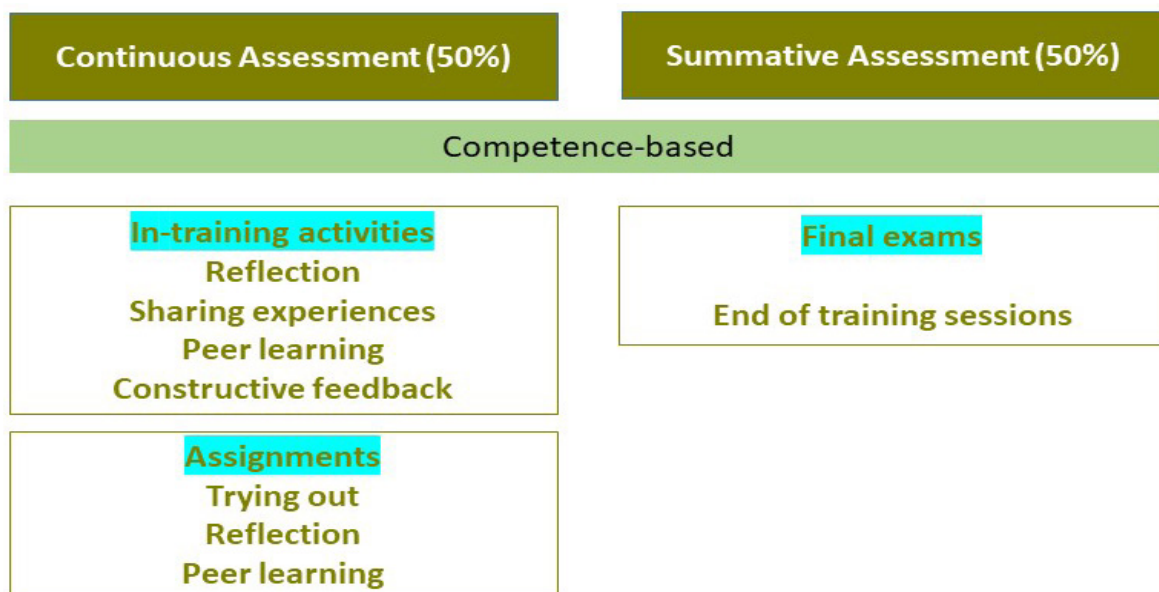
Figure 2: CPD-CEMCMT Programme Assessment

According to UR-CE regulations, distribution of marks will be as follows:

- Formative/in course assessment: 50%

- Summative assessment/end of module examination: 50%

Participants must score at least 50% on each module to be awarded the "Continuous Professional Development Certificate in Educational Mentoring and Coaching for STEM Teachers".

Programme Principles

The design of this CPD programme is based on following principles:

1. Collaboration among teachers

Your professional learning journey will be most effective when you delve into mathematical ideas with your colleagues and together inquire about how your understanding impacts your teaching. Hattie (2009) identifies collaborative work by teachers in preparing and evaluating their teaching as a top factor affecting learning outcomes. We will use micro teaching for consciously and critically reflecting on one´s practice within a team.

2. CPD as a learning trajectory

Research shows that isolated and once-off models of intervention have little sustainable impact on teaching practices and learner achievement (Borko, 2004; Cole, 2004). Effective CPD requires continuous interactive support over a substantial period of time, should focus on specific educational content under guidance of an expert and revolve around products that help fostering a sense of ownership (Borko, 2004; Shalem, Sapire, & Huntley, 2013; Guskey, 2003). Communities of Practice in schools form an effective and efficient framework to organize such professional development (Vescio, Ross, & Adams, 2008; Brodie, 2013). Therefore, this programme only forms one element in your CPD. In between sessions, you will be required to try out methods and techniques and reflect on them with your peers. Communities of Practice in your school will complement what you learn during the programme and will help you to apply and familiarize yourself with the content.

3. Implementation of the Competence-Based Curriculum

The implementation of a new Competence-Based Curriculum (CBC) started in 2016. The CBC is centred around seven subject areas and aims to develop students' abilities in **six generic competences** (Rwanda Education Board, 2015): (1) critical thinking; (2) creativity and innovation; (3) research and problem solving; (4) communication; (5) cooperation, interpersonal relations and life skills; and, (6) lifelong learning. This guide aligns with the principles laid out in the CBC framework (Rwanda Education Board, 2015):

i. Learner centeredness

The curriculum must address learners' individual needs, interests, abilities and backgrounds, creating an environment where learning activities are organized in a way that encourages learners to construct the knowledge either individually or in groups in an active way.

ii. Focus on competences

This means that teaching and learning is based on mastering discrete skills and changing attitudes rather than focusing only on acquiring knowledge. This does not mean that knowledge is not important, but it forms a stepping stone to mastery of skills, rather than an endpoint.

iii. Inclusiveness, Flexibility, Transparency and Accountability

Learning is organised so that every individual is valued, and all learners can thrive, including girls and learners with learning difficulties. Catering for learners' needs and talents helps facilitate horizontal and vertical mobility within and across education systems. Schools, learners and communities must communicate openly and honestly about the curriculum and learning in the school to ensure successful teaching and learning.

iv. ICT integration

The competence-based curriculum must enable educators and students to use ICT as a tool to improve the quality of education in all subjects at all levels in teaching and learning practices (Rwanda Education Board, 2015). ICT must support the teaching and learning process as well as encourage research, communication and collaborative learning.

v. Interconnection with crosscutting issues

The curriculum reflects the significance of connections between different subject areas, integrating them across years and cycles. Crosscutting issues are integrated across learning areas appropriately. They are all important for students to learn about, but they are not confined to one subject. The topics include comprehensive sexuality education, environment and sustainability, financial education, gender, genocide studies, peace and values education, standardisation culture and inclusive education (Rwanda Education Board, 2015).

4. Practice-Based

Although the programme is based on educational research, the focus is on improving your practice as a subject leader. We have translated research findings into practical advice about teaching and learning. This also means that we expect you to engage with the programme content during your teaching. You will be asked to try out methods, take notes and reflect on them. Only then will you get the most out of this CPD programme.

5. Reflective Practice

Reflection is the human capacity to look back explicitly and think about one's own actions within a complex education context.   This context is complex because there are technical, emotional, moral and political dimensions to what you do as an SSL. Reflective practice is a crucial process to maintain a critical approach towards yourself and your work. Reflection can be learned through analysing case studies and discussing one's practice with peers and experts.

MODULE 1

COACHING, MENTORING AND COMMUNITIES OF PRACTICE

Introduction

This module focuses on the competences needed to coordinate and implement CPD with your colleagues (STEM teachers). It focuses on three key methods of school-based professional development: coaching, mentoring and communities of practice.

There are three units in this module. The first unit, **teacher continuous professional development**, unpacks the concept of continuous professional development (CPD) in education. We discuss what makes CPD effective and highlight the main educational policies in Rwanda. The second, **coaching and mentoring**, introduces coaching and mentoring in an education context. Starting from the GRROW model for coaching and mentoring and related key skills, it shows participants how to engage in meaningful coaching and mentoring conversations. The third unit, **communities of practice (CoPs),** explores how CoPs can be useful in schools. It looks at advantages of CoPs and the conditions to make them successful, which we will call key enablers. It further discusses how STEM SSLs can start and sustain CoPs within their schools.

Module Learning Outcomes

By the end of this module, you should be able to:

- Explain the concept of continuous professional development (CPD) in education;

- Analyse effective ways for CPD in education;

- Demonstrate understanding of current policies, programmes, and plans related to CPD for teachers in Rwanda;

- Identify stakeholders involved in CPD for teachers and their respective roles;

- Understand how adults learn;

- Describe the professional development cycle of teachers;

- Explain the rationale behind coaching and mentoring in education;

- Conduct coaching conversations by applying the GRROW model;

- Support fellow teachers in CPD towards improving the teaching and learning of STEM subjects.

- Explain the concept of induction of new teachers;

- Identify stakeholders involved in teacher induction and their respective roles;

- Explore the importance of teacher induction;

- Establish strategies for effective teacher induction;

- Explain the concept of a community of practice;

- Identify advantages of a CoP for CPD of teachers;

- Motivate STEM teachers to participate in a CoP;

- Establish an effective CoP of STEM teachers within their school;

- Facilitate a CoP session.

- Organise and manage the CoP of STEM teachers within their school.

UNIT 1: TEACHER CONTINUOUS PROFESSIONAL DEVELOPMENT

Introduction

The quality of education depends on many factors, but teachers and school leaders are the two most critical sets of actors (Glewwe & Muralidharan, 2015; Hattie, 2009; Leithwood et al., 2008; Robinson et al., 2008)

"Probably nothing within a school has more impact on students in terms of skills development, self-confidence, or classroom behaviour than the personal and professional development of their teachers" (Barth, 1990, p. 46).

In order to improve the quality of education in this regard, the following key questions form the themes of this unit:

- What are the most effective ways for teacher development and learning?

- How does adult learning take place?

- What do we know about adults' best learning practices?

- What is the most conducive environment for adult development and growth?

Unit Learning Outcomes

By the end of this unit you will be able to

- Explain the concept of continuous professional development (CPD);

- Analyse effective ways for CPD in education;

- Demonstrate understanding of current policies, programs, and plans related to CPD for teachers in Rwanda;

- Identify stakeholders involved in CPD for teachers and their respective roles;

- Explain the rationale behind coaching and mentoring in education;

- Understand how adults learn most effectively;

- Describe the professional development cycle of teachers;

- Value the importance of lifelong learning by teachers.

Section 1: Continuous Professional Development in Education

1.1 Introduction

In this section you will study the concept of continuous professional development (CPD) of teachers, its relevance to teaching and student learning and your role in this process. You will also explore how CPD needs of teachers evolve during their teaching career. Finally, current policies, programs and plans related to CPD are highlighted.

1.2 What is Continuous Professional Development?

> ### *Activity 2*
>
> Individually, from your experience, how do you define CPD in education?

There are different definitions of CPD in education. Broadly speaking, CPD includes all formal and informal learning that enables individuals to improve their own practice; a process of continuing growth of a professional. Rwanda Education Board (REB) defines CPD as follows:

> *"CPD is a continuous process. It's about working together, by advising each other, by being respectful and supportive and not critical, by reflecting on our own practice. CPD is based on needs – what we need to learn as teachers to improve the quality of teaching and learning in school".*

Building on REB's definition we suggest this more comprehensive definition of CPD in education:

CPD means learning continuously throughout one's career to improve performance. It is an umbrella term that covers all formal, non-formal and informal professional learning experiences over the duration of a teacher's career. It should achieve a balance between individual, group, school and national needs; encourage a commitment to professional and personal growth; and increase resilience, self-confidence, job satisfaction and enthusiasm for working with children and colleagues (Bubb & Earley, 2007). In other words, it is about creating opportunities for adult learning, with the purpose of enhancing the quality of education.

Non-formal and formal professional learning experiences are organised CPD activities. Unlike non-formal CPD, formal activities lead to a certification. Informal learning experiences are activities that are not organized as CPD, for example discussions with peers, reading of articles or books on education, looking for information on the internet…

1.3 Types of Continuous Professional Development

When thinking about CPD, many people think automatically about trainings. However, there are many different CPD activities. Depending on the needs and on your target group, other methods of CPD may be more effective. Examples of CPD methods are:

- participating and contributing to workshops/seminars/conferences (in-house/ outdoors),

- short courses and award-bearing programmes (distance, online, face-to-face),

- study tours and field visits,

- specialist expertise,

- professional development items in meetings,

- communities of practice,

- (informal) discussions with colleagues or students to reflect on practices,

- action research,

- case study discussions,

- lesson study,

- reflective diaries and keeping professional portfolios,

- (research) projects,

- coaching,

- mentoring,

- team teaching,

- job shadowing,

- peer observation,

- developing and adapting instructional/learning materials,

- rotating roles/jobs,

- structured feedback from students,

- self-study (internet, books, journals, magazines…).

Activity 3

Review the above list of CPD methods. Which methods do you have experience with? Use the table below to group the methods into 3 categories.

Category 1: I have experience using this in my class	Category 2: I know what it is, but I haven't used it yet in my class	Category 3: I'm not sure what it is

Next, compare your table with the table of your neighbour.
- Are there any methods your neighbour has experience with and you don't? Ask for examples from his/her teaching.
- Are there any methods that you are not sure about, and your neighbour knows what they are?

Table 1 below lists CPD methods and their definitions.

Table 1: Types of CPD activities

CPD method	Definition
Peer lesson observations	A peer is a colleague who is at the same professional level. Teachers observe a lesson taught by a peer and engage in a feedback conversation afterwards.
Discussions	Teachers talk about their work with their colleagues.
Sharing practices	Sharing the methods, ideas and knowledge that work well or not so well.
Problem solving	Finding solutions to challenges at school.
Giving feedback	Giving comments on a teacher's strengths and weaknesses in a supportive way which helps the teacher to improve his/her work.
Reflection/self-evaluation	A teacher thinks about his/her own teaching practice. He/she thinks about what he/she has done well and what he/she needs to do to improve.
Communities of Practice	A group of colleagues who meet regularly to discuss their work. They think of solutions to challenges and share their practices.
Model lesson	A teacher shows good teaching by demonstrating methods in an example lesson. Other teachers (peers) watch and learn from his/her demonstration.
Self-study	Studying individually, not directed by a teacher or supervisor.
Formal training	Professional development that leads to an accredited degree.
Workshop	Participants learn about practical skills to help them in their work. There is usually a concrete output such as a manual, lesson plan, teaching resources etc.

CPD method	Definition
Lesson study	Lesson Study is a CPD method in which a group of teachers work together to target an identified area for development in their students' learning. Using existing evidence, participants collaboratively research, plan, teach and observe a series of lessons, using ongoing discussion, reflection and expert input to track and refine their interventions.

Source: REB (2017), adapted by VVOB

1.4 Why CPD in Education?

The educational landscape in Rwanda is changing quickly. On a regular basis, teachers face new policies, new technologies, innovative approaches to teaching and learning, and many other changes within the educational environment. Moreover, teaching is a complex profession and pre-service teacher education is rarely sufficient to provide all knowledge and skills that are necessary for successful teaching (Feiman-Nemser, 2001). A significant portion can be acquired only on the job such as assessing student's work, writing informative reports to parents about their children's progress and communicating with parents (Britton, Raizen, Paine, & Huntley, 2000). Hence, there is a necessary role for schools in providing an environment where teachers can learn the craft and succeed as teachers. This is crucial as teaching faces a relatively high turnover rate compared to other professions (Ingersoll & Strong, 2011).

Furthermore, evidence shows that teachers' professional development can have a positive impact on student achievement and teachers' practice. Guskey (2003) writes that high-quality CPD is a central component in improving education. It is not enough to present to a class. It is not because you have taught something, that learners have learned it. Teachers need to adapt their teaching so that learners can understand (REB, 2017). Therefore, it is important that teachers can continually learn throughout their careers. This ongoing process of professional development, teacher collaboration and lifelong learning starts in pre-service education as showed in Figure 3.

Teachers need to adapt their teaching so that learners can understand (REB, 2017)
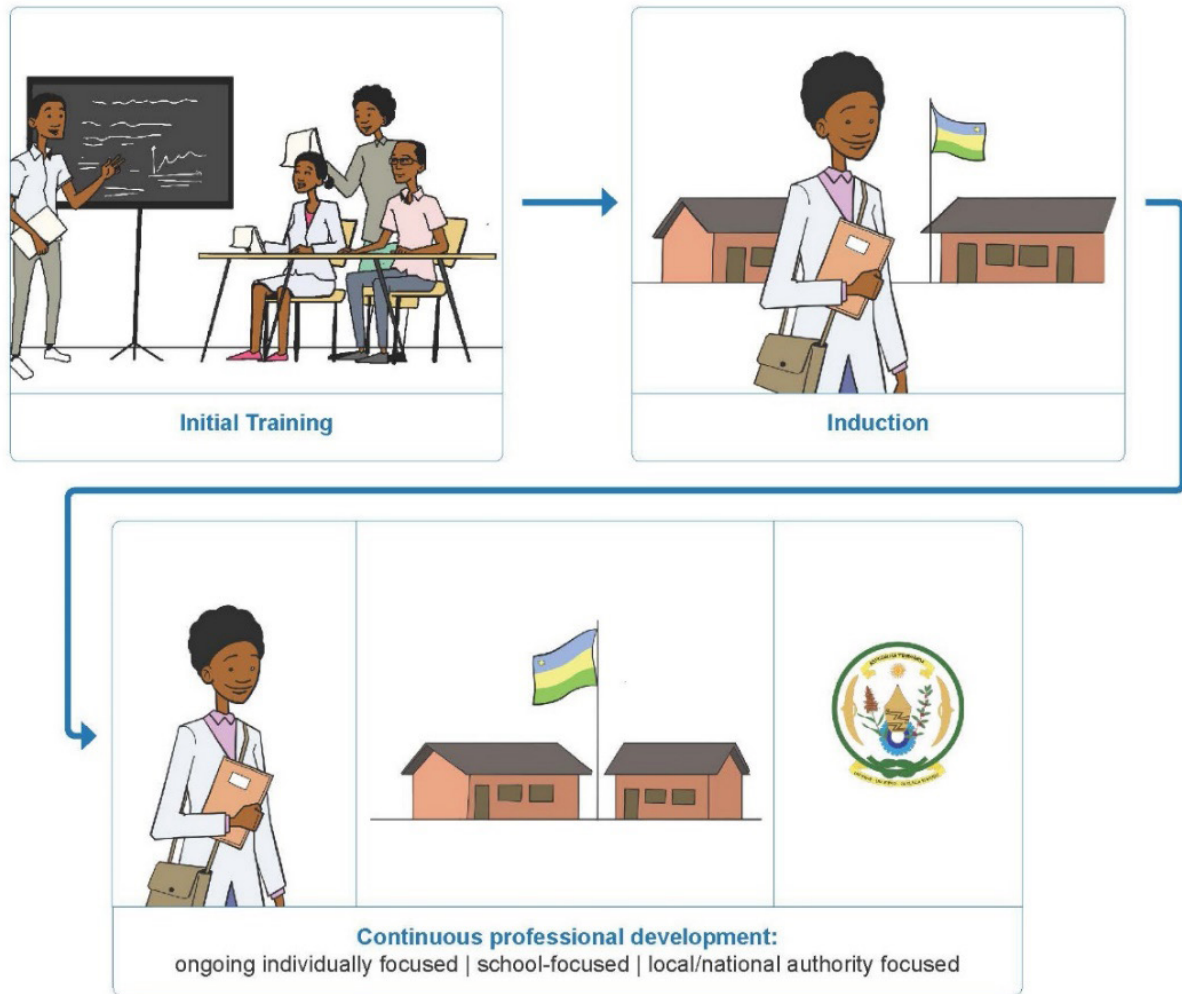
Figure 3: Teacher CPD continuum (adapted from Jones (2003) – Illustrated by VVOB Rwanda)

As shown in Figure 3, professional development can be initiated by teacher's own needs (individually focused), organizational needs (school focused) or institutional needs (local or national authority focused), but always with the intention to improve teaching and learning. A school leader could for example request all teachers to learn more about coaching skills with the purpose that they coach each other afterwards.

1.5 Characteristics of effective CPD

As a leader of CPD in your school, it is important to know what effective CPD is. Unfortunately, not all CPD that is organized for teachers is effective (Bertram, 2011; Cole, 2004; Ingvarson, Meiers, & Beavis, 2005). We will explore what makes CPD effective.

> ### *Activity 4*
>
> Write after the prompt below:
>
> > *The last professional development I recently participated in was (not) effective because …*
>
> Let your thoughts flow for a few minutes. Read your writing and highlight some keywords.

Evidence shows that teachers' professional development can have a positive impact on student performance and teachers' practice. Guskey (2003) writes that high-quality CPD is a central component in improving education. However, Cole (2004) writes that much teacher CPD is ineffective.

Outcomes of effective CPD

We call CPD effective when it results in demonstrable, desirable and sustained changes in competences among school staff:

- **Demonstrable change**: What has changed? Demonstrable change can be a change in behaviour, but can also be changes in thinking, knowledge (cognitive change) and attitudes (affective change). How can we tell? Do we see changes in classroom practice and at school level? This shows the need for monitoring and evaluation.

- **Sustainable change**: The change should be integrated in the school culture and organisation. A sustained change means that the change does not disappear after the CPD activity or after a few months. The sustainability of change can be improved when there is a strong supportive environment in the school and teachers are encouraged to try out new practices in their classrooms.

- **Desirable change**: The change needs to be desirable. People need to be aware,

informed and convinced that the change will contribute positively to the quality of teaching and learning. Not all changes are desirable, and the needs of individual teachers are not always the same as those from the school. Ultimately, for a change to be sustainable, it needs to be desirable by those who will implement it. They need to be ready and willing to implement the change.

Criteria for effective CPD

Activity 5

Think about following questions:

> *From your experience, what does effective CPD mean for you?*
>
> *What did you find effective CPD?*
>
> *Why was that CPD effective for you?*

Discuss with your neighbour. Afterwards, each pair shares one criterion that has not been mentioned before. In this way, a list of criteria of effective CPD will be constructed.

Below, we list criteria for effective CPD, based on educational research.

1. Team and school focused

Professional development and school development go hand in hand. Professional development can be initiated by individual needs, organisational needs (of the school) or institutional needs (of MINEDUC), but always with the intention to improve teaching and learning. A school could request some teachers to learn more about questioning techniques, so they can mentor and coach other teachers afterwards. Professional development that is focused on stimulating teachers in a school to work and learn together is more effective than CPD for every teacher separately (Hargreaves & Fullan, 2012).

Professional development might also be initiated by needs that are identified in policy documents or strategic plans such as the school's SIP. Needs analysis must therefore go beyond asking individual teachers "what they need". Also, note that "you don't know what you don't know", which means people may not always be aware of their needs. Therefore, asking people what they need should not be the only source of information to determine the CPD needs.

2. Process oriented

Learning is a process, not a once off event. Effective CPD should create opportunities for try-out (safe environment, time…) and for reporting, feedback and reflection. The learning activities are spaced in time to allow the learning to take ground and grow. This CPD programme is an example of a learning process. Since learning is a process, CPD should include time and attention for all steps between awareness and reflection on implementation (Figure 4).

Traditional ways of professional development often focus on creating awareness and building knowledge and understanding. By the time the workshop is over, the knowledge has not yet been translated into practice, nor have teachers had the opportunity to practice new knowledge and to reflect on the learning. Many trainers assume that knowledge of an innovation is sufficient to implement it, but this is not true! Effective CPD is more than only developing awareness and building knowledge and understanding. To create demonstrable and sustainable change, professional development needs to pay attention to all the components of the learning cycle, so also on translating knowledge into practice, practising new knowledge and creating opportunities to reflect. The reason why these stages are often neglected in CPD is that trainings and workshops are less suitable methods in these stages. More effective methods during these stages are coaching, mentoring, shadowing and working in Communities of Practice.
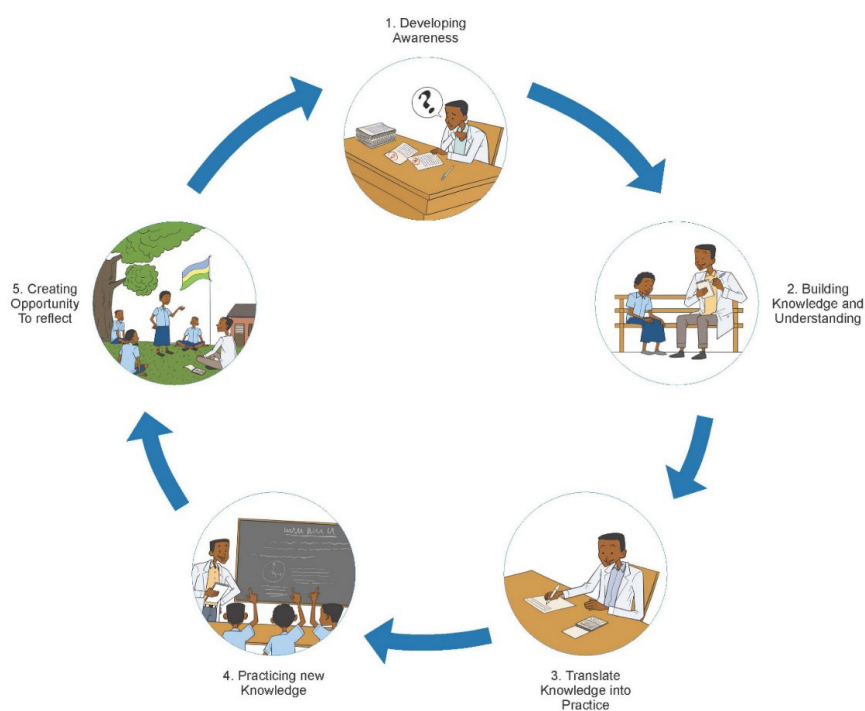
Figure 4: The Learning Cycle (Timperley, Wilson, Barrar, & Fung, 2007) – Illustrated by VVOB Rwanda

Effective professional development takes the learner from a stage of unconscious incompetence ("I wasn't aware that I could not do this", to a level of conscious incompetence ("I know I should do this, but I can't"), then to the level of conscious competence ("When I pay attention, I can actually do it") to ultimately reach the level of unconscious competence ("I do this right, almost automatically") (see Figure 5). Sustainable implementation requires that the person moves from comfort (ignorance) over insecurity (resistance) to confidence and security with the new practice (see Figure 5).
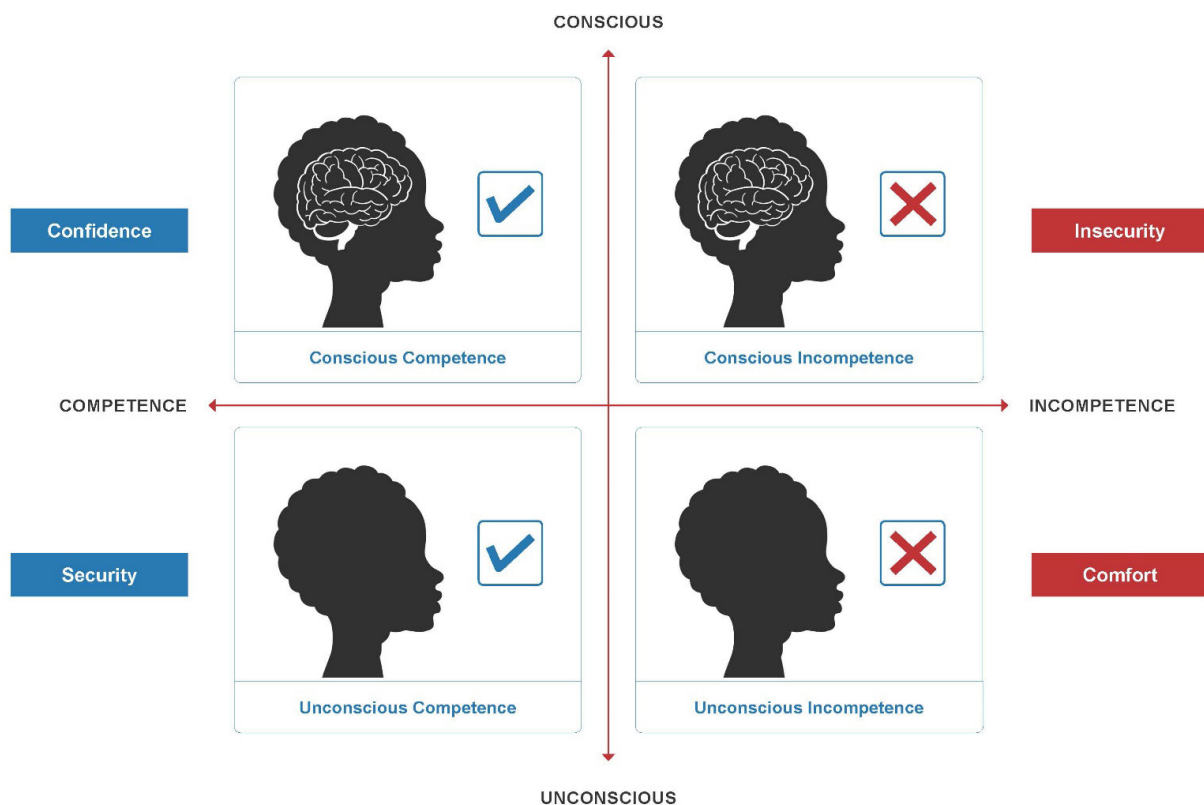
Figure 5: From unconscious to conscious learning (Howell & Fleishman, 1982)

For example, imagine a child that learns to swim. First, the child is not aware of what swimming entails, the moves, the techniques etc. (unconscious and incompetent). The child is comfortable, but he is not aware of swimming. You cannot worry about something you are not aware of. Next, he learns about swimming and how to do it, but he cannot yet swim (conscious and incompetent). The next step is that the child learns to swim. It is very focused on getting the moves right and in the correct order (conscious and competent). He acquires the confidence to swim. In the final stage, the child masters the technique of swimming. He doesn't need to think any more about the different moves, but practices them automatically (unconscious and incompetent). These 4 stages are a typical sequence in which we learn things. Through

practice, we can move from conscious to unconscious competence. Unconscious competence is much more durable than conscious competence. Can you think about another example?

3. Rooted in reflection

CPD is more than training of skills, it is practice informed by theory and evidence and vice versa. The starting point of professional development is individual, institutional (school) and/ or systemic (province, national) self-evaluation. Reflection means that you consciously and explicitly look back at your behaviour as a head teacher or teacher within the complex context of education. Reflection is a key part of the experiential learning cycle of Kolb (1984). In this cycle, reflection is the key stage between the analysis of evidence whether an intervention works and the planning stage. Reflection is about critically interpreting the evidence in connection to one's own practice.

4. Experiential

Effective CPD takes the context of participants into account. It builds on participants' experiences and addresses actual problems that participants experience in the classroom. It creates opportunities to try out what has been learnt and provides immediate feedback. It is important to give participants hands-on experiences (Kolb, 1984).

5. Focused

Effective CPD identifies specific objectives, targets and provides the content to achieve them. Not only the facilitator but also participants need to know exactly where they are going and why. CPD should be linked to the needs that are identified in the SIP. They should have an idea of the desired future (what do we want to reach?) and this future is clearly linked to improved teaching and learning and the impact on students.

6. Collaborative

CPD is more effective when it is done together with colleagues. The facilitator should not only present the topics to the participants but engage with them. Learning is a shared responsibility between facilitator and participant. The facilitator needs to encourage collaboration among participants. Research (OECD, 2013) found that teachers who collaborate regularly with their colleagues – teaching jointly in the same class, observing and providing feedback on each other's classes, engaging in joint activities across different classes and age groups, and taking

part in collaborative professional learning – report a greater sense of self-efficacy. Self-efficacy means that they feel more confident to do their work and have a higher self-esteem.

7. Differentiated

Effective CPD takes a variety of prior knowledge, preferences, contexts (such rural vs. urban), needs and mental models into account. Effective CPD uses suitable CPD strategies that allow participants to differentiate in content, process and assessment (Nicol, 2007). Give lecturing its place, but not more than that. Provide opportunities to engage with content and construct own understanding.

Professional life cycle of a teacher

Not all teachers need the same professional development at the same time. This is illustrated by the concept of the professional life cycle (Steffy & Wolfe, 2001). This means that teachers continuously engage in learning and that their learning needs evolve over the course of their careers. New teachers start in stage 1. Their main concern is to master the subject matter knowledge, get familiar with all the procedures and administration, and manage their class. Gradually, their focus shifts to the effectiveness of their teaching. They start looking for teaching approaches that result in better learning. They gradually develop expertise in selecting good combinations of technology, pedagogy and content knowledge (TPACK). When teachers reach the third stage of maturity, they have developed a strong expertise. Their professional development should be characterised by letting them explore new approaches, novel technologies or new areas of content knowledge. In the fourth and final stage, the concern widens from their own teaching to teaching and learning in the whole school and beyond. At this stage, professional development includes taking up roles as mentor or coach or get involved in the education system at the local or district level (see **Fout! Verwijzingsbron niet gevonden**).

Stage 1: Survival

From day one when teachers wonder whether teaching is the right job for them. Their thoughts are dominated by thinking about; classroom management, visits by supervisors, professional competence, and acceptance by colleagues.

Stage 2: Consolidation

At this stage the teacher's focus moves from survival to students' learning. Now the skills from the previous stage are thoughtfully applied in the class. Teachers are able to analyse learning, social or classroom management problems in light of individual student differences and needs. Teachers at this stage face a decision, stay at stage 2 (comfortable in classroom but exploring little else) or move to stage 3

Stage 3: Renewal

Once having teaching skills and understanding of student development have been mastered, and several years of teaching experience have been completed, classroom routines become comforting or boring. Teachers seek new approaches as they participate in regional or national professional development programs and visit successful colleagues to seek new ideas for teaching and learning

Stage 4: Maturity

At this stage teachers move beyond classroom concerns and seek greater professional perspective. The teacher considers deeper and more abstract questions about broad educational issues; educational philosophy, ways to strengthen the teaching profession, and ideas that can enhance education throughout the school region or nation. Regrettably, many teachers never reach this stage

Figure 6: Stages of teacher development (Steffy & Wolfe, 2001) – Illustrated by VVOB Rwanda

Figure 6 shows that teachers have different professional development needs depending on which stage in their professional life cycle there are in. Starting teachers need concrete support in pedagogical content knowledge (how to teach the subject), class management and subject matter knowledge. They also need to feel welcome at the school, time, opportunities to build up routines and a mentor who can give support. More experienced teachers benefit from professional development that helps them discover and try out new approaches to increase their impact on their learners. Teachers who have achieved expert or mastery level have again different CPD needs. They want to be useful to others within their school or in neighbouring schools. By helping other teachers, they also gain skills and question their own practice. As an SSL, it is important to realize that teachers have different CPD needs and that a one-size-fits-all approach is not suitable.

Activity 6

Think individually about the questions below. After a few minutes, exchange your ideas with your neighbour.

- *Which criteria of effective CPD can your school improve upon?*

- *What can you do to make CPD in your school more effective?*

8. Producing and constructing

It is important to realise that knowledge and skills are not passed on by the teacher to the learners, but they are acquired by participants. It is not because you teach something, that you students have learned it. No one can do the learning for them. Participants need to actively work on a product to ground the learning. Learning takes place through a production process. This also provides motivation.

9. Ownership

Effective CPD involves participants in such way that they take charge of one's own learning. Participants develop and implement because they are owners of the process. It is important to link this energy with a vision and strategic plan as this will further motivate participants.

10. Integrated

Effective CPD links with existing knowledge, skills and structures. It provides transferable knowledge, skills and structures and is integrated in the School Improvement Plan.

Section 2: Rwandan Education Policies and Stakeholders for CPD Programmes

Activity 7

Think about following questions individually. Afterwards, discuss your ideas with your neighbour:

- *What policies and official documents exist that are related to CPD for teachers in Rwanda? What do they say about CPD programmes?*

- *Who are the key stakeholders in CPD for teachers?*

2.1 Rwandan education policies and documents

There are various policies, documents, plans and programmes that call for CPD of teachers. To list but a few:

Rwanda Vision 2020

A pillar of Rwanda's Vision 2020 is to have skilled people for the socio-economic development of the country (MINECOFIN, 2012). This pillar underlines the importance of education and training for producing citizens who have the knowledge, skills and attitudes that enable them to be entrepreneurs in their own learning, thinking and doing. In this perspective, improving the quality of education and training is one of the overarching goals of the Government of Rwanda.

Education Sector Strategic Plan 2018/2019 – 2022/2023 (MINEDUC, 2017)

This strategic plan is structured around nine strategic priorities:

1. Enhanced quality of teaching and learning outcomes that are relevant to Rwanda's social and economic development;

2. Strengthened continuous professional development and management of teachers across all levels of education in Rwanda;

3. Strengthened STEM across all levels of education in Rwanda to increase the relevance of education;

4. Enhanced use of ICT in teaching and learning to support the improvement of quality across all levels of education in Rwanda;

5. Increased access to education programmes especially at pre-primary, TVET and higher education levels in Rwanda;

6. Strengthened modern school infrastructure and facilities across all levels of education in Rwanda;

7. Equitable opportunities for all Rwandan children and young people at all levels of education;

8. More innovative and responsive research and development to community challenges; and

9. Strengthened governance and accountability across all levels of education in Rwanda (p7).

Priorities 2 and 9 have a particular focus on CPD:

- **Strengthened continuous professional development and management of teachers across all levels of education in Rwanda**. This priority plans to introduce a comprehensive cluster and school-based CPD for all categories of teachers. The new approach of CPD for teachers will focus on enhancing the professional competences of the teachers required for delivering the new competence-based curriculum. The new curriculum is based on an active, constructivist approach to learning. Therefore, the key components of the CPD for teachers will include a focus on early grade literacy and numeracy; active learning and practicing of continuous assessment. A sub-component of this strategic priority is also to improve teacher management practices. This includes the deployment, staffing norms, transfers, retention and incentivisation strategies (p40);

- **Strengthened governance and accountability across all levels of education in Rwanda.** This priority stipulates that head teachers will be trained and supported in school leadership to equip them with sufficient skills so that they can provide CPD   to their teaching staff and plan for school improvement and development. Head teachers also need to be able to identify strengths and weaknesses of their teachers and provide support and advice on pedagogy, subject matter, inclusion and other cross-cutting issues. Therefore, districts will need to prioritise the oversight of schools to foster a continuous ethos of improvement in

learning outcomes across all schools. This will include the school-based CPD of teachers through the establishment of district CPD committees. It is expected that stakeholders at all levels will be empowered to take responsibility for accountability, including community involvement in monitoring (pp.56-57).

Teacher Development and Management Framework (draft version, REB, 2017)

This framework states that teacher development (including initial teacher education and continuous professional development) has received much attention for its potential to improve educational quality. The assumption is that teacher development improves teaching, which increases children's learning engagement and achievement. Therefore, improving teacher development is a priority for the Rwandan government, civil society groups and development partners (p.6).

Teacher Development and Management Policy (MINEDUC, 2015)

This policy specifies that teachers will be encouraged to improve their knowledge skills, competences and qualifications upon completion of their initial training through a structured programme of CPD and distance learning. Professional support will be provided through professional development opportunities offered within the school, and by the teacher education institutions (in-service, outreach). The teacher support work of stakeholders including professional associations, parents, and NGOs, will complement the state provision of professional support within the parameters laid down in a national framework for CPD.

Three out of the six (6) policy priorities (PP) are directly related to CPD (3, 4 and 5):

- **PP3**: Introduce a high-quality induction year for newly qualified teachers, and other than in exceptional circumstances, require all teachers to be 'licensed' following the successful completion of their induction period;

- **PP4:** Require all teachers to undertake and record CPD, and ensure that an effective system for appraisal, mentoring, support, assessment, and re-licensing for all teachers is put in place to support it;

- **PP5**: Enhance school leadership quality and training;

Furthermore, this policy seeks to further professionalize teaching in Rwanda, based on "*the recognition of teaching as a distinct and valued profession within the public service, governed*

by its own code of professional ethics, and having clear pathways for professional and personal development".

Four principles of teacher development and management reflected in the TDM policy are;

- teacher development is a career long process;

- every teacher has diverse needs to be addressed;

- teacher development and management are a shared responsibility among teachers and employers at different levels;

- teacher development and management draw on all stakeholders' creativity, proactivity, flexibility and resourceful planning.

School Based Mentor Program Framework (REB, 2016)

This framework underlines that teachers will need to learn new methodologies in order to increase the quality of their teaching, (and therefore the quality of learning) that takes place in their schools. Improving the quality of teaching cannot happen in one training session, but instead will happen throughout a teacher's career. This ongoing process of improving teachers' knowledge, skills, attitudes and values at school after initial training is known as CPD. In this framework CPD will have several forms at the school and sector level. For example, School Based In-service training (SBI), Communities of Practice (CoPs), peer lesson observations, model lessons, self-study, formal training from REB and other courses and workshops.

2.2 Stakeholders involved in CPD

CPD in schools is not the only responsibility of head teachers. REB's key strategy to deliver CPD at school level is through the School-based Mentoring Program (SBMP) (REB, 2016)This framework describes the responsibilities of all stakeholders in relation to CPD. Based on those stakeholders' responsibilities, interviews with SEOs and focus group discussions with teachers, NTs, parents and head teachers, specific responsibilities for the induction of NTs have been identified. Table 2 summarizes the key responsibilities for each stakeholder, including the SSL.

Table 2: Responsibilities of stakeholders for CPD

Responsibilities in SBMPF	Responsibilities in induction of NTs
Teachers	
▪ Keep personal record of training received.	▪ Provide support and guidance through CoPs.
▪ Actively Participate in CPD -training/ sharing good practice with peers.	▪ Conduct peer lesson observations and model lessons.
▪ Implement new teaching methods learned in training.	
▪ Seek support from peers, SSLs and SBMs when needed.	
▪ Improve skills in English as medium of instruction.	
▪ Monitor learners' progress through formative and summative assessment.	
School Subject Leaders	
▪ Provide suggested CPD Action Plan for the term supported by SBM to Deputy HT.	▪ Experts in teaching.
▪ Report CPD activities conducted during the term to Deputy HT.	▪ Are informed of innovations and stimulate learning from each other by organizing team teaching, lesson observations and discussions on good practices.
▪ Work with SBM to assess CPD needs, especially for subject matter knowledge.	▪ Give special attention to NTs teaching the same subject. They express belief in their professional growth and stimulate to try out new approaches.
▪ Collaborate with SBM to facilitate CPD sessions for their subjects.	
▪ Work with SBM to help improve subject specific English for teachers (e.g. vocabulary)	▪ Support NTs in lesson planning and coach them to improve their teaching.
▪ Support teachers to develop teaching and learning materials, give model lessons, develop teaching aids.	▪ Give special attention to improve the language capacities of NTs in teaching.
▪ Conduct model lessons under the direction of Deputy HT.	▪ Stay in contact with the SBM for effective mentoring of NTs.

School Based Mentors as a …
coach in English: ▪ Assist all teachers to improve the quality of their English for use as a language of instruction. ▪ Facilitate teachers' use of English self-study materials to assist peers to improve their English. **expert in teaching and learning**: ▪ Are informed and inspired by innovations in education. ▪ Show personal leadership in professional development, which makes them role models for other teachers. **guide and organiser of school-based CPD**: ▪ Promote the development of teachers to improve learning and to develop the school as a learning organisation. ▪ Organise CPD in the school and set up CoPs to share and encourage good practices. ▪ Provide support to NTs to facilitate their integration in the school community and to support their growth as a teacher. Therefore, SBMs connect NTs to colleagues, who can take an active role in mentoring NTs. **promoter of reflective practice**: ▪ Stimulate reflection and facilitate giving of feedback on the quality of teaching and learning at school. ▪ Encourage teachers to reflect on their teaching. Teachers can improve their teaching practices by focusing on building on strengths and overcoming weaknesses.

Deputy Head Teachers	
▪ Supervise and support the work of SBM and SSLs. ▪ Approve the CPD plan submitted by SBM and SSLs, and forward it to the HT. ▪ Assist SBMs to find resources for CPD activities. ▪ Assist the HT in preparing and analysing monthly reports. ▪ Conduct lesson observations, CPD meetings, model lessons and trainings as part of the school's CPD plan. ▪ Teach classes (6 periods or 340 minutes per week) to allow SBM a reduced teaching load.	▪ Give NTs a warm welcome and introduce them to the SBM, SSLs, the colleagues, the parents and the children. ▪ Collaborate with SBM and SSLs and the school community to demonstrate their belief in the capacity and growth of the NTs.

Head Teachers	
- Organise academic staff to select a mentor - Make time for CPD and mentoring activities on the school timetable - Discuss CPD training needs of school staff - Work together with SBM, teachers and Deputy Head Teacher/ DOS to develop a CPD plan for school - Work with Deputy HT to supervise SBM activities - Monitor SBM and CPD activities and send reports to SEO each term - Motivate teachers to improve quality of education in their school - Provide necessary resources Teach classes (6 periods or 340 minutes per week) to allow SBM reduced load	- Give NTs a warm welcome and present them to the SBM, SSLs, the colleagues, the parents and the children - Collaborate with SBM and SSLs and the whole school community to demonstrate their belief in the capacity and growth of the NTs
Sector Education Officers	
- Communicate information from district to school and vice versa - Regularly collaborate with Head Teachers to monitor SBM work - Report on CPD activities - Co-ordinate and implement SBMP and CPD activities at the sector level: e.g. sector level communities of practice for peer learning between SBMs and teachers	- Ensure that school leaders are focused on the professional development of NTs by effectively implementing an induction programme - Are involved and take their responsibility in the recruitment of teachers - Pay attention to NTs wellbeing by advocating for timely payment of salaries and guaranteeing medical insurance by the district

District Directors of Education & District Education Officers	
- Ensure that every public school in the district has a SBM - Through DCC, select qualified Mentor Trainers based on REB guidelines - Facilitate and support SBMP and CPD activities in the district - Ensure every school has resources necessary to carry out effective SBMP and CPD activities	- are responsible for facilitating, organizing and scheduling the process of recruitment and for the deployment of the NTs - ensure quality of the NTs' induction programme - are attentive to NTs well-being i.e. by paying the teachers' salaries on time, supporting accommodation and guaranteeing health insurance - coordinate all educational activities at district level in relation to NTs through the **DCC**, District Continuous Professional Development Committee
Development Partners	
- Support trainings for SBMs and SSLs, school leadership, district education stakeholders - Assist in developing CoPs within and between schools. - Provide financial and technical support for the development of teaching and learning materials.	
University of Rwanda College of Education (UR-CE)	
- Partner with REB to provide CPD Diploma and Certificate Programmes. - Oversee monitoring and evaluation for the Diploma and Certificate Programmes and deliver certificates.	NT mentors from URCE: - Monitor the performance of NTs during their first year of teaching (induction period). - Stimulate reflection and give feedback (on teaching activities). - Set up trainings for SBMs and SSLs. - Monitor the induction process of NTs.

Rwanda Education Board	
- Produce and distribute training materials for teachers. - Coordinate and plan training of SBMs through Inspectors, support and collaborate with schools in monitoring of the SBMP. - Collect and analyse monitoring reports from districts. - Provide training to district, sector, and school education leaders to enable them to take up their roles and responsibilities.	Support and monitor induction of NTs through: - development of a policy and long-term strategy for strengthening the induction system for NTs - development of competence frameworks for teachers based on professional standards - development of operational manuals on various topics related to effective teaching and learning.
TTC tutors as NT mentors	
	- Monitor the performance of NTs during their first year of teaching (induction period). - Stimulate reflection and give feedback in an appreciative way (on teaching activities). - Set up trainings for SBMs and SSLs on mentoring with a focus on reflective practice and coaching techniques. - Monitor the induction process of NTs.

Source: REB, 2016

UNIT 2: COACHING AND MENTORING

Introduction

In the previous unit, we have learned that there are many methods of CPD. This unit explores coaching and mentoring as two key forms of CPD. In this unit, you will develop the skills for coaching and mentoring effectively fellow teachers. It also introduces the concept of induction for providing specific support to new teachers.

Unit learning outcomes

Upon completion of this unit, you will be able to

- explain the rationale behind coaching and mentoring in education;

- conduct coaching conversations by applying the GRROW model;

- explain the concept of induction of new teachers;

- identify stakeholders involved in teacher induction and their respective role;

- explore the importance of teacher induction;

- establish strategies for effective teacher induction;

- appreciate how coaching and mentoring can contribute to a conducive learning environment.

Section 1: Defining and Understanding Coaching and Mentoring

1.1 Introduction

Coaching and mentoring are often used together, and their meanings are mixed. The boundary between them is not always strict and often the same people in schools carry out or participate in both processes (Lofthouse, Leat, & Towler, 2011). This section introduces different definitions of coaching and mentoring and explores the roles of SSLs in supporting fellow teachers towards the achievement of learning outcomes.

1.2 Understanding Coaching and Mentoring

Activity 8

Individually, write down what you think is meant with mentoring and coaching. Post it on the wall for the other members to read. Discover the definitions of other participants through a gallery walk.

Coaching and mentoring are both activities that aim to support individual learning and development. Both imply a relationship where the coach or mentor supports his/her coachee or mentee in his/her personal and professional growth.

Coaching is an ongoing professional learning relationship in which an educator provides support to one or a group of educators in the process to understand and solve problems by the educators themselves with the aim to improve their performance or practices in their profession. Coaching is done through initial and follow up conversations. Coaching is a structured way of working through conversations. It builds on a shared understanding of effective teaching and learning. The role of a coach is to help coachees to find solutions for the challenges they face.

Mentoring is a time-bound professional relationship in which an experienced educator supports one or more less experienced teachers with the purpose to acquire good practices and grow in the profession. It also builds on a shared understanding of effective teaching and learning. Whereas coaching can concern all categories of teachers, beginning and senior

teachers, mentoring is often used in relation to new teachers and mentors are experienced teachers.

In Rwanda, mentorship responsibility is assigned to the SBM, DHT in Charge of Studies and the SSL.

Activity 9

In your daily practice, are you a coach, a mentor, a coachee or a mentee? Give concrete examples of your role(s).

Mentoring and coaching in the Rwandan context

In Rwanda, mentorship applies to pre- and in-service teacher education. In Teacher Training Colleges (TTC) and UR-CE, students receive support from their teachers, tutors or lecturers, and from school teachers during their internship. Mentoring in pre- and in-service education aims to support the grow process of the mentee(s). It may also take place to address underperformance.

The main idea of mentoring is that support is provided from a more experienced educator to one or a group of education practitioner(s). For the new education practitioner(s) the main purpose of mentoring is to familiarise with the new work environment and to grow in the profession. In addition, the experienced educator and the new one(s) share the same area of focus. Moreover, showing interest and believing in the potential of the mentee is crucial to growth.

1.3 Growth Mindset

Coaching is a way to support someone in his growth and enthusiasm for learning. It starts from a positive mindset, focusing on what is possible, rather than what is going wrong. Therefore, believing in the potential of the coachee to improve and learn is a key attitude for a successful coach. Carol Dweck calls this a growth mindset, as opposed to a fixed mindset (Dweck, 2006). Having a fixed mindset means that you believe that someone's ability is innate (you are born with it) and unchangeable.

Figure 7: Growth Mindset and Fixed Mindset (Dweck, 2006)

A recent meta-analysis found only small effects of the growth mindset on learning outcomes (Sisk, Burgoyne, Sun, Butler, & Macnamara, 2018). However, the study recognized that students with low socioeconomic status or who are academically at risk might benefit more from mindset interventions. They also note that the intervention is quite small and does not cost much, so even a small effect is valuable.

Having a growth mindset does not mean giving only praise and hiding "the long and difficult journey" in the learning process (Dweck, 2015). It is really about setting high expectations for all learners and teachers and believing that, with hard work, all can achieve great results. As Dweck (2015)wrote: *"The growth mindset was intended to help close achievement gaps, not hide them. It is about telling the truth about a student's current achievement and then, together, doing something about it, helping him or her become smarter."*

1.4 The GRROW Coaching Model

Effective coaching requires structuring and shaping coaching conversations. There are many models that can be used for this. A model that is often used in school coaching is the **GRROW model**. This model builds on a model which was originally described by Whitmore (1994) and Landsberg (2015). GROWW is an acronym for Goal, Reality, Resources, Opportunity and Will (Figure 8):
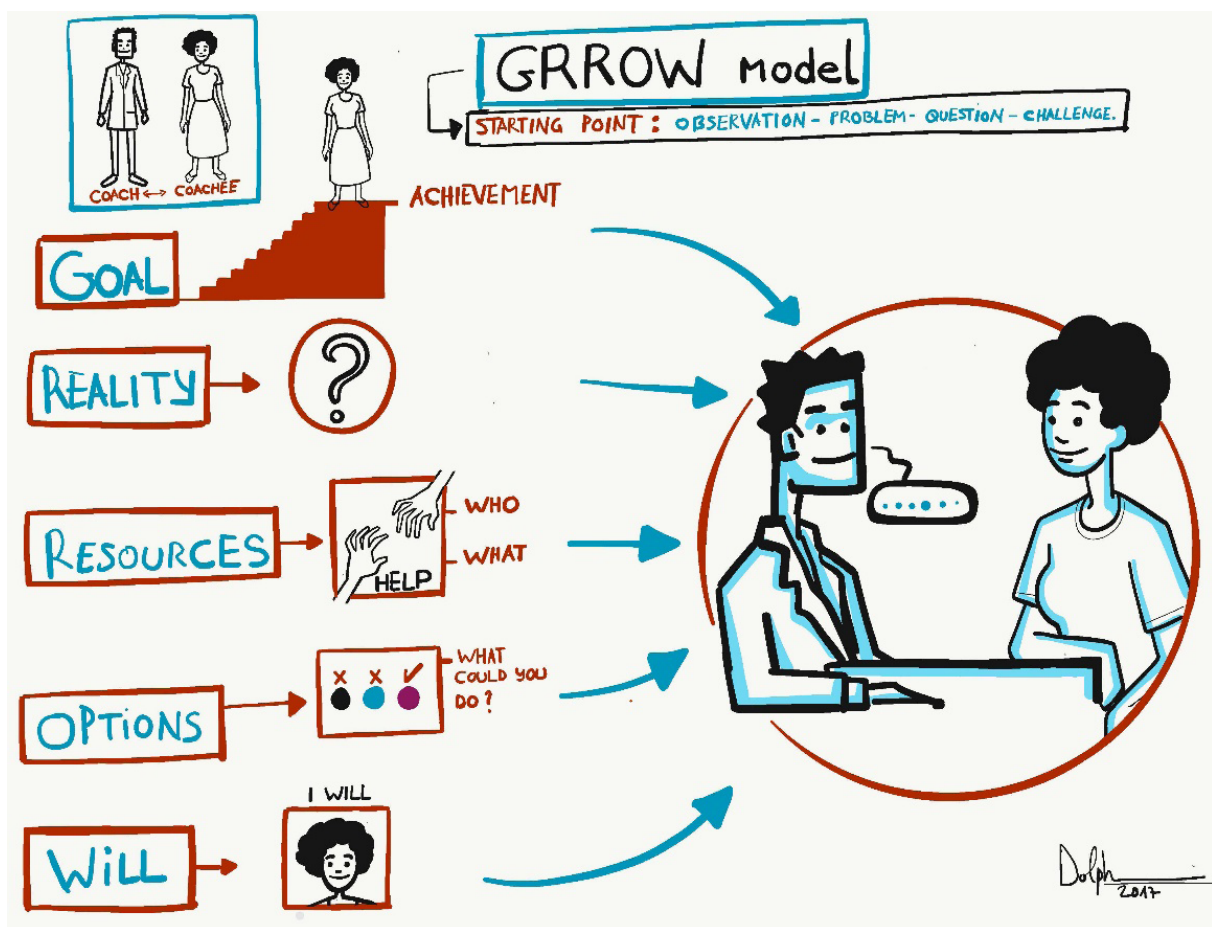
Figure 8: GRROW model (Clement, 2017; Whitmore, 1994) – Illustrated by VVOB Rwanda

The GRROW model is not a fixed structure that you strictly need to follow during a coaching conversation. Clement (2017) prefers to call it a game in five steps, because the coaching process is more like a game, or a dance with 5 different elements, rather than a rigid structure to follow.

Like most coaching models, the GRROW model assumes that the coach is not necessarily an expert in the coachee's situation. The coach acts as a facilitator in helping the coachee to choose the best option. A coach can also give advice, but he/she always needs to relate it to the coachee. It is the coachee who learns and comes to solutions, rather than the coach telling the coachee what to do.

The role of the coach is to stimulate learning by the coachee by asking the right questions.

The **GRROW model** consists of five steps (Clement, 2017; Ramakrishnan, 2013).

1. Goal – explore the objective, the desired result: what do you want to achieve?

First, the coach and the coachee look at the challenge the coachee faces. This can be a question, or a problem related to a specific situation. Questions could be, "How can I use more experiments in my lessons?", "How can I change this misconception about fractions that students have", or "How can I involve my students more in my lessons?" A situation refers to the practice of the coachee where he/she was challenged. For example, the desire to use other resources to make sure that all students reach the goals of a given lesson. Another example of a situation could be the ambition to avoid an irritated reaction when a student is not behaving well. In either scenario, the coachee struggles with something and doesn't know what to do. Therefore, he/she needs to identify the behaviour he/she wants to change and then structure this change as a goal to achieve. It is always about the coachee's behaviour himself/herself. Not someone else's behaviour. As a coach you need to find out what the coachee really wants. It is important to keep in mind that a goal is not the same as a duty or task. Sometimes it is good to go back to the reality of the situation to understand what the goal is about or to find out what exactly the goal is. But at the end the coach needs to invite the coachee to look forward to the goal. Coaching is not about complaining but looking at the future and finding a solution. It is about growing, focusing on possibilities.

A goal needs to be SMART and positively stated (not *'I don't want to be or to do this or that anymore'* but *'I'd like this or that')*. SMART stands for Specific, Measurable, Actionable or Achievable, Realistic, Time-bound.

Some **questions** to help the coachee to find a goal

- What would you like to accomplish?

- What do you want to change or to do differently?

- What would the benefits be if you achieved this goal?

- What outcome would be ideal?

2. Reality – explore the problem, the current reality and its context: what is happening now?

In this second phase the coachee describes his or her current reality. Too often, people try to solve a problem or reach a goal without fully considering their starting point, and often they are missing some information that they need to reach their goal effectively. It is in the reality phase that the questions should most often be initiated by the interrogatives "what," "when," "where," "who," and "how." It's important that the coach does this in a not judgmental way, to ensure honesty and accuracy. The purpose of those questions is to help the coachee to bring the situation into sharper focus in his/her own mind and to identify starting points for change. This "reflection" is a way of describing the situation and mapping out its underlying realities and context. But as a coach, don't spend too much time in exploring the reality. It is not the purpose to make an in-depth analysis of the situation, but to identify possible solutions.

Some **questions** to explore the reality are:

- What progress have you made so far in dealing with the problem?

- What strategies have you tried already?

- What bothers you the most?

- How do others experience the problem?

- What is working well?

- How are things going at the moment?

- Where do you think that things are going wrong?

- How does that all fit together?

- What is missing?

This last question is usually much more revealing than the question "What is wrong?" The answer of the coachee may point you towards possible options and resources.

3. Resources – explore the available talents, skills and means: Who or what can help?

In this phase the coachee is stimulated to think about available resources that could help in achieving the goal. Many people find it difficult to ask for help. The coach needs to stimulate the coachee to ask for help; to look at possibilities where the coachee can find help; to make these resources available. A coach is not expected to take actions instead of the coachee. A coach always encourages the coachee to do it on his/her own.

The basic question in this phase is: what resources can you (coachee) use to solve your problem? This question can be asked in many ways:

- What could help you?

- Where could you find this help?

- Who could help you?

- What can be helpful for you?

- Where can you find information?

- How did/would your colleagues react in this situation?

4. Options – explore what can help the coachee to solve his/her problem and reach his/her goal: What could you do?

The purpose of this stage is not to find the "right" answer but to develop a list of possible solutions. The quantity of options is more important at this stage than the quality of the options. It is from this broad range of creative possibilities that specific action steps will be selected. The coach needs to create an environment in which participants feel safe enough to express their thoughts and ideas without fear for judgement from the coach or others. Once a comprehensive list is prepared, the *Will* phase of coaching can be simple, selecting the

best from the list. However, in complex cases, it may be necessary to re-examine the list by analysing the costs and benefits of each option.

Questions in this phase include:

- *What steps can you take?*

- *Can you think of an original approach to this situation?*

- *What are the options?*

- *What do you need to stop doing in order to achieve this goal?*

- What do you think you need to do to get a better result (or closer to your goal)?

- What else could you do?

5. Will –take decisions and agree on actions: What will you do?

The purpose of the final phase of the coaching sequence is to invite the coachee to make a choice; to decide which options are most likely to help reaching the goal, and to transform this in a concrete plan of action. It is important that the coachee formulates the plan. As coach, you need to hear that the coachee is sincere and committed to the actions. The coaching conversation should end with a specific plan.

Useful **questions** include:

- *What will you do and when?*

- *Will this action meet your goal?*

- *What could stop you moving forward? How will you overcome this?*

- *How can you keep yourself motivated?*

Finally, the coach and the coachee have to decide on a date to review the coachee's progress. This will provide accountability and allow to change the approach if the plan isn't working.

To conclude, the purpose of a model is to remind you about what is important in a coaching conversation. The order of the different steps is not fixed. For example, in some conversations a coachee can start by raising a problem which needs to be explored before an effective goal can be set. It's also not necessary to follow every step. The main thing is to focus on the goal of your coachee and to show interest.

Activity 10

In this activity, you will practice coaching conversations using the GRROW model.

Step 1: individually (5 min.):

▪ Think about a concrete problem or challenge you are facing now in your work.

▪ Write it down.

Step 2 (in groups of 3) (10 min.):

▪ decide on the roles of each participant: coach – coachee – observer.

▪ Coachee: tell your story.

▪ Coach: train the five steps of GRROW & respect moments of silence.

▪ Observer: make notes and do not make eye-contact nor interrupt.

Step 3: Feedback on the coaching conversation (10 min.)

▪ Questions to be asked by the observer to the coach: What went well? What was difficult? Could you keep focus?

▪ Questions to be asked by the observer to the coachee: Did you feel understood? What have you felt as a good intervention?

▪ Feedback of the observer to the coach based on following questions: Did the coach explore well the situation? Did the coach use the 5 steps of the model? Which key skills did the coach use?

▪ **Switch roles** and repeat steps 2 and 3.

Section 2: Skills for Effective Coaching and Mentoring

2.1 Introduction

In the previous section we discussed the importance of structuring your coaching conversations. But this is not enough. Coaching starts from a strong belief in the ability of the coachee to grow and deal with problem situations in a new and better manner. Moreover, to coach well, one needs to possess certain skills to facilitate conversations. This section describes the seven basic skills of the GRROW model for effective coaching (Clement, 2017).

2.2. Seven Skills of GRROW Model

Coaching can only become an inspirational process if it is built on a foundation of seven skills: explore, appreciate and reinforce, confront and stay connected, challenge, inspire, allow and give space, relax and keep your sense of humour. These skills are common, everyday skills, present in all of us, but not always easy to put into practice.

> ### Activity 11
>
> What skills should a good coach possess? Agree on the most important skills.

1. Explore

A key skill of a coach is the ability to help others to explore their situation. Coach and coachee explore the origins and nature of the challenge. They discover together the key questions. They listen actively to the other person's comments and look carefully at the topic under discussion. They explore the circumstances, the possibilities, the expectations and wishes.

The basic attitude of a coach should be: "I am curious" (Clement, 2017, p. 30). Exploring is a skill which can be used at almost any point in a conversation. It's an important lever for learning. True learning usually has its roots in careful exploration (Clement, 2017, pp. 30–31). A pitfall for every coach is the tendency to immediately try and offer their own solution to the problem. The coach is there to guide and stimulate the coachee's own learning process, not to provide answers to all his problems (Clement, 2017).

Key elements in the exploring process are active listening and questioning. Those two concepts are described below.

Active listening

Activity 12

Think individually about the following question. After a few minutes, discuss your ideas with your neighbour.

How can you recognize when someone is actively listening?

Active listening is an essential part of a constructive conversation. You need to listen intently to what your coachee is saying and to how she is saying things. So, you listen to the pitch, tone and rhythm of your coachee's talk. In addition, you need to be interested in what your coachee is *not* saying because people don't always say everything that is happening. Therefore, it is important that you listen for subtle changes in voice, avoidance of questions or a change in subject. So, let your coachee know what you are really hearing and ask if there is something more she wants to say.

The **essence of active listening** is your ability to:

1. Listen attentively and remove all distractions: give your coachee your complete attention. Avoid interruptions, distracting behaviour and keep anything distracting out of view. Phones can be a distraction, so make sure that you will not be disturbed by your phone;

2. Paraphrase or give feedback that you have understood correctly: test your understanding by summarising or paraphrasing what you have heard before you respond. It is important, however, to only paraphrase major points in the conversation. Summarising or paraphrasing is not only to prove that you have been listening attentively, but it is also part of the process by which coach and coachee create a mutual understanding (Clement, 2017);

3. Check perceptions and acknowledge feelings. This is about what your coachee expresses through the tone of the voice. As a coach you can easily miss many of the emotional dimensions of a conversation if you are not listening to what is not being said. Feelings

will help you to sort out information, organize it, and use it effectively as you shape and share relevant feedback. Furthermore, give your coachee the opportunity to confirm or disagree with your reflections on his/her feelings.

4. Acknowledge what the person is saying with verbal and nonverbal responses. Respond with "yes" "yes," "really?", "mmh", "OK" or "I see" and make appropriate eye contact (REB-VVOB, 2016). This demonstrates to your coachee that you are following what he/she is saying. You need to listen carefully to know when to use those cues.

Active listening does not mean that you have to agree with everything the coachee says. It can be a challenge to listen to and explore someone's situation when you are not in agreement with them. In that case, you still need to try to understand what the coachee is thinking and feeling. What is she experiencing? What is her perspective? When you don't agree with your coachee, it is best to say so. In such case, it is good to say that you have a different opinion, while at the same time show that you are interested to learn more about the coachee's viewpoint. We call this a **multiple message**. For example, "I don't share your opinion, even so, I am interested in your conclusions and how you reached them. Tell me about it…" (Clement, 2017, p. 38). This opens the way for real discussion which also makes it easier to listen actively. Comparing and evaluating different points of view will enable you to reach clearer conclusions about the situation.

In addition to those skills, you should also be emphatic and **non-judgmental**. When you value your coachee and accept his/her feelings you will be able to empathise more. Ultimately your judgements and opinions are about yourself and your own life journey. Active listening requires you to put your own concerns, attitudes and ideas to one side and focusing on those of your coachee. This demonstrates the coachee that you are giving her undivided attention. Therefore, it is essential as a coach that you allow your coachee to present the whole picture so that she shows the level of her understanding and the extent of her ideas on how to address the issue facing her. In other words, as a coach you need to make sure you don't rush in with suggestions and solutions.

As an SSL, you need to guide your colleagues to reflect on their teaching. By allowing several seconds of **silence** before asking a question or giving feedback, you will ensure that your coachee has said all she wants to. Moments of silence are moments of thinking. Moreover, active listening will enable you to give reasoned and constructive feedback during the coaching process. But while listening is an essential part of coaching, you don't need to keep listening

when a coachee gets stuck in her dilemmas. Skilful interruption can help your coachee to move out of distress. So, this is not a lack of respect but showing you are interested and focused on the goal.

Asking questions

Asking questions is a key instrument in the process of exploring. It allows you to explore problems and goals. It elicits your coachee's ideas of how to address the challenge he is facing and possible means by which it might be addressed. Questioning is important to get a full understanding of the situation and the challenge. Don't allow a first answer from the coachee to pass by unchallenged (Clement, 2017). There are two common types of questions you can use. They are different in character and usage: closed and open questions.

Closed Questions

There are two types of closed questions. A first type is a question that can be answered with either a single word or a short phrase. So, 'How old are you?' and 'Where do you live?' are closed questions. Another type of closed question is a question that can be answered with either 'yes' or 'no'. 'Are you happy?' and 'Is Kigali the capital of Rwanda?' are closed questions. REB defines closed questions as questions that have short, fixed answers.

Closed questions stimulate focus and clarity.

Closed questions stimulate focus and clarity. Some examples of good closed questions in a coaching conversation:

- Do you agree with that?

- What gets your preference, this one or that one?

Can you imagine yourself doing this? (Clement, 2017, p. 44)

Open Questions

Open questions invite the coachee to give a descriptive answer. REB defines an open question as a question that has more than one answer and can produce a lot of information.

Open questions have the following characteristics:

- They ask the coachee to think and reflect;

- They ask for opinions and feelings of the coachee;

- They hand control of the conversation to the coachee.

Open questions begin usually with what, why, when, where, who, how? Keep in mind that why-questions may be counterproductive. The word "why" seems to trigger our self-justificatory defence mechanisms. This is usually related to the manner and tone in which "why" questions are asked. A good alternative is a question that invites the coachee to describe, rather than forcing him/her to analyse or defend himself/herself (Clement, 2017, p. 44).

Open questions often begin with a verb:

- describe how …,

- tell me in more detail what …

- explain what you were thinking when … take me through it step by step …

- I would like to know more about … (Clement, 2017, p. 42).

So, open questions are commonly used to encourage the coachee to speak so that the coach can collect the necessary information. Good open questions are:

- Questions which stimulate more precise observations and descriptions:

  - How did you react to these comments?

  - How did you decide to intervene?

  - What was the result of your intervention?

- Questions which naturally flow from what the coachee has experienced:

  - What exactly is it that makes you so enthusiastic?

  - What conclusions did you draw from all this?

  - How did you do it last time?

Develop the reflex of building further on answers and remarks of the coachee. Jef Clement

- Questions that are focused:

  - How did that meeting go today? (Instead of: How did the things go today?")

- Questions on facts and feelings:

  - What happened exactly?

  - What did they do?

  - How did that affect you?

  - What exactly provoked your resistance?

- Questions for clarification:

  - I don't understand you fully, tell me more about it?

  - That surprises me. What makes you think like that?

- Questions that build on previous answers:

  - If a coachee says "But that's not really the point", you can ask "So, what is the real point"?

  - If a coachee says "I am certain", you can ask "Tell me what makes you so certain?"

- Questions that ask for concrete examples:

  ◆ If a coachee says "Nothing much happened" on your question "How was the meeting?", you can ask "What do you mean? What was decided? …

If a coachee says "There is still no clear agreement" you can ask "What kind of agreement did you expect?" (Clement, 2017, pp. 40–48)

You can use exploring in each stage of the GRROW model. The table below gives some examples of questions that you can use in the exploration stage of a coaching conversation.

Table 3: Questions for exploring during each stage of the GRROW Model

Goal	- What would you like to have reached by the end of this coaching session? - If that seems to be a bit too ambitious from where you are now, can you give me a couple of stepping stones along the way?
Reality	- Aside from the day-to-day frustrations, what is it about your work that gives you the most (dis)satisfaction? - What concern lies behind your (dis)satisfaction?
Resources	- What actions have you done so far? - Who/what could help you with that?
Options	- How could you reach this goal? - Are there other ways possible to reach your goal? - What are the alternatives?
Will	- How are you going to deal with it? - Which steps are you going to take first? - Can you see yourself doing that?

Source: Artevelde University College, 2017

Activity 13

In this activity, you will conduct part of a coaching conversation, focusing on the exploring stage (asking questions and active listening).

In groups of three participants, two of you discuss (A & B) and the third one observes (C):

- A and B select a topic which is good for discussion (preferably a subject that you don't agree upon);

- A and B discuss this topic following the rule that:

  - A speaks and before B can formulate his/her argument. B first summarizes what A has said and has checked if that was right (You just said … and …, is that correct?);

  - Only if A agrees, B can speak;

  - Then A summarizes, checks if that was correct, and only if B agrees A can speak again;

- C observes: (s)he intervenes if A or B doesn't respect the rules.

Rotate the roles in the group, so that everyone plays the role of coach, coachee and observer.

Afterwards, with the whole group, discuss the exercise:

- What was difficult?

- How does it feel when the coach summarizes your ideas?

2. Appreciate and Reinforce: giving supportive feedback

If you want to get the best out of your fellow teachers, you need to reinforce and appreciate. Reinforcing is used for things that are already going well and appreciating is used to acknowledge an improvement.

You need to create a supportive learning climate to increase their willingness to learn and change. Appreciation, confirmation and support are the basis of trust. In other words, if teachers feel supported, receive confirmation and are appreciated for their efforts, a climate is created in which they are prepared to give their very best. This kind of environment increases people's readiness to take risks and makes them ready to receive corrective feedback. So, if people can build on a basis of appreciation and reinforcement, then critical and direct feedback become all the stronger (Clement, 2017).

To conclude, the skill to appreciate and reinforce has many advantages in supporting professional development:

- stimulate the learning process;

- develop a relation of trust;

- encourage self-confidence;

- strengthen engagement;

- stimulate to move out of the comfort-zone: I make more effort to try something new because there is someone who gives me appreciation;

- create openness for corrective feedback.

But what is stopping us in doing this? **What are the obstacles?** There can be many reasons for being less generous with our appreciation of others than we could be.

Some reasons are:

- We are not used to do it, because we consider it as normal that people are making efforts;

- It feels strange. We are not quite sure of the possible reactions of the coachee and what attitude to take;

- It asks for another way of thinking and acting. Instead of looking at people in terms of what they need to improve, you look at their strengths; what they are doing well already;

- If we give praise, we are afraid to lose our authority or that too much appreciation will not encourage the learning process (Clement, 2017).

A way to overcome these challenges is to use **multiple messages**. You will find it much easier to be generous with your praise if you acknowledge the obstacles and give them a place in your approach towards the coachee (Clement, 2017). For example:

- You might think I am exaggerating, but I really think you handled this situation very competently…

- Perhaps you think it is normal to always do your best. Even so, I want you to know that I am happy with your level of commitment…

If you wish to promote a supportive learning environment, you should be **generous** (frequently) and **authentic** (meaning what you say) with your appreciation and reinforcement. Moreover, your appreciation or reinforcement should be **concrete**, small (avoid words as 'always' and 'never', for example, when you talk to an audience you always talk well or you are the best interviewer) and given immediately (direct related to a specific event). You might not find this easy in the beginning and you need to pay explicit attention to it and practise. Don't forget that an appreciation is given on someone's behaviour which is changeable. It is not personal.

Supportive feedback is generous, authentic, concrete and is not personal.

There is no standard format. An appreciation or reinforcement can be verbal or non-verbal (be attentive, nod your head, smile …). Finally, if giving appreciation is a skill, it also applies to receiving it. Both processes can create an uncomfortable feeling. Do not enter into a discussion with the coachee. Simply acknowledge the objections that are expressed, give them a place, and continue to express your appreciation and support. In this way you will help the coachee to receive your appreciation (Clement, 2017).

Appreciating and reinforcing is a skill that you can use in each stage of the GRROW model. The table below shows some questions that you can use in each stage.

Table 4: Questions for appreciating and reinforcing during each stage of the GRROW Model

Goal	▪ I think that the goal you aim at is very honourable.
Reality	▪ This is a very interesting suggestion you bring here.
Resources	▪ You sure can think out of the box. ▪ I notice that you are well aware of the resources you could use.
Options	▪ You sure can think out of the box. ▪ You are very creative in thinking about your options.
Will	▪ I see that you are enthusiastic! ▪ Your eyes are shining when you are talking about the steps you are about to take.

Source: Artevelde University College, 2017

Activity 14

In this exercise, you will practice the coaching skills of appreciating and reinforcing. Make groups of 3

- For each member of your group, write down one or two elements that you have appreciated about that person during the workshop.

- Think about the best way to formulate your appreciation to these persons.

- Share your appreciation with each other.

Reflect briefly on the activity:

- Was it easy to give appreciation?

- Was it easy to receive appreciation?

3.   Confront and Stay Connected: giving confrontational feedback

Activity 15

As a coach, what would you do if the following situations occur during a coaching conversation?

- The coachee tells you something that you know will irritate his colleagues if told them in the same manner.

- You think that the coachee's approach is ineffective.

- You notice that the coachee is not prepared to take a risk.

- Your coachee has a highly unrealistic idea in mind.

During a coaching conversation, you may notice things that give you cause for concern. You can keep silent if you are sure that the coachee will be so upset by the matter that it would disrupt the entire coaching conversation. In most circumstances though, it is better to immediately tell the coachee what you are thinking. If you fail to do this, you run the risk that you will no longer be able to give honest attention to the coaching conversation. Moreover, 'difficult' messages that are not communicated may become a source of gossiping. Confrontational feedback and criticism give the coachee the opportunity to learn from external observations, emotional reactions and interpretations associated with his/her behaviour. People are usually open to this kind of feedback if they experience sufficient appreciation and support. When people feel appreciated and valued, they get even curious about the comments and criticism of others. Importantly, giving feedback is not about "being right" or "being wrong". To conclude, expressing disagreements in a constructive way is important in order to continue the conversation and to ensure an authentic relationship (Clement, 2017).

Giving feedback is not about "being right".

It is not easy to accept or give criticism, as it is often seen as a personal attack. Therefore, it is important to 'depersonalize' criticism. As every criticism is a hidden wish, expressing things as wishes or desires often makes it easier to find options and solutions. Keep also in mind that critical feedback is a gift, even it is not always experienced as such. Afterwards, the coachee is often grateful that the coach was prepared to hold up a mirror (Clement, 2017).

Why do we keep our critical comments to ourselves?

We are concerned about the person, his reaction (e.g. afraid that he might criticize us in return) and hope to preserve our relationship. Not giving feedback can lead to inner conflict and frustration that harms the relationship even more. Formulating a **multiple message** (and… and…) can help: a message about the relationship and a confrontational message based on concrete facts. For example: "I don't want to hurt your feelings or lose your trust, but I don't think that this way of doing will work. We call this type of feedback as **"connected confrontation**": we confront the coachee with our criticism and we stay connected with his/her feelings and concerns. This approach is both supportive and corrective.

Multiple Message
1. A message about the relationship

I don't want to discourage you but…

2. A confrontational message relating to facts or actual behaviour

I don't think that approach is the right thing to do because…

3. Always give your thoughts back to the coachee

What do you think/feel about this?

Figure 9: Structure of a multiple message to confront and stay connected (Clement, 2017, adapted by VVOB)

Key elements of giving confrontational feedback are (Clement, 2017):

- do it immediately and in small steps;

- do it a lot but stay authentic;

- be concrete: focus on the process, the product or the actions but <u>not</u> on the person;

- avoid words such as always and never. Be specific (give examples);

- express your own feelings and doubts about expressing critical feedback;

- do not formulate feedback as a question if it is meant as a message. For example: "Do you not think it might be better to look for a different way of doing this?" instead of "My fear is that things will go wrong if you carry on like this."

- show interest in the reaction and the feelings of the coachee;

- do not threaten or intimate the coachee;

- do not enter a discussion. Many people tend to defend themselves immediately when they receive critical feedback. Give space to the defensive objections of your coachee. Keep in mind that most people don't want to be right, but want to be heard.

Figure 10: Confrontational feedback should be specific

Activity 16

Individually:

Think about a situation in the past where you wanted to give confrontational feedback but for some reason you didn't. Write down the feedback you would have given.

Note that:

- It can help to start with saying why you were afraid to give that person feedback.

- You only give feedback when you truly believe the other would benefit.

In **pairs** (role-play):

Tell the other the feedback you have prepared. The other person is playing the one who receives the feedback.

- How does it feel to receive this feedback?

- What can be helpful in receiving feedback?

- Deliberate together in finding a good way to formulate the message (use a multiple message).

With the **whole group**, briefly reflect on the exercise:

- How was it for you to do this exercise?

- Do you think it is possible to give this feedback "in real life"?

4.   *Challenge*

Many people would like to realize more than what they are currently achieving. The ability to challenge or stimulate people to cross new boundaries, to break through the limits which they have set for themselves, to encourage self-confidence, is one of the most powerful tools at the disposal of the coach.

Challenging is about:

- going for your dream;

- developing your self-confidence (trust yourself); becoming the person you want to be

- using your talents and inner resources; unlocking your full potential;

- extending your responsibility; having courage;

- doing something less (challenging someone to give others more responsibilities)

- being proud.

During a coaching conversation, the coachee may mention things which allow others (like the coach) to see that they have qualities which have not yet been fully utilized in the problem or learning situation. As a coach, be on the lookout for such resources and name them clearly when you hear them. Often these signs only become clear "between the lines" of what the coachee is saying, from the manner he deals with a problem or from a chance remark which he makes. If you talk openly and explicitly about these resources, it will often result in a dynamic, which will stimulate the learning process (Clement, 2017).

Such resources can be (Clement, 2017, p. 85):

- a quality that you observe in the coachee (e.g., organisational talent, communication skills, strong insight in the situation…);

- a different situation in which the coachee dealt effectively with a similar challenge;

- an idea that the coachee mentions passingly;

- an insight

- a specific skill

Some phrases that you can use are:

- you clearly organize well in other situations. How could you best use your talents here?

- that idea you just mentioned may turn out to be very useful.

- image if you are able to repeat or even improve on that success in your current situation.

How can you challenge?

Encouraging self-confidence by supporting coachees in exploring their feelings to separate the personal level (who they are) from the behavioural level (their actions). People frequently interpret their difficulties as something personal: "I am not doing well" becomes "I am not good enough". After a good conversation they can see that they are not alone or that the problem they face is not abnormal, and that there are perhaps possibilities which they didn't realize before. Possible comments of the coach are: I would also be frustrated if that happened to me, but how can we move forward? Maybe it's your fault and maybe it isn't, but that's not the point: wouldn't it be better to try out and find the most effective way out of the situation? (Clement, 2017, p. 87)

Extending spheres of responsibility, discussing the areas where the coachee would like to take more responsibility or have a greater influence.

Keep in mind that if you want to challenge people, you will also need to give them appreciation and support them. Coaching achieves its maximum effect if the coach appreciates and reinforces, whilst at the same time dares to be confrontational and challenging (Clement, 2017, p. 94).

5. Inspire

Coaching is inspirational. It is not just a "quick fix" for specific problems, but it is starting point for new development and fresh perspective (Clement, 2017). Problems may become persistent when people continue to look at a problem in the same way. Looking at a situation in a different way can be a starting point for a different approach and may result in a simpler way to solve the problem. How can you help to find new and creative ways of handling challenges, to explore unusual approaches, in other words, **how can you inspire?**

Appeal to the coachee's enthusiasm: ask inspiring questions, questions about what would make the coachee happy or challenge her. Possible questions include:

- What really interests you?

- What would increase your enthusiasm?

- How would you change things if you were in charge?

What do you really want? (Clement, 2017, p. 99)

Explore inspiring experiences: help the coachee to focus on what went well, the coachee's successes, and her feelings related to those successes. Possible questions after the coachee has shared a successful experience (Clement, 2017, p. 100):

- What did you feel? How did you experience it?

- How was this experience different from others?

- What skills and talents did you use then? Could you use these same skills and talents now?

- How could you transfer this recipe for success to your current situation?

Reset the frame: invite the coachee to look at the challenge, problem, situation, resources, solutions or actions from a different perspective. Questions may include (Clement, 2017, pp. 101–102):

- How do you think others will look at this?

- How would colleagues deal with this?

- If we ask: 'how can we solve this' instead of asking 'who is right', how might that change things?

- This may seem like a disadvantage now, but are there any hidden advantages in the situation?

- How might that sound if you dared to be more ambitious?

- From which perspective is this problem not a problem at all?

- What additional elements (information, people, etc.) would you need to bring about a change of perspective?

- Okay, that is what you don't want. But what is it that you really want?

- Which choices require more courage, but could be more rewarding?

- What choices would you make if you were forced to decide based on what is important rather than what is easy?

Encouraging innovation and creativity: invite the coachee to try out new solutions, to do something "out of the ordinary". It's also about giving support to the coachee to overcome his/her fear or other feelings in dealing with new approaches. Possible interventions include (Clement, 2017, p. 104):

- What would be a totally different approach in these circumstances?

- What kind of things would your colleagues never expect you to say at the start of a meeting?

- Describe your objective to me and tell me about the things you associate with that objective.

- Let's try and find at least five different approaches to deal with this problem.

Your challenge as a coach is to ensure that you do not focus too much on the problem, but inspire the coachee to develop.

Sometimes it can be useful to **give advice**. When you do so, it is important to put the learning process back with the coachee. You can do this by:

- asking the coachee if he wants to hear your idea.

- asking whether your advice is helpful. Which elements are helpful, which aren't?

- making sure the coachee doesn't copy your idea blindly. Ask how the idea could work within the coachee's context?

6. *Allow and give space*

Enthusiasm, creativity, self-confidence and many other qualities are not always instantly accessible. Sometimes feelings such as disappointment, fear, anger, resistance, indifference … may block the path.

How should a coach respond to such "obstructive" feelings?

Many feelings can make us feel uncomfortable. Experience shows that it doesn't work to reject feelings. Feelings do not disappear, simply because they are suppressed or rejected. Therefore, it's important to give them a place, to acknowledge their existence. By giving those feelings the necessary space, they will make room for new experiences. Once exposed, these uncomfortable feelings relax. So, it is important that you take enough time to explore the feelings that block the coachee. Take time to listen carefully to the coachee's answers and explore them further if necessary. Keep repeating this process until you see that the uncomfortable feeling is gradually being reduced in a natural manner.

Possible **questions** are (Clement, 2017, pp. 115–125):

- How do you experience this fear? When is it most noticeable?

- What irritates you exactly?

- What options do you see for dealing constructively with your fear?

- How could you formulate your feelings in a manner that is constructive both for you and for the people around you?

- What desires lay hidden behind your anger?

- What makes it so difficult to accept the new approach?

- How could you better equip yourself to integrate the changes into your work?

The ability to explore and allow "difficult" feelings is a valuable coaching skill, but not easy to apply. If people become more skilled at expressing their underlying concerns and uncertainties, they will also become more confident about new ideas and more skilled in reconciling the differences between old and new approaches. So, the challenge is to give these feeling a proper place, so that coachees have room to express themselves more freely (Clement, 2017; pp. 126-127).

7. *Relax and keep your sense of humour*

As a coach you need to create a relaxing learning environment. **But how?** It is about:

- Showing encouragement and reinforcement:

  - belief in the potential of your coachee, focus on her strengths and find ways to build on these foundations (growth mindset).

  - Nonverbal relaxing posture: looking at someone in an appreciative and supportive manner helps the coachee to relax.

- Breathing in deep and relax manner. Without saying a word for example, your relaxed breathing says to the coachee: "there is a problem, but we will find our way out of it. Let's look at how we can move forward"

- Humour

- Allowing moments of silence

To sum up, creating an atmosphere for the coaching conversation is a silent skill (a skill without words). You create a mental image of the other person as someone who can be successful (Clement, 2017 p. 136).

Activity 17

In this activity, you will practice coaching conversations following the GRROW model.

Step 1: individually (5 min.)

- Think about a concrete problem or challenge you are facing now in your work.

- Write it down

Step 2 (in groups of 3) (10 min.):

- Decide on the roles in your group: coach – coachee - observer

- Coachee: tell your story

- Coach: apply the five steps of GRROW & respect moments of silence

- Observer: make notes and do not make eye-contact nor interrupt

Step 3: Feedback on the coaching conversation (10 min.)

- Questions to be asked by the observer to the coach: What went well? What was difficult? Could you keep focus?

- Questions to be asked by the observer to the coachee: Did you feel understood? What have you felt as a good intervention?

- Feedback of the observer to the coach based on following questions: Did the coach explore well the situation? Did the coach use the 5 steps of the model? Which key skills did the coach use?

Switch roles and repeat steps 2 and 3.

Section 3: Induction of New Teachers

3.1 Introduction

Teaching is complex work and pre-service teacher education is not sufficient to provide all the necessary competences for successful teaching. An important part can be acquired only while on the job. Hence, there is a necessary role for schools in providing an environment where new teachers can learn the craft and succeed as teachers. The goal of induction programs is to improve the performance and retention of new teachers, with the aim of improving student learning.

New teachers' professional learning needs are different from those of experienced staff. Their induction is an important first step in ensuring that they make an impact upon change and learning within their classrooms at the earliest possible opportunity (Hampton et al., 2004). Any induction system will be limited in time. Therefore, it is important that an induction system paves the way for continuous learning after the formal end of the induction period. Promotion of a culture of lifelong learning and teacher collaboration is therefore an important element of this trajectory. This section will explore the concept of teacher induction, its importance and different approaches.

3.2 Challenges that new teachers face

Activity 18

Think about your first professional experience in the school you are currently working in.

- What challenges did you face?

- What support did you receive to overcome those challenges?

According to the Education Sector Strategic Plan 2018/19-2022/23 New Teachers are teachers in their first three years of their career. In this module however, we consider new teachers as newly qualified teachers from pre-service training or newly appointed teachers in a school regardless of their previous experience within their first three years in a school. This is in line with the draft Rwandan Teacher Development and Management (TDM) Policy (MINEDUC, 2015) that states:

"The key to retaining teachers, especially teachers in the early years of their career, is to provide a robust system of professional support that can quickly address job-related challenges and enhance commitment to teaching. All beginning teachers – defined as teachers in the first 3 years of their career, will receive systematic professional support from their head teachers, mentors and school inspectors specially trained for this purpose." (p.15)

In their first years of teaching, teachers face some specific difficulties or concerns (Table 5).

Table 5: Difficulties encountered by new teachers in Rwanda

- Challenges in lesson planning and teaching
- Administration
- Challenge with classroom management
- Fear of not being integrated in school community
- Lack of experience
- Lack of pedagogical documents
- Cooperation with colleagues
- Content mastery
- Identifying learners' needs
- Adapting to the system
- Interpersonal relations
- Managing time
- Content and methodological approaches

Source: Training Session TTC Tutors, April 2018

An induction programme should address these challenges by providing support, thereby improving the retention of new teachers. A higher retention of new teachers is a lever for developing the conditions that make schools good places for all teachers to work and learn. An effective teacher is the most important factor in producing consistently high levels of student achievement (Hattie, 2009). Therefore, teachers must have the opportunity to learn throughout their careers, and that process begins with those newest to the profession (Wong, Britton, & Ganser, 2005). Furthermore, induction presents an opportunity for experienced teachers to analyse and share their expertise, advancing their own professional development.

Finally, many teachers still work largely in isolation from their colleagues. This isolation is again especially challenging for new teachers, who are often left to "sink or swim" within the walls of their classrooms (Ingersoll & Strong, 2011). Therefore, induction of new teachers must be well planned, carefully executed and evaluated to ensure it meets the general and individual needs of new teachers and provides a firm foundation for career-long professional development. Induction programmes should be part of a school-wide strategy on teacher professional development, teacher collaboration and lifelong learning.

The following elements characterize a strong induction programme (Yusko & Feiman-Nemser, 2008):

- committed school leadership that promotes a developmental approach to teacher learning;

- information-rich hiring procedures that introduce candidates to the school's mission, values, resources and community;

- orientation to school policies and procedures before school starts;

- opportunities to learn with and from colleagues;

- curricular support including the availability of complete curricula and resources;

- growth-oriented supervision with transparent teacher evaluation processes.

3.3 Induction approaches

Activity 19

In pairs, list in the table below (based on Cautreels, 2009):
- possible reasons and consequences of the five common difficulties new teachers face;
- possible strategies (in terms of activities) to overcome those difficulties based on the reasons and consequences listed.

Difficulties	Reasons	Consequences	Strategies

In plenary, share your strategies

In the current practices on induction of new teachers (outside Rwanda) we distinguish two approaches: **support-oriented induction and standard-oriented induction** (Birkeland & Feiman-Nemser, 2012). The distinction between these approaches is related to the goals, outcomes and beneficiaries of the induction. The first one focuses on new teachers only with the purpose to familiarise them with the work environment and to address immediate problems and concerns. The support provided is not related to the achievement of professional standards. This is one of the key characteristic of the standard-oriented induction approach. In addition to the purpose of the support-oriented approach, the standard one aims to provide support to new teachers, so they can learn how to teach and grow in their teaching profession based on a shared understanding on effective teaching and learning. New teachers receive support in a framework of clear and transparent expectations in terms of professional standards to achieve. This framework concerns all teachers and observes different levels of achievement related to the teaching experience. It is imbedded in a vision that promotes teacher lifelong learning and a collaborative school culture.

The TDM Policy (MINEDUC, 2015) advocates for a standard-oriented approach of teacher induction, where support, development and assessment co-exist. Following 'registration', new teachers take part in a probationary period of one year during which they work under the mentorship of more experienced teachers in the subjects they are qualified to teach. During this probationary period, teachers will have to demonstrate that they are reaching the professional teacher standards. When they succeed they are awarded full entry into the teacher profession. The probation period is stipulated in article 14 of the Teacher Statutes, Official Gazette n° 48 of 28/11/2016: *"Every newly appointed teacher is subjected to a probation period of twelve (12) months where his/her immediate supervisor evaluates his/her performance in terms of his/her professional capacities, qualities and behaviours."*

3.4 Induction programmes

> ### *Activity 20*
>
> Discuss following questions:
>
> - *What should be part of an induction programme?*
>
> - *What are the success factors of an effective induction programme?*

There are different types of induction programmes depending on the context and the induction approach. An essential component of many induction programs is mentoring. This explains why those two terms, induction and mentoring, are often used interchangeably. Mentoring is an essential part of induction but not sufficient. It must be part of a broader range of support. In brief, an induction programme is a range of (in) formal services or activities provided to new teachers in order to support their learning and development.

> *An induction programme is a range of services or activities provided to new teachers to support their learning and development.*

What are those different types of activities? Based on research evidence on means for effective CPD, elements and success factors of induction and aligned with the priorities and strategies of the Government of Rwanda, **four types of formal activities** are proposed for the induction programme in Rwandan schools: mentoring, communities of practice, seminars and trainings, and support by TTC tutors.

1. Mentoring activities

- **One-to-one mentoring**: one mentor (SBM, SSL or DHTS) meets with one NT at a time.

- **Group mentoring:** one "in-school NT mentor" meets with more than one NT at a time. This can be done when NTs have a common goal. Group mentoring is effective in situations where time and mentoring resources are scarce.

Examples of mentoring activities:

- joint lesson planning;

- observing mentor's teaching, including a discussion before and after observation;

- observing fellow teachers, including a discussion before and after observation;

  - observing a teacher teaching the same subject or grade;

- observing a teacher teaching another subject or grade;

- observing another new teacher;

- observing NT's teaching, including a discussion before and after observation;

- analysing student work and results on formative assessments;

- analysing marking and record keeping systems;

- discussing about teaching and learning issues, not focused on a specific lesson;

- suggesting and discussing teaching and classroom management techniques;

2. Community of Practice (CoP) sessions

NTs and more experienced teachers meet regularly to discuss their work. Members of CoPs can teach the same subject, but this is not necessary. A school can have a CoP that works on classroom management with teachers from various subject areas. Activities that can be done during a CoP session are:

- collaborative lesson preparation;

- lesson study/micro-teaching

- discussing lesson observations;

- case study discussions;

- analysing student work on formative and summative assessments;

- analysing marking and record keeping systems;

- developing strategies for teaching learners with learning difficulties.

3. Seminars and trainings for new teachers

Trainings can be organized at school, sector or district level. The content should be relevant to the specific needs of new teachers, which is usually different from the needs of more experienced teachers (See section on teacher life cycle).

4. Support to school-based induction by TTC tutors

This support includes following activities:

- observing NT's teaching;

- analysing student work and results on assessments;

- reviewing NT CPD plan (review progress and set targets);

- monitoring the implementation of the induction programme.

Activity 21

Read the proposed induction activities in Annex 3 and identify activities that you already apply in your school. Discuss what you would change in this schedule.

Share the results of your work with the whole group.

UNIT 3: COMMUNITIES OF PRACTICE

Introduction

CPD is more effective when it is done collaboratively (Brodie, 2013; Guskey & Kwang Suk Yoon, 2009). Research (OECD, 2013) shows that teachers who collaborate more with their colleagues – teaching jointly in the same class, observing and providing feedback on each other's classes, engaging in joint activities across different classes and age groups, and taking part in collaborative professional learning – report a greater sense of confidence in their teaching skills and higher motivation. Teachers who work together also experience less isolation. Collaborative learning is an important instrument to build a school atmosphere where staff is willing to share and work together, where teachers are not only interested in their own class, but are involved in learning at the whole school (Kools & Stoll, 2016).

This unit focuses on one method of collaboration within a school: Communities of Practice (CoPs). In this unit you will discover the different conditions, functions and modalities to establish and lead a CoP. First, the concept of CoP will be discussed and a working definition will be proposed.

Unit learning outcomes

By the end of this unit participants should be able to:

- explain the concept of a CoP;

- identify advantages of a CoP for STEM teachers;

- motivate colleagues to participate in a CoP in their school;

- effectively support CoPs in their school;

- see the value of CoPs as an effective method for in-school CPD;

- organize CoP sessions that improve the quality of teaching and learning in their schools;

Section 1: Defining and Understanding a Community of Practice

1.1 Introduction

This section introduces the concept of a community of practice. A working definition is proposed, followed by discussions on the effectiveness of a CoP for the professional development of teachers.

1.2 Rationale for Communities of Practice

Activity 22

In pairs, think about the following questions:

- *What does "community of practice" mean for you?*

- *Are you currently collaborating with other teachers in your school?*

- *What is going well and what can still be improved?*

- *What keeps you from collaborating (more) in your school?*

Different terms are used to refer to a similar concept: community of practice; learning community; professional learning community and professional learning network. The key element is that professional peers meet each other (face to face or virtually) and consciously reflect on their practices with the objective to learn from and with each other. In the Rwandan educational context, there is a diversity in terms such as the Professional Learning Networks (PLN), Communities of Practice (CoP), School-Based In-service training (SBI) and Professional Learning Community (PLC).

For consistency and to avoid any confusion, REB suggests using the term "**Community of Practice**" and the following definition: *"a group of colleagues who meet regularly to discuss their work. They think of solutions to challenges and share good practices"* (REB, 2017).

1.3 Importance of CoPs in schools

Research (Bolam, McMahon, & Stoll, 2005; Kools & Stoll, 2016; Vescio et al., 2008) has shown that CoPs contribute to the quality of teaching and learning within a school (Figure 11).

- They bridge the gap between education theory, policy and practice, creating spaces for addressing practical issues and connecting pedagogical practice with subject content knowledge.

- They provide spaces where young teachers share innovative ideas with experienced teachers and where experienced teachers can in turn mentor young teachers. This stimulates teachers to critically interrogate their practice rather than to recycle old ideas.

- CoPs help to increase the capacity of the school to achieve sustainable improvement in the learning that takes place in the school. School-based CoPs not only aim to achieve individual goals, but also aim at changing school culture which could become more collaborative and more focused on learning by all. Learning based on concrete needs, which is a key element of CoPs, ensures that development is truly relevant.

- They have a positive effect on teacher confidence and satisfaction;

- They have a positive effect on teaching and learning outcomes.

Figure 11 summarizes the potential benefits of CoPs in a school (Bolam et al., 2005; Brodie, 2013; Vescio et al., 2008).

Means of collaborative problem solving	Allows deep sense of inquiry and critical reflection	Creates shared responsibility and identity ("common cause")	Teachers/school leaders are resource people instead of "listeners" ("peer learning" versus "expert learning")
More cost effective type of TPD (esp. if school-based)	They allow to identify common needs	They may bridge the gap between theory, policy and practice	Spaces to share innovative ideas
Space for mentoring young teachers	Allows mobilizing competences of local community of professional peers	Focused on real problems of school/classroom life	Opportunity to break out of isolation (new teachers/school leaders)
Opportunity to share materials, data, tools that reduce workload	May lead to increased job satisfaction and motivation	Enables teachers to keep up-to-date with pedagogy and didactics	Creates a real sense of ownership and agency

Figure 11: Impact of CoPs on the quality of learning and teaching (VVOB, 2017)

CoPs are not staff meetings. The major difference is that the objective of a CoP is professional development. This is done by collaboratively inquiring and reflecting on one's practice. Also, CoPs are bottom-up instruments where the agenda is set by the members.

Section 2: Initiating and Facilitating a CoP

2.1 Introduction

This section will help you to set up, facilitate and coach an effective CoP of STEM teachers.

2.2 Key Enablers of Communities of Practice

> *Activity 23*
>
> In small groups, discuss the following question:
>
> ▪ *What conditions should be met for a CoP to be successful?*

To have an impact on teaching and learning, a CoP should be well structured and organised. Simply bringing teachers together alone does not guarantee growth and development. Some conditions need to be in place to create a climate in which learning and opportunities for growth can arise. Those conditions for an effective CoP are referred to as **Key Enablers** (Katz, Earl, & Jaafar, 2009). They are summarised in Figure 12.

Figure 12: Key Enablers of CoPs (Brodie, 2013; Katz et al., 2009; Wenger, Trayner, & de Laat, 2011), adapted by VVOB

1. Shared Purpose and Focus

A shared purpose and focus on quality teaching and learning is critical for a CoP. When teachers take ownership of this commitment, learning (and not teaching) becomes the focus. A purpose needs to be translated into a concrete, realistic and useful learning focus, which challenges teachers to question their current practice, make changes and inform their own learning needs. Remember, if you don't know where you are, and you don't know where you want to go, don't be surprised ending up at a place where you don't want to be! Teachers need to feel responsible that all learners in the school can learn to the fullest of their abilities.

A shared vision on what is high-quality teaching and learning is critical for a CoP.

Indicators:

- Members decide together to address certain challenges in their teaching, for example 'teaching electricity, statistics, 'student dropouts', 'parent involvement', etc.;

- Members share a vision on key aspects of the education system what is quality, inclusiveness, what is the role of the teacher, what is the purpose of education etc.

- During a set period the CoP limits itself to this prioritized subject and is not distracted by other affairs;

- Each session has a defined purpose (exploring, trying out, evaluating…)

- At the end of each session a conclusion is made, and participants evaluate whether the objective of the session has been attained.

2. Relationships

A CoP cannot be successful if members do not trust each other and respect each other's differences. A spirit where people are not afraid to talk about challenges they experience in their teaching, critically comment to others, avoid gender stereotyping and share their ideas on learning, is very important for a CoP. Mutual trust and respect don't come automatically in a group. A lot of time and effort are needed to create them, but once they are there, real and powerful learning can take place. Mutual trust and respect lead to productive relationships.

Indicators:

- Members don't hesitate to share good practices and failures, strengths and weaknesses;

- Members demonstrate trust and respect each other: they talk honestly, create transparency, they don't judge on right or wrongs, do as they promise, keep commitments, listen first.

3. Collaboration

Preparing, teaching and assessing learners have long been individual tasks of every teacher. Effective CoPs challenge this view and encourage opening one's classrooms through peer learning, lesson study, team teaching, observations and mentoring. Improving learning in a COP becomes a collective responsibility. Collaboration means much more than cooperation. Cooperation is about sharing materials. Collaboration is about intensive interaction that engages educators in opening their beliefs and practices to investigation and debate. When colleagues engage in a dynamic process of interpretation and evaluation of practice they enhance their own practice and that of the profession. This kind of collaboration allows people to address the tough problems of teaching, building commitment through group understanding, solve issues of mutual concern, and spread innovation beyond individuals and single sites.

Indicators:

- Members jointly plan the CoP, based on a common focus on the issues for improvement;

- Members work together and/or divide labour;

- Members expect that they will give to one another help and advice, concern and sympathy while respecting each other's autonomy;

- Members share their work with others and expose their ideas and intentions to one another;

- Members observe and each other's class.

- Members jointly develop teaching resources such as lesson plans, teaching aids or assessment instruments.

4. Inquiry

Inquiry means that teachers collectively question teaching routines, examine their ideas about teaching and learning, find ways to respond to difference and conflict, and engage in supporting one another's professional growth. Inquiry means that data about teaching and learning are collected and used to analyse performance. In a CoP, teachers can decide to focus on one topic for a long time, using data and research to get to the bottom of it. Action research can be used to evaluate the impact of a different teaching strategy.

Indicators:

- Members analyse issues thoroughly before possible solutions are discussed;

- Members don't take first answers for granted but try to go deeper;

- Members ask open questions;

- Members collect and analyse data about teaching and learning in their class;

- Members focus on challenges for a longer period.

5. Leadership

School leaders need to provide practical support to CoPs such as adapting teachers' timetables, providing resources and a space for the CoPs. However, SSLs and SBMs should provide instructional leadership through encouraging and motiving teachers to participate, setting and monitoring the agenda, creating a culture conducive to collaborative learning, promoting enquiry and building capacity. CoPs also require distributed leadership. This means that not just one member is the leader of the CoP, but that many members, both males and females, take up leadership functions such as setting the agenda, developing resources, coordinating group activities, supporting colleagues' learning.

Indicators:

- Members divide roles and responsibilities in the framework of organising and sustaining the CoP;

- Members divide roles and responsibilities related to their expertise in the issue that is addressed;

- Leadership tasks regularly rotate among members of the CoP;

- All members of the CoP feel responsible for the well-functioning and success of the CoP;

6. Diversity and Openness

Diversity within a CoP helps creating a stimulating learning environment. If everybody has the same expertise and always agrees with each other, you will learn not so much as when each member has different ideas and interests to bring to the CoP (Downes, 2013). CoPs should be open to new members, such as new teachers. They mustn't discriminate according to gender. Also, effective CoPs are not isolated communities, but form networks with other schools, invite external experts or members from other CoPs without losing their focus. In this way, expertise and alternative viewpoints can be brought into the CoP.

> *Effective CoPs are not isolated communities, but form networks with other schools, invite external experts or members from other CoPs without losing their focus.*

Indicators:

- number of male and female members in the CoP;

- number of members per age category in the CoP;

- Involvement of outsiders in the CoP;

- Degree that members feel that they can contribute to discussions in the CoP;

7. Accountability

A well-functioning CoP is not the objective. The purpose is to improve teaching and learning and CoPs are a means to that end. School leaders have a key role to play in making CoP members accountable to make sure that the time and resources spent on a CoP are resources

that are well spent. Head teachers can ask CoP members to identify goals and targets for the year. For example, a CoP on maths may decide to focus on fractions. At the end of the year, they want to develop a common set of lesson plans and 3 learning materials and they want to achieve a 20% increase in the examination results for the questions on fractions. This is external accountability. Internal accountability means that CoP members hold each other accountable for showing up on time, actively engaging in discussions and implementing what has been agreed upon in the CoP.

Having a well-functioning CoP is not the objective. The purpose is to improve teaching and learning.

Indicators:

- Members can explain to each other why they act as they do;

- Members have clear goals and targets (per term, per year) that they want to achieve with the CoP;

- School leaders assess the effectiveness of the CoP against set goals and targets;

- Members hold each other accountable for complying with what has been agreed.

2.3 Activities in a CoP

In CoPs, teachers discuss, reflect and learn together about how to improve their practice. More concretely, mathematics teachers can engage in activities such as:

- Developing expertise in the analysis of learner results. For example, a mathematics teacher may have difficulties to understand why learners always make similar mistakes. He/she can bring this concern to the CoP to help in addressing the issue.

- Developing expertise in preparing and delivering mathematics lessons. For example, mathematics teachers develop a lesson plan together, one teacher tries out the lesson plan while others observe and take notes. Afterwards, the lesson is discussed, and improvements suggested.

- Developing expertise in the implementation of the competence-based curriculum;

- Strengthening pedagogical content knowledge (e.g. addressing misconceptions from learners, using games, techniques to motivate learners, using various representations of a mathematical concept...)

- Developing teaching and learning materials. Working together to develop a manual, experiment materials, games, tests etc.

- Implementing education policies such as making lessons gender equitable and inclusive, using ICT for mathematics teaching, using (more) concrete materials.

2.3 Modalities of Collaborating in CoPs

Activity 24

In small groups, discuss how a CoP would work <u>in your school</u> using the following questions:

- Is there a CoP in your school/ sector?

- Who sets up CoPs? Who sets the agenda?

- How can you motivate members to participate, if they have limited time and resources?

- How can you convince CoP members to share their challenges?

- How can you maximize the impact of the CoP on teaching and learning?

- How can teachers find the time to engage in CoP?

- What should be the frequency of sessions?

- Who is responsible for follow-up of action points made in the CoP?

Write your ideas on a flipchart and put them on the wall. Look at the flipcharts from other groups and discuss their ideas.

1. Who sets up CoPs and their agenda?

According to the ideal theoretical situation, CoPs should be voluntary structures, so teachers who are not motivated will not attend. However, research (Hairon & Dimmock, 2012; Little, 2002) showed that teachers are often not capable to start CoPs in a self-regulating way. Therefore, CoPs need to be initiated and well-managed, in particular at the early stages

(Brodie, 2013). In Rwanda, CoPs for teachers at school level have been initiated by REB with the support of JICA. Those CoP sessions are known as SBI-sessions. The activities held during those sessions are need-based. So, the agenda is set with the CoPs members. The approach is the same for the PLCs of head teachers and deputy head teachers at sector level implemented with the support of VVOB and BLF.

2. How can you motivate members to participate, if they have limited time and resources?

CoPs take time to become productive, as trust needs to develop among members (Katz et al., 2009). However, time and resources are very often limited. Some arguments to motivate people to engage in CoPs are:

- members discuss and work on what they think is relevant and important for them;

- members can deal with concrete issues related to classroom practice;

- they have a more flexible and voluntary nature compared to regular staff meetings;

- working together saves time: lessons plan developed, resources developed, problems solved, assessments prepared…);

- lifelong learning is a part of your job as a teacher.

- collaborative learning is more effective and more fun than learning alone.

3. How can you convince CoP members to share their challenges?

It is not about convincing members to share their failings, but about building trust and "legitimate peripheral participation" (Lave & Wenger, 1991). This means that members can observe and learn and gradually adopt a more central position in a CoP. As trust develops, members will become more willing to adopt a vulnerable position, ask questions, admit challenges etc. Trust needs to be built and cannot be rushed. Creating a trustworthy environment is a skill of a good facilitator.

4. What should be the frequency of CoP sessions?

Time for teachers to participate in CoPs should be scheduled into the school year. CoP sessions can take place during the immediate pre- and post-term periods. Teaching schedules can be organized in such a way that teachers have some time during the school week to have a CoP session. It is important to recognize that time spent in a CoP is not "lost" time. By sharing and

working together, teachers will save time in preparing lessons, setting exams, making schemes of work etc.

A successful CoP requires that its members come together regularly. Only by meeting regularly the necessary depth of discussions, progressive gains in knowledge and sustainable effects on teaching and learning can be achieved. The optimal frequency will depend on the length of sessions, the number of participants, the objectives of the CoP and the dynamics in the group.

As part of the induction programme for NTs, it is suggested to organise at least one session in term 1 and 2 sessions in terms 2 and 3 (Appendix 3).

5. Who is responsible for following up on action points made in CoP?

Every CoP member is accountable to the other CoP members for the implementation of resolutions. Members ask each other questions and give recommendations about how other team members have implemented the resolutions. Through coaching and mentoring, SSLs can support CoP members with the implementation of action points.

6. How can CoPs be organized within a school and between schools?

The most straightforward and often most sustainable option is to organize CoPs within a school. Of course, this only works if schools are big enough. However, CoPs can also be organized between schools. If financial and logistical constraints can be overcome, inter-school CoPs can be a very effective way to exchange ideas and align organizational cultures between schools. CoPs between schools will also work best if there is an explicit objective to mix better performance with less performing schools. SEOs can play a role in pairing schools and forming a CoP.

CoPs can be structured per subject and per grade. The condition is again that the school is big enough. This is probably the ideal situation where teachers can prepare and evaluate lessons and topics together that are relevant for their own teaching.

In Rwanda, CoPs for school leaders are organized at sector level. These are called Professional Learning Communities (PLCs). CoPs for teachers are usually within the schools and organized per subject like presented in Figure 13.
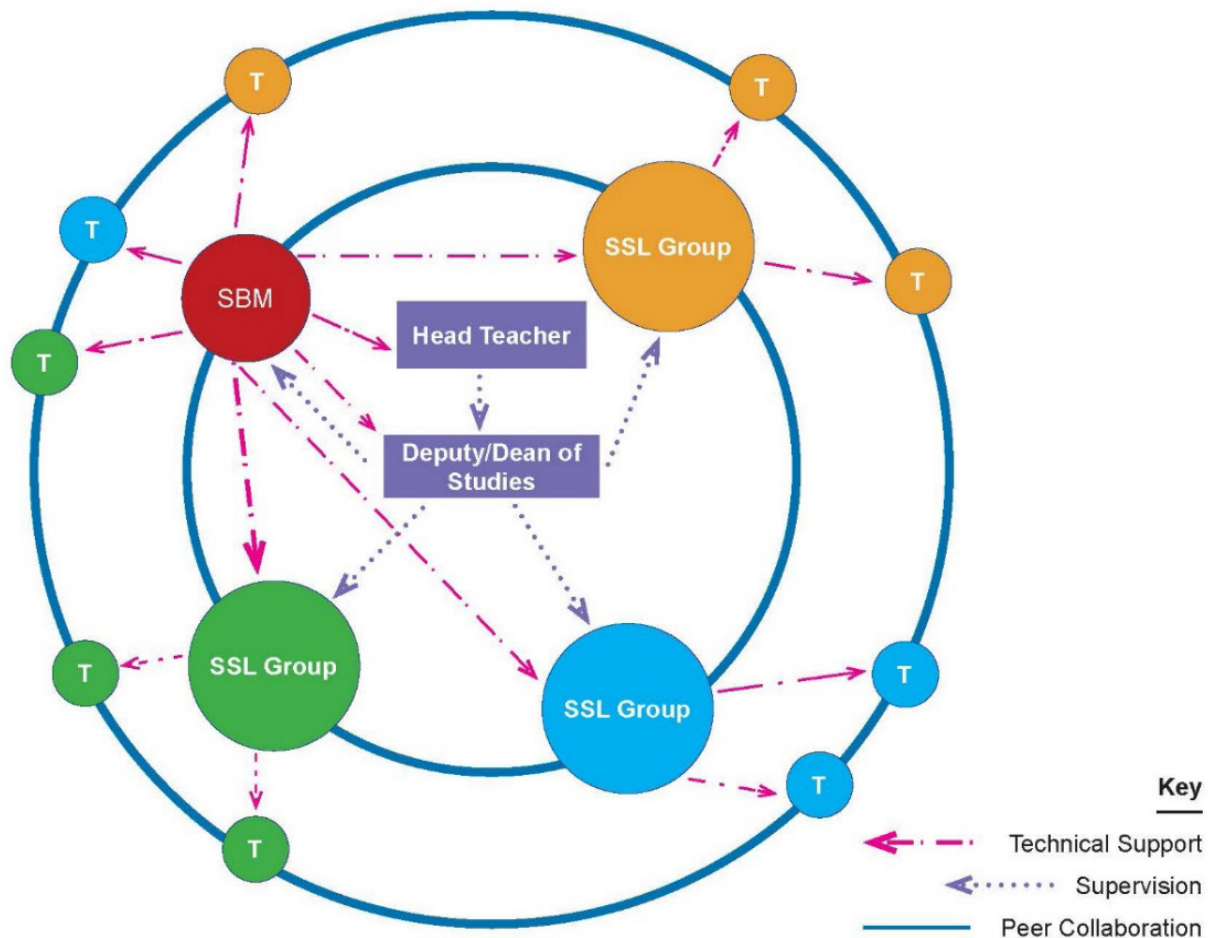
Figure 13: In-school relationships between teachers, head teacher and deputy head teacher (REB, 2016)

7. Are CoPs only for new teachers?

CoP members should preferably be a mixture of new and experienced teachers, as both have learning needs and useful expertise. New teachers can learn from experienced teachers on how to deal with specific learner difficulties, develop their PCK, discuss class management challenges and use tried-and-tested resources. Experienced teachers can benefit from these interactions, as it requires them to explain their work and thinking. This can help to reflect on their own teaching. Experienced teachers can also learn from the new ideas, enthusiasm and innovative technologies that new teachers can introduce to the CoP.

8. How to facilitate a CoP?

Your first focus when leading a CoP is to ensure that the key enablers are realized. Apart from the competences that CoP facilitators need to give guidance to their CoPs, participants also need to have the competences that are linked to the key enablers. Many of these competences are the same as those for coaching and mentoring.

REB has identified the **PDSI cycle** as a method to organise CoPs for teachers. PDSI stands for Plan, Do, See and Improve. Based on an identified problem you plan actions or CoP activities. The next step consists on conducting those activities. After applying you see if the problem has been solved and if an improvement is observable (REB-JICA, 2016). This problem-solving cycle is a reflective process that is also used in the roll-out of the competence-based curriculum at school and sector levels (REB, 2017). As a result, four CoP sessions could be focused on dealing with a challenge that the members face, going through the four steps of the PDSI cycle.
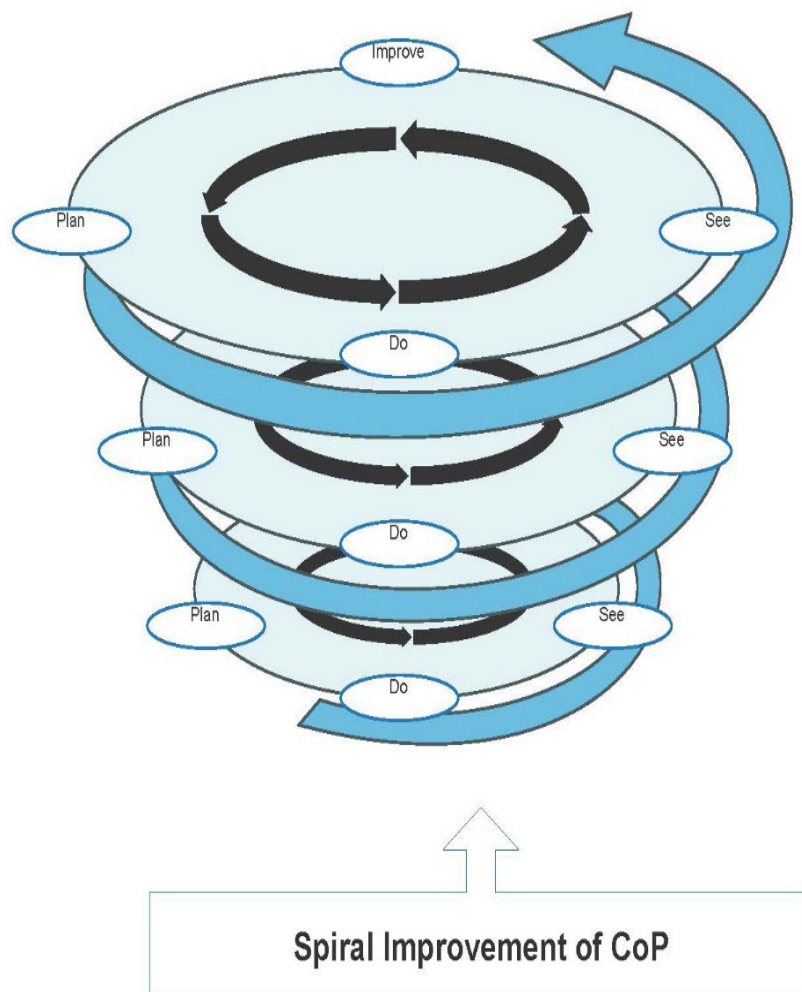

Figure 14: Spiral learning through the PDSI Cycle

Table 6: Example of guideline for conducting CoP sessions

Steps	Allocated time (1st CoP session)	Allocated time (2nd CoP session)
Step 1: Introduce the CoP session – Collaboration 1. The facilitator welcomes everyone; 2. The facilitator invites each CoP member to introduce him/herself; 3. The facilitator asks participants to share their expectations and reminds them about the purpose of a CoP; 4. Members agree on the housekeeping rules.	30min	5min
Step 2: Assign roles and responsibilities within the CoP - Leadership To promote leadership and active engagement of members, it is highly encouraged to appoint members on a rotational basis. This is something that can be considered as soon as the CoP members are used to the way a CoP session is conducted. Members appoint the facilitator, note taker, time keeper of the current CoP session.	5min	5min
Step 3: Set the agenda of the CoP session – Purpose and Focus & Collaboration Members agree on the topics of the agenda of the current and following CoP sessions. The topics are identified based on the common needs/goals of the CoP members. The common goals are selected from teachers' CPD plans. The number of topics to be addressed over the timeline of one school year will determine the number of CoP sessions. It is recommended to limit the number of topics/goals to be addressed in a CoP session to maximum 2. According to this CoP members plan the CoP sessions.	30min-45min If there are no common goals identified yet, a specific CoP session should be organised to address this	5min This is a recall of the agenda that has been set during the first CoP session or the CoP session on the identification of the common goals.

Step 4: Discuss and make resolutions on the topics of the agenda – Purpose and Focus, Collaboration, Collaborative Inquiry & Accountability	This step is skipped because during the first CoP session the focus is on identifying the common goals and planning the CoP sessions.	60min Step 4 starts with the reading of the minutes of the previous CoP session, with a focus on the resolutions and the areas of improvement.
To facilitate the discussion and resolution making process to address the topics on the agenda, REB has identified the Plan, Do, See and Improve (PDSI) process. Based on a common identified problem (translated in a goal to reach) the CoP members plan actions (Plan) to address the problem. These actions can be conducted during a next CoP session or in between (Do). It will depend on the nature of the action. When the actions have been conducted the CoP members reflect by observing if the problem has been solved (See) and if an improvement is observable. Based on this the CoP members decide if additional actions are needed and how this should be done (Improve). If an improvement is needed, the whole circle starts again. Keep in mind that making resolutions implies to agree on the time within which each resolution needs to be realized and by who. Moreover, for each resolution a CoP member needs to be appointed to do the follow up.		
Step 5: Close the session and recall the date for the next CoP session – Purpose and Focus, Collaboration & Accountability	15min	15min

1. The facilitator closes the session with
   ▪ an evaluation of the session: each participant, including the facilitator, shares 1 <u>supportive and 1 corrective feedback on how the CoP session was led</u>. Based on this they identify the areas of improvement for the next CoP session. The feedback and areas of improvement are included in the minutes of the CoP session;
   ▪ a recap of the resolutions;
2. Members confirm the date of the next CoP session		

Activity 25

In small groups, prepare a role play for a CoP session. Each member will play a role:

- one participant is the facilitator of the CoP

- two members are members of the CoP. Each will receive additional guidance about his/her role.

- one member is the observer. He/she will share observations and give feedback to the facilitator and members.

After each role play, discuss the following with the whole group:

- what went well in the CoP?

- what advice would you give to the facilitator and members to make the CoP more effective? Use the key enablers for your feedback.

Activity 26

In small groups, prepare your first or next CoP session in your school:

- who to invite?

- how to motivate teachers to join?

- your communication with the DHT and HT?

- arranging time and place

- agenda of the session

- intended outcomes of your CoP by the end of the school year.

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APPENDICES

Appendix 1: Profile of a science and maths School subject leader(MMSL) as a coach and mentor

Standard description:

School Subject Leaders of science and maths (SSLs) should be experts in teaching science (biology, chemistry and physics) and mathematics. They are informed about innovations in science and maths and organize for all other teachers a community of practice. In addition, they stimulate learning from each other by organizing team teaching, lesson observations and discussions on good practices. They also stimulate and participate in reflection on teaching, students' progress and learning outcomes. Furthermore, they coach teachers in teaching and effective assessment of learners.

The SSL gives special attention to NTs. They express belief in their professional growth. They also support them in lesson planning and coach them to improve their capacities. They give special attention to improve the language capacities in teaching. They have regular contact with the SBM.

Competences:

Knowledge

To fulfil the responsibilities related to the support of teachers and induction for NTs an SSL should **know /understand** the following:

- Principles of induction of NTs.

- Guidance and counselling services.

- Leadership and management structure within the school.

- Management of professional growth.

- Kinyarwanda and English as mediums of instruction.

- Gender stereotypes associated with teaching at primary and secondary school level.

- Knowledge of different techniques/strategies of mentoring and coaching.

- Knowledge of CBC (subject matter, spiral structure, teaching methodologies, assessment)

- Gender responsive pedagogy.

- Crosscutting issues related to the teaching of science and mathematics (inclusive education, ICT)

- Professional knowledge and awareness of policies related to teaching.

Skills

To fulfil its responsibilities related to the support of teachers an SSL should DO the following:

- Support teachers in teaching science and maths using a range of active and participatory methods.

- Selecting and using a variety of suitable teaching and learning materials.

- Apply a range of monitoring and evaluation skills.

- Use different teaching techniques appropriate to the teaching of mathematics and science.

- Interpret and enrich the maths and science curriculum.

- Use a wide range of formative and summative assessment skills.

- Use a range of feedback techniques.

- Use proper subject/specific terms in English and Kinyarwanda for mathematics and science education.

- Apply ICT skills (literacy) in the teaching of mathematics and science.

  - use the internet for a wide range of applications of teaching science and mathematics.

  - conduct action research on teaching science and maths.

- Demonstrate effective Communication skills

  - Talking effectively;

  - Active listening;

  - Speaking and writing English and Kinyarwanda;

  - Giving constructive feedback;

- Use coaching and mentoring skills:

  - Help teachers to formulate their own goals to improve teaching science and maths;

  - Evaluation skills of progress of teachers in teaching science and math;

  - Support teachers to reflect on their teaching practice;

  - Questioning in an open way/ open practice;

  - Relate existing to esired practices;

  - Modelling;

  - Formulate the need between current condition and the wanted condition;

  - Organise CPD for teachers.

- Collect, maintain, distribute different sources and materials for teaching science and math

- Apply improvisation strategies/techniques to facilitate the teaching of science and math.

Attitudes

To fulfil these responsibilities related to the support of teachers, SSL should show the following:

- Punctuality.

- Flexibility.

- Innovation

- Willing to share experiences/ good communication.

- Positive mindset towards NTs.

- Self-confidence.

- Accountability.

- Integrity

- Being an example to all science and maths teachers.

- Honesty.

- Self-respect.

- Perseverance.

- Sociability.

Appendix 2: Template for Coaching Conversations based on the GRROW Model

	EXPLORE	APPRECIATE & REINFORCE	CONFRONT & STAY CONNECTED	CHALLENGE	INSPIRE	ALLOW & CREATE SPACE	RELAX & KEEP SENSE OF HUMOUR
GOAL							
REALITY							
RESOURCES							
OPTIONS							
WILL							

Appendix 3: Example of a One-Year Induction Programme

Note: in-school NT mentor is preferably an SSL

Timeline	Induction Activities			
		Type	**Duration**	**Facilitator**
Before starting to teach	1	Introduction to induction programme		DDE & SEOs
	2	Logistical support for accommodation		DDE & SEOs
	3	Introduction to school's mission, values, policies, procedures & resources	40-60min	Head teacher
	4	Visit of classrooms and staffroom	40min	(Deputy) head teacher
Term 1: 10 weeks				
Week 1 & 2	1	Appointing a mentor to each NT	20min	Head teacher
	2	Introduction to colleagues, learners, school general assembly committee	40-60min	Head teacher
	3	Providing classroom materials including curriculum resources	40-80min	in-school NT mentor
	4	Introduction to record keeping	40min	in-school NT mentor
Week 3 & 4	5	Sharing roles & responsibilities between mentor and NT	40min	in-school NT mentor
	6	Needs assessment of the NT	40min	in-school NT mentor
	7	Development of individual CPD plan (goals and actions)	80min	in-school NT mentor
Week 5 & 6	8	Mentoring activity	40-60min	in-school NT mentor
	9	Community of Practice (CoP) session	120 min	SBM/SSL/DHTS

Week 7 & 8	10	Mentoring activity	40-60min	in-school NT mentor
Week 9 & 10	11	Mentoring activity	40-60min	in-school NT mentor
Term 2: 15 weeks				
Week 1 & 2	1	Mentoring activity: lesson observation for informal evaluation	80min	NT mentor from pre-service & in-school NT mentor
	2	Mentoring activity: Analysing student work and results	40min	NT mentor from pre-service & in-school NT mentor
	3	Mentoring activity: Review of NT CPD Plan	40min	NT mentor from TTC & in-school NT mentor
	4	Approving reviewed NT CPD plan	20 min	Deputy head teacher with NT mentors
	5	Monitoring the induction programme	40 min	(D)HT & NT-mentors
Week 3 & 4	6	Mentoring activity	40-60 min	in-school NT mentor
	7	CoP session	120 min	SBM/SSL/ DHT
Week 5 & 6	8	Mentoring activity: informal evaluation	40-60min	In-school NT mentor
Week 7 & 8	9	Mentoring activity	40-60min	In-school NT mentor
Week 9 & 10	10	Mentoring activity	40-60min	In-school NT mentor
Week 11 &12	11	Mentoring activity	40-60min	In-school NT mentor
	12	CoP session	60min	SSL/ SBM/DHT
	13	Lesson observation for formal evaluation	60 min	(Deputy) head teacher

	14	Mentoring activity	40-60min	SSL
Week 13 & 14	15	Mentoring activity	40-60min	SSL
	16	Mentoring activity	40-60min	SSL
Week 15		No activity		
Term 3: 14 weeks				
Week 1 & 2	1	Mentoring activity: lesson observation for informal evaluation	80min	NT mentor from pre-service & in-school NT mentor
	2	Mentoring activity: analysing student work and results	40min	NT mentor from pre-service & in-school NT mentor
	3	Mentoring activity: review NT CPD plan (review progress and set targets)	40min	NT mentor from pre-service & in-school NT mentor
	4	Approving reviewed NT CPD plan	40-60min	D(HT) & NT mentors
	5	Monitoring the induction programme	40 min	(D)HT & NT-mentors
Week 3 & 4	6	Mentoring activity	40-60 min	in-school NT mentor
	7	CoP session	120 min	SBM/SSL/DHT
Week 5 & 6	8	Mentoring activity: lesson observation for informal evaluation	40-60min	(D)HT
Week 7 & 8	9	Mentoring activity	40-60min	in-school NT mentor
	10	CoP session	120 min	SBM/SSL/ DHT
	11	Mentoring activity: lesson observation for formal evaluation	60 min	in-school NT mentor

Week 9 & 10	12	Mentoring activity	40-60min	in-school NT mentor
	13	Mentoring activity: lesson observation for formal evaluation	60 min	(D)HT
Week 11	14	Mentoring activity: End-of-year review NT CPD plan	80min	NT mentor from pre-service & in-school NT mentor
	15	Monitoring the induction programme	40min	NT mentor from pre-service & in-school NT mentor
	15	End-of-year review of NT by NT mentor from TTC together with in-school NT mentor	40-60min	NT mentor from TTC & in-school NT mentor
Week 12, 13 & 14	13	No activity		
Ongoing throughout the induction year				
		Informal discussions/meetings with in-school NT mentor (SSL), NT mentor from TTC, other colleagues and SEO		
		Regular or supportive communication with (deputy) head teacher		in-school NT mentor
		Self-study		NT
		Seminars/trainings		in-school NT mentor & SEO

Appendix 4: Questions for Coaching Conversations with STEM Teachers

Questions are based on West & Staub, 2003.

Questions about the goals and the plan for the lesson:

- What is your plan for the lesson?

- Where in your plan would you like some assistance? (based on the teacher's response, the coach focuses on one or more of the following ideas.)

- What is the key question for this lesson?

- What skills (applications, practice) are being taught in this lesson?

- What tools are needed (e.g., experiment materials, rulers, pattern blocks…)?

- Do any of these concepts and/ or skills are addressed at other points in the unit?

- Which goal is your priority for this lesson?

- How does this lesson contribute to the achievement of your primary goal?

What are students' prior knowledge and difficulties?

- What related and relevant knowledge have you already explored with the learners?

- What relevant contexts could you integrate in this lesson?

- What do you predict that students may find difficult or confusing?

- What misconceptions may students have about the lesson content?

- What ideas might students begin to express and what language might they use?

How does the lesson help students reach the goals that you have set out?

- What grouping structue will you use and why?

- What opening question do you have in mind (to capture interest, to activate prior knowledge)? Can you think of an alternative?

- How do you plan to present the tasks or problems? Can you give different options?

- What model, manipulative or visual will you use?

- What activities will move students towards the stated goals?

- What will students say or do that will demonstrate their learning?

- How do you plan to assist those students who you predict will have difficulties?

- What extensions or challenges will you provide for students who are ready for them?