

TDC PROGRAM

Dec. 2018 -
Feb. 2019



Teacher Development Coordinator Handbook

LIC 4

TEACHING LEARNING STRATEGIES

Name of TDC:

Name of Mentor Teacher:

Name of School:

School ID:



मनीष सिंसोदिया
MANISH SISODIA



उप मुख्यमंत्री, दिल्ली सरकार
दिल्ली सचिवालय, आई. पी. एस्टेट,
नई दिल्ली-110002

Deputy Chief Minister, GNCTD
Delhi Secretariat, I.P. Estate,
New Delhi-110002

Dear friends,

Delhi's Education Reforms have come a long way with your support over the past two years. In this period, we have made several strides towards making provide quality and accessible education to our children through government schools. School infrastructure is in the process of an overhaul that will take care of our needs at the current rate of enrollment for the next ten years.

The government has also reimagined the way teacher training workshops are conducted. Through the Mentor Teacher Program launched last year, the foundation for a long term academic support system for teachers has been laid. The discourse in our schools has begun to focus more on learning outcomes and how we as educators can achieve them.

In order for us to build on this strong foundation, our goal has to be to transform the classroom experience for our children. The role of Teacher Development Coordinators (TDCs) and Mentor Teachers (MTs) in influencing the teaching learning methodologies used in classrooms is crucial. In the months and years to come, as TDCs and MTs you have your tasks cut out for you.

I welcome you into this role and assure you complete support and backing of the government in the process of achieving our joint goals in education. The government is delighted to have driven, passionate and dynamic teaching professionals on board for such programs. I wish you the best in this mission.

Warm regards,

Manish Sisodia

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SECTION ONE

Teacher Development Program (TDC) Overview



IN THIS SECTION

- Introduction to TDC program
- Major Milestones
- Data reflections of last year

Introduction to TDC Program

The Teacher Development Coordinator (TDC) program is an initiative introduced by State Council for Education Research and Training (SCERT) as an extension of flagship Mentor Teacher Program with the vision of creating a collaborative platform of teacher teaching in all Directorate of Education (DOE) Schools.

Through the TDC program we aspire to work together to build a movement of motivated and professional teachers who are committed to improving children's learning and to restore the noble status of teaching as our profession. Apart from taking on the role of the overall professional development of teachers in a school as a Teacher Development Coordinator (TDC) you will build and lead a teacher group/network called the Academic Resource Team (ART) consisting of few key champion teachers. This will be an on-going, community of practice through whom all teachers of the school can tangibly improve their classroom practice and children's learning.

The TDC program has successfully reached out to all 13 districts in the state of Delhi, covering 1024 schools. The District Institute of Education and Training (DIET) is the academic lead of the TDC program – this institute has supported the program in almost every aspect. Nine DIETS' with 24 facilitators including DIET Principals, DIET lecturers and BRPs across Delhi play a central role in the operation and facilitation of the programme. Alongside DIET staff – 200 Mentor Teachers (MTs) also provide regular support to the TDCs, along with nine Program Managers from STIR with one in each DIET thus, supporting the TDC program in districts as well. As per the requirements of the programme various avenues and platforms of engagement were created which aimed at the professional development of the teachers. Thus, 30 minutes' sessions take place on a daily basis, along with one-on-one sessions, monthly meetings etc.

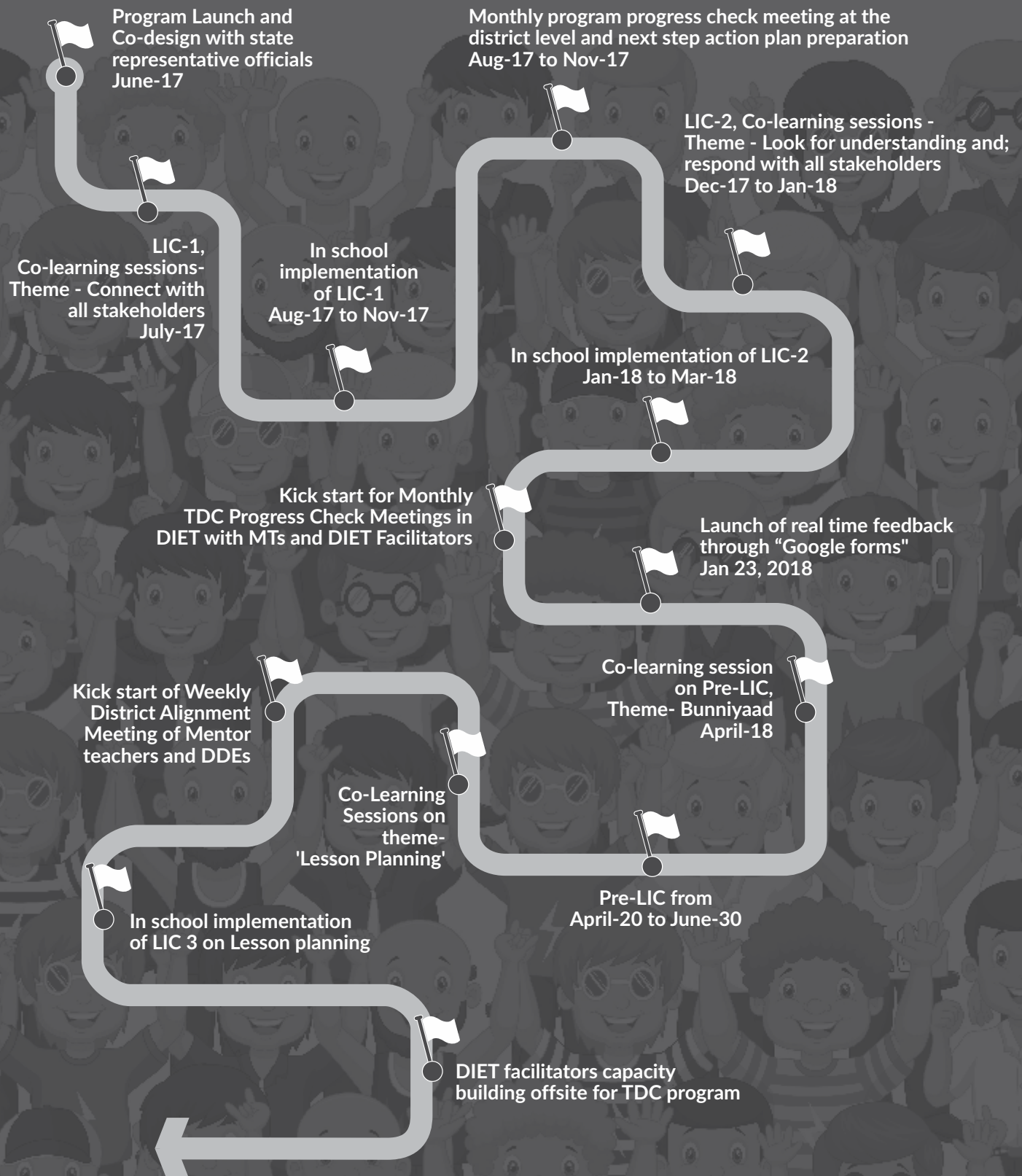
The role of a TDC is of supporting teachers in creating 'school as learning organisation'. The aim is that the TDC will contribute to the development and management of a consistent and cohesive academic environment in school where everyone can learn.

The main purpose of TDC program is to create a system where everyone learns and everyone is intrinsically motivated to sustain learning outcomes and improving classroom practices at all levels. The focus of the program is around:

- i. Techniques that can improve students' foundational skills (Literacy and Numeracy levels) as well as the overall student learning outcome
- ii. Classroom practices that are engaging, and supports learning with understanding
- iii. Teacher's collective and individual capacity and professional development

This handbook has been designed to enable the Teacher Development Coordinator (TDC) to work as a facilitator in strengthening academic environment in their respective schools by conducting academic discussions during monthly ART meetings, 30 minutes' sessions and approaching teachers individually on a regular basis.

Major Milestones



Data Reflections from Last Year



ART MEETINGS ORGANIZATION

LIC-1			LIC-2			Pre-LIC	LIC-3		
ART-1	ART-2	ART-3	ART-1	ART-2	ART-3	ART-1	ART-1	ART-2	ART-3
711	681	659	657	553	431	664	746	865	750



ART MEMBERS PARTICIPATION

LIC-1			LIC-2			Pre-LIC	LIC-3		
ART-1	ART-2	ART-3	ART-1	ART-2	ART-3	ART-1	ART-1	ART-2	ART-3
5622	5351	5363	5609	4997	3234	6087	8506	8552	7500

5,967* Meetings

5,924* ART members

80* minutes average time

Ref: * Insight from TDC google form for LIC2,3, and Pre-LIC. * Insight from TDC google form for LIC2,3, and Pre-LIC

DATA

On an average, throughout the LICs

59% Female and **41% Male**

ART members participated in the ART meetings.

PUNCTUALITY

92% of the ART members

were present for the pre-LIC meeting at the scheduled time.

INSIGHTS FROM THE ART MEETINGS



31% TDC shared that students have started **coming regularly** to schools (LIC-1)

61% TDC shared students have started **asking questions** in state of doubt (LIC-1 and 2)

60% TDC shared that theme was relevant to classroom and I was **able to use the strategies** suggested in the handbook. (LIC-2)

35% TDC shared Teachers in my school has become **more observant** of student's needs (Pre-LIC)

61% respondents have shown interest to **voluntary attend** the skill building sessions on Leadership skills, Teaching and Learning of Language, Teaching and Learning of Mathematics, Mentoring skills. (Pre-LIC)

94% TDC shared that the discussion in ART-1 meeting was on Lesson Planning (LIC-3)

DATA In **61%** ART meetings TDC gave ART Members the opportunity to work in pairs or small groups

Qualitative Aspect

LEARNING ORIENTATION



TDCs have shared that previously they were less interested in the TDC Program but with the programmatic journey they are now witnessing a shift in the mindsets among fellow teachers, and they are now more open to learning new methodologies through workshops and are experimenting to implement them with the student through fellow teachers. From the feedback of TDCs Co-Learning sessions 61% respondents have shown interest to voluntarily attend the skill building sessions on Leadership skills, Teaching and Learning of Language, Teaching and Learning of Mathematics, Mentoring skills.

The strategies proposed in LIC-2 were implemented by

96% of the respondents.

61% responses from TDCs have shown interest in capacity development session

ACADEMIC INCLINATION



The environment in schools has become more conducive to academic discourse, there are instances where some MTs have shared that teachers of different schools are discussing the academic issues even beyond school hours. TDCs has shared that now they see a growth in the understanding and inter-connectivity among the teachers, students, and parents.

Cumulatively

10,058 ART Members

participated in three ART Meetings

PLANNING



The qualitative inputs by PM through ART meeting observation and quantitative DATA on the LIC through google forms has helped the stakeholders i.e. DIET, MTs, TDCs, and HoS to reflect and has provided an opportunity for focused district specific planning through DPCM and DAM.

PMs have observed more than

80% ART meetings against the target

37% TDCs and ART Members

cumulative responses project a requirement for resources for making TLMs

CLASSROOM PRACTICES



In **77%** meetings action plan to implement Lesson plan was created *

In **96%** meetings discussion was related to student learning*

In **90% ±** meetings teacher appreciated their efforts

PM CLASSROOM OBSERVATIONS

- Out of total Classroom Observed 68% were of high quality
- There is shift in the energy levels of the teachers and have become eager to learn during the feedback session that is being provided through Classroom Practice Development Framework.
- Group work is also being practiced in class and one can see a variety of material used depending on the availability of resources.
- The teachers have started effectively incorporating techniques like mind map for initiating and mostly in concluding the class.
- Structure of the lesson planning was shared with the TDCs in the co-learning sessions. Teachers are being encouraged to practice Lesson planning in the schools. This pushes the teachers to have a concrete plan before they enter the classrooms and helps them to discover the inner potential of the students
- They have started planning various activities like reading, reflection, explanation by students to ensure students are engaged, responsive and interested.
- Additionally empathy, dedication, real-life applications and connections with previous knowledge are also being discussed in class.

SECTION TWO

Learning Improvement Cycles and Roles of Stakeholders

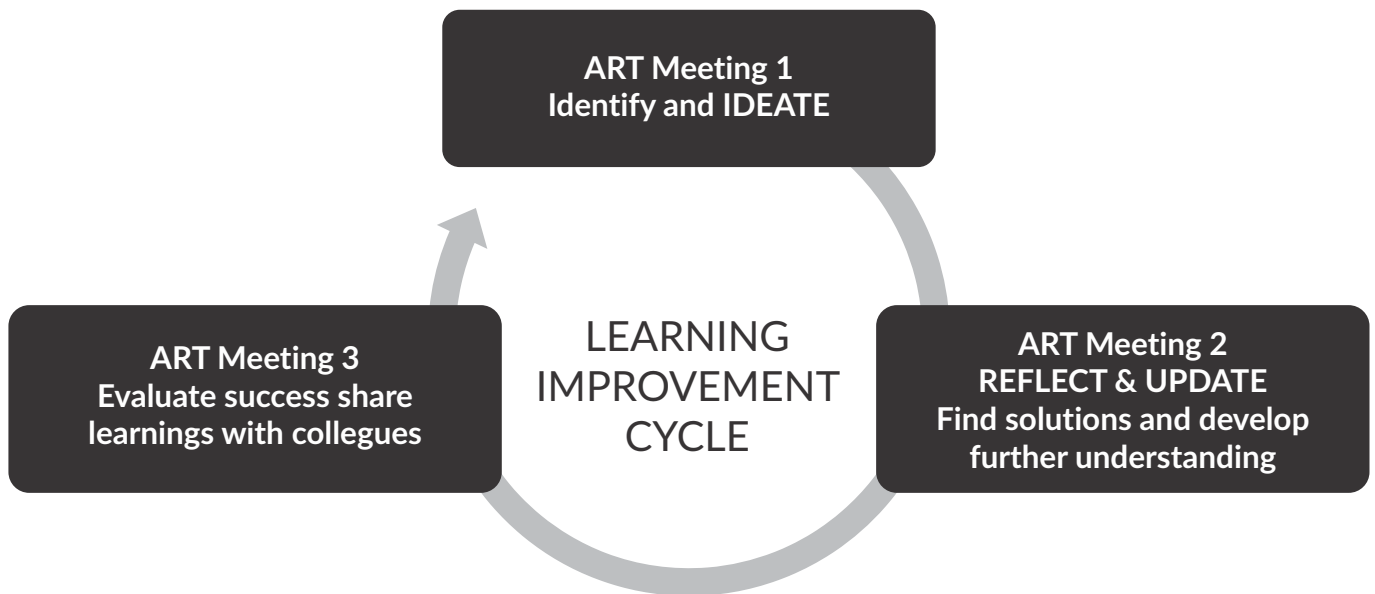


IN THIS SECTION

- Our Design: Learning Improvement Cycle Structure
- Program Support Structure to TDCs
- Forms of Engagement and expectations of TDCs
- Introduction to LIC theme of Teaching Learning Strategy

Our Design: - Learning Improvement Cycle Structure

The Learning Improvement Cycle (LIC) is an improvement process designed specially to support actual changes in classroom practices as well as to develop teacher professional mindsets and behaviours. By providing teachers with opportunities to see progress, create something together and work towards a shared goal, it includes all the ingredients required to build motivation and support behaviour change.



Program Support Structure to TDCs

- ⦿ 3x co learning sessions each academic year (led by Facilitator Group with the support of Mentor Teachers) to empower TDCs to lead effective teacher professional development sessions and bring a shift in classroom practice amongst teachers in their respective schools through effective classroom observations and feedback
- ⦿ 2x Support visits by MTs per school per cycle to observe network meetings and reflection meetings with MTs.
- ⦿ 2x support visit by MTs per school per cycle during various other forms of engagement (30min daily meetings, faculty meetings, etc)
- ⦿ 1x per month Mentor teacher with DDEs and DIET officials as a district level representation to share learnings based on data
- ⦿ 3x Google forms for TDCs and ART members to share their feedback on meeting completion and implementation of design.

Forums of Engagement and Expectations from TDCs

Monthly ART Meetings



Academic Resource team (ART) is a core group of teachers who will support the academic needs of the school. On average it is best to have 10% of the teachers of a school consisting of motivated and highly diverse (consisting of all subject, grade, etc) to the extent possible. Through the ART is perhaps the only way you as a TDC can reach (or have a touch point) with all teachers in your school (especially if your school has more than 25 teachers).

Expectation from TDCs

- TDCs are expected to conduct one ART meeting per month as a part of LIC program. In total they have to do 3 ART meetings in one LIC.
- TDCs are expected to give feedback on Google forms post completion of their ART Network meetings. They also have to make sure that the feedback on google forms are also taken by ART members.
- TDCs are expected to help teachers in written reflections in their teacher's diary.

There are detailed structured session plans given in your Handbook from Page no. 14 onwards for your help to conduct ART meetings effectively.

Daily 30-minute Meetings



The aim of the 30-minute meeting is to develop a culture of academic discussions in school focused on developing it as an excellent learning organization and therefore achieving part of the overall vision of “An education system where everyone learns”.

As a TDC, it provides you with an opportunity to initiate discussions centred around the three main priorities, namely:

- A. Techniques that can improve students' foundational skills (Literacy and Numeracy levels) as well as the overall student learning outcome.

- B. Classroom practices that are engaging, and supports learning with understanding.
- C. Teacher's collective and individual capacity and Professional development.

Expectation from TDCs

- Ensuring 30 minutes' session are happening on a daily basis in schools to promote a culture of academic discourse and collaboration.
- The focus in school's constructive problem solving in schools where every teacher gets a chance to express and share.

Key tips to structuring the 30-minute meeting

1. Sharing learning profile of kids with teachers in the 30-minute session. The learning profile can be shared with respect to following indicators:-
 - Name of Student
 - Strength of the child(Both subject and competency)
 - Circumstances at home (Parents aligned to education)
2. Sharing different Teaching Learning Strategies used by teachers in different classes to make teacher learning process useful. This discussion can be done in whole group and also between subject specific teachers
3. Choose a strategy from previous themes of Building Connect, Look for Understanding and Respond, Mission Buniyaad and Lesson Planning. Focus on revision of strategies around particular theme and how they are continuing in their respective classes.
4. Discussion on non-pedagogic issues like child safety, attendance and student health. Major objective is to find constructive solutions to a problem as a team.
5. Strategies for improvement in reading in schools

Also it is requested from everyone to continue sharing different learning material in form of videos, pictures, reading content in your WhatsApp groups which can be helpful for students. The overall idea is centred on cross sharing and continuous improvement.

One on One Sessions



One on One sessions or Individual sessions can prove to be a useful way for having more personalised discussions with the teachers in school. As a TDC, it provides you with the opportunity to: -

- **Building rapport and credibility with the fellow teachers.** And breaks the myth of a rigid hierarchy
- **Create a mentor-mentee relationship.** Teachers will eventually be more proactive in talking to you about key issues.
- **Have deeper discussions on any given topic.** You might find that a particular teacher may want to have longer discussions on a particular topic which other members of that meeting may not be interested. Through the one-on-one you will now be able to address it
- **Seek and give feedback to each other.** It would be awkward sometimes to give or receive feedback in a group setting. Be open and take initiatives to seek feedback from the teachers too.

General Suggestions for holding an effective 'One on One' session:-

- **Being present, listening actively and clarifying:** It's very important to be present and listen attentively to the teacher. It will help you understand her/his challenge better and respond accordingly.
- **Communicating clearly, succinctly and effectively:** It's important to communicate clearly to avoid any sorts of confusion.
- **Asking appropriate questions to gain understanding:** It's important to understand the other person's challenges in any such session. Asking questions that helps you build your understanding is an important skill to have.
- **Using intuition:** Sometimes we get the feeling that the person we are talking to has not expressed what they really want to say, or are not being open about their emotions. We can use our intuition to formulate appropriate questions to help the person open up a bit more.
- **Suspending assumptions:** It is best to clarify than to assume something to be true. We must use skilled questioning to enable **them** to express how they are thinking and feel.
- **Giving supportive feedback:** An effective Mentor, always remember to give praise, encouragement and congratulations, whenever this is genuine and appropriate.

Classroom Observation and Feedback

The objective of classroom observations is to observe effectiveness of the classroom processes and provide constructive feedback to the teachers.

Classroom observations must be a positive and supportive experience for the teachers. The purpose of the classroom observation is to observe how the teacher is using the Teaching Learning Strategies and to provide suggestions to improve the Teaching Learning Strategies to enhance the overall teaching learning experience for both teachers as well as students.

Some of the key pointers to keep in mind for Classroom Observation.

Before the Observation

1. Ensure that the lesson plan has been shared for the specific class that you choose to observe.
2. Ensure that MT is present during all the classroom observations that you make.

During the Observation

4. Arrive before the class begins, rather than entering sometime during the middle of the lesson.
5. Be discrete, sit where students are not distracted by your presence and are not in the overt line of vision, but at the same time you are able to see both teacher and students
6. Take brief notes when necessary and ensure that these notes relate to the teaching and learning taking place rather than comment on the content of the session
7. Be mindful of your mannerisms and body language during the observation as this can impact on teaching practice and on student learning.
8. Try and keep interactions with students at a minimum.

Post Observation

1. Ensure that your feedback is constructive and specific to actions that teachers can take to make classroom practices more effective.

Please refer to Annexure A the Classroom Practice Development Framework.

Introduction to the fourth LIC Theme

Teaching Learning Strategies

The concept of 'learning' is complex. What does it mean to have 'learned' something? Where 'learning' is really effective, it is where we have stored information in our long term memory in a way that we can make sense of. For example, our ability to speak our mother tongue is because we have 'learned' it to the extent we can remember all the required words, and we have stored it in a way we can easily make sense of and ultimately use. Understanding this definition of learning is crucial for teachers, as this should underpin what strategies they use in the classroom; the highest impact Teaching Learning Strategies, then, are those which most easily facilitate the process of helping students remember things in ways they can easily understand.

*“Learning a skill is totally different from learning a concept. Many teachers are aware of these two contradictory facts- drill can be boring, and yet practice is the only way for their students to master certain procedures. The problem with drill comes when we assume that it will **substitute for understanding**. Concepts and procedures are two different things, both of which students need to learn. Practice alone cannot lead to conceptual knowledge, and understanding alone cannot lead to mastery of a procedure. Relationship between conceptual and procedural knowledge is bi-directional. Reflecting on the use of a procedure reinforces our understanding of the concept. We should ask students **whether** and **why** certain procedure work and other procedures are incorrect (for example, while adding large numbers, why is it important that we place them one under the other in a particular way?)”*

-Kamala V. Mukunda

Here comes the role of Teaching Learning Strategies we bring in our classrooms. Teaching Learning Strategies are those applications that fuel effective and efficient classroom interaction to drive students on their journey of discovery in a learning experience.

There is a good amount of research investigating the effectiveness of Teaching Learning Strategies for activating prior knowledge as a means to support students' reading comprehension and learning. Prior knowledge activation is regarded as a research-validated approach for improving children's memory and comprehension of text. Using prompts, probing questions, hints, cue cards, books, other resources can be helpful in eliminating the anxiety of failure and encouraging efforts, however, the usage needs to be timed.

Reference: <http://www.cccbsi.org/Websites/basicskills/Images/InstructionalPractices.pdf>

SECTION THREE

ART Meeting Plans



IN THIS SECTION

- Phase 1: Identifying challenges in and implementing classroom strategies around 'Teaching Learning Strategy'.
- Phase 2: Reflection and improvement of strategies that were implemented in the classroom and develop further understanding around 'Teaching Learning Strategies'.
- Phase 3: Evaluation of the impact classroom strategies across the school system.

Phase 1: Identifying Challenges in and Implementation of Teaching Learning Strategy



MONTHLY ART MEETING - 1




OVERALL OBJECTIVE OF THE MEETING



- Officially Welcoming Academic Resource Team to the new Learning Improvement Cycle with theme 'Teaching Learning Strategies'
- Introducing Teaching Learning Strategies : Elaborative Questioning and Retrieval Practice
- Identifying the challenges under given theme and co-creating/selecting solutions for them and hence executing the first step of LIC.

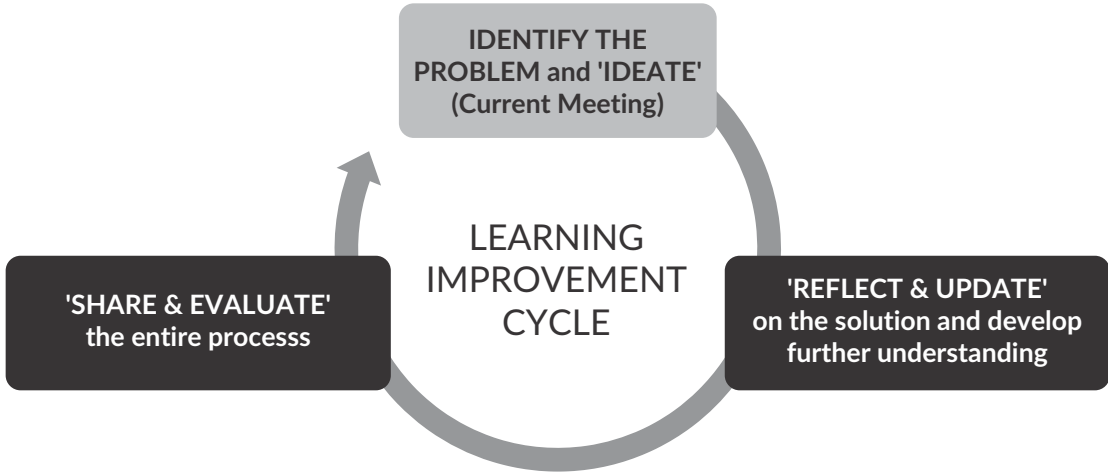
Simple Facilitation Guide

Key Steps	Time	Area of Discussion	TDC's Notes
Step-1 Welcome, building bond and Introduction to the programme	15 minutes	<ul style="list-style-type: none"> • Welcoming teachers to the First ART meeting • Community Agreement • Energizer • Brief about the first meeting <ol style="list-style-type: none"> i. Meeting structure ii. Meeting aims 	
Step-2 Sharing, Support and Feedback	15 minutes	<ul style="list-style-type: none"> • Teaching Learning Strategies: - Introduction of theme one pager 	
Step-3 Develop Teachers Professional Behaviours and Mindset	30 minutes	<ul style="list-style-type: none"> • Introducing of Elaborative Questioning • Introducing Retrieval Practice 	
Step-4 Create an Action Plan	20 minutes	Create an Action Plan (<i>choose a classroom strategy</i>) to implement in your classroom or school)	
Step-5 Closing and Next Steps	10 minutes	Closing and Reminders	




Detailed Instruction for ART Meeting - 1

STEP ONE	WELCOME, BUILDING BOND AND INTRODUCTION TO THE MEETING (15 min)
<p>Welcome</p> 	<ul style="list-style-type: none"> • Welcome your teachers to the journey and specifically to the Learning Improvement Cycle (LIC) which focuses on the theme: 'Teaching Learning Strategies'. • Thank teachers for coming and in a special way recognize the teachers who came on time.
<p>Agenda and aims for the meeting</p> 	<p>Start with explaining the 5 steps of the meeting and the expected outcome from the meeting.</p> <p>Meeting Aims:</p> <ul style="list-style-type: none"> • Officially Welcoming Academic Resource Team to the new Learning Improvement Cycle with theme 'Teaching Learning Strategies'. • Identifying the challenges under given theme and co-creating/selecting solutions for them and hence executing the first step of LIC.
<p>Community Agreement</p> 	<ul style="list-style-type: none"> • Say to the participants, “To achieve the explained objectives effectively, we are going to create a set of mutually agreed rules which we will follow throughout the meeting. Let's call these rules as Community agreements...” • We will keep on updating these rules if required for better functioning of our meeting”. • The idea behind community agreements is :- <ul style="list-style-type: none"> ✓ Everyone takes responsibility for keeping the meeting on track. ✓ Regulate behaviours of participants ✓ Ensure mutual respect and avoid conflicting situation <p>Few examples of community agreements are given below:</p> <ul style="list-style-type: none"> ✓ Avoid putting down of yourself or others (everyone has their own perspective) ✓ Be willing to try new things (doing so will help you innovate) ✓ Listen well ✓ Participate fully – (try not use cell phones at this time) ✓ Be willing to share your reflections <div data-bbox="296 1733 363 1806"> </div> <div data-bbox="379 1754 651 1789" data-label="Section-Header"> <p>FACILITATOR'S TIP</p> </div> <div data-bbox="402 1806 1423 1880" data-label="Text"> <p><i>Write these in a chart paper before starting the meeting (to save time) and ask teachers to read and mutually agree on it, if needed teachers can add or delete few.</i></p> </div>


<p>Energizer: (Based on Teaching Learning Strategy)</p> 	<ul style="list-style-type: none"> • Create your own energizer and conduct it with the participants OR you can try this one: <div data-bbox="300 232 651 297">  FACILITATOR'S TIP </div> <div data-bbox="383 291 1449 366" style="background-color: #f0f0f0; padding: 5px;"> Please choose an energizer that will take less than 5 minutes. </div> <p>Move to the spot</p> <p>Ask everyone to choose a particular spot in the room. They start the game by standing on their 'spot'. Instruct people to walk around the room and carry out a particular action, for example, hopping, saying hello to everyone wearing blue or walking backwards, etc. When the facilitator says “Stop”, everyone must run to his or her original spots. The person who reaches their place first is the next leader and can instruct the group to do what they wish.</p>
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STEP TWO	SHARE, SUPPORT AND FEEDBACK (20 min)
<p>Understanding LIC</p>	<ul style="list-style-type: none"> • Remind ART that we are in the first meeting of LIC-4 and we will be focusing on identifying the challenge on the mentioned theme. The discussion will revolve around our current theme, 'Teaching Learning Strategies'. <div data-bbox="347 970 1460 1444">  <pre> graph TD A[IDENTIFY THE PROBLEM and 'IDEATE' (Current Meeting)] --> B['REFLECT & UPDATE' on the solution and develop further understanding] B --> C['SHARE & EVALUATE' the entire process] C --> A subgraph Cycle A B C end </pre> </div>
<p>Introducing the Theme (Teaching Learning Strategies)</p>	<p>Introduce the new theme “Teaching Learning Strategies”</p> <p><i>“Learning a skill is totally different from learning a concept. Many teachers are aware of these two contradictory facts- drill can be boring, and yet practice is the only way for their students to master certain procedures. The problem with drill comes when we assume that it will substitute for understanding. Concepts and procedures are two different things, both of which students need to learn. Practice alone cannot lead to conceptual knowledge, and understanding alone cannot lead to mastery of a procedure. Relationship between conceptual and procedural knowledge is bi-directional. Reflecting on the use of a procedure reinforces our understanding of the concept. We should ask students whether and why certain procedure work and other procedures are incorrect (for example, while adding large numbers, why is it important that we place them one under the other in a particular way?)” - Kamala V. Mukunda</i></p> <p>Detailed discussion on one pager Page no. 13</p>

	<p>Reflective questions:</p> <ul style="list-style-type: none"> • Why are teaching learning strategies important for the learning process? How do they promote learning? • According to you, what are the components of effective Teaching Learning Strategies? <p>References: Book: 'What did you ask in school today', Kamala V. Mukunda</p>
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STEP THREE	PRACTICING TEACHERS' PROFESSIONAL BEHAVIOURS AND MINDSETS (30 min)
<p>Introducing the session</p> 	<p>Elaborative Questioning:</p> <p>In this meeting, we will first explore elaborative questioning skills as a teaching learning strategy. This method of questioning aims to encourage learners to give explanations (i.e., elaborate) for their answers, mostly using 'how' and 'why' questioning.</p> <p>Video on elaborative questioning: https://www.youtube.com/watch?v=RuyvPB3cXBo&t=180s </p> <p>Points to discuss after watching videos: (ART members to note their responses/ideas in their diaries for further reference.)</p> <ul style="list-style-type: none"> • What, according to you, is the role of teacher in this video? • How does elaborative questioning enable student learning? Substantiate with your classroom's example. <i>(it promotes 'reflection' and 'deep thinking' amongst students)</i> • What are some of essentials to keep in mind when using elaborative questioning as a teaching learning strategy? • How can you use this strategy in your subject teaching? <p>Note: Refer to the reading on elaborative questioning on page no.</p> <p>Retrieval Practice :</p> <p>Show teachers the Suggested Video on retrieval practice. https://www.youtube.com/watch?v=kA9WCpePT14 </p> <p>Before showing the video share with teachers that though this video is in English and not specifically a classroom example, it beautifully explains what the practice is all about. It also, highlights some specific methods to be used in the classroom as part of retrieval practice.</p> <p>The questions to reflect on:</p> <ul style="list-style-type: none"> • What according to you is retrieval practice? What is the purpose of using it in classrooms? <i>(Discuss the concept of this practice and emphasize the purpose of it as an teaching learning strategy to improve student learning and not as an assessment strategy for the purpose of grading)</i> • How can you use retrieval practice in your classrooms? Give examples.

	<p><i>(Elicit subject examples of this from the teachers, talk about the nature of questions, frequency etc.)</i></p> <ul style="list-style-type: none"> • What are some of the challenges that you anticipate in using retrieval practice? <i>(Allow teachers to voice their concerns, probable responses will be related to it taking more time during the lesson, syllabus completion etc. focus on how retrieval practice doesn't take more classroom time it involves using classroom time more effectively. Think about the activities you currently use in class in other words, are students using their "time on task" effectively?)</i> • Have teachers refer to the handout on retrieval practice (Refer to Handout 2).
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STEP FOUR	
CREATE AN ACTION PLAN (20 min)	
Introduction to the session	<p><i>Now that we have a firm understanding of the theme 'Teaching Learning Strategies', let's create an action plan for how to use these strategies and skills.</i></p> <ul style="list-style-type: none"> • Divide teachers into small groups. Ask them to refer to the different ideas related to the strategies explained on the handbook. Ask them to discuss these ideas in their respective groups/pairs in the next 10 minutes. • They should select one of the ideas (ways of using the strategy) to implement in their classrooms. Encourage teachers to implement at least one idea related to both the strategies in their classroom before the next ART meeting. Refer to the section on suggestive ideas for classrooms on page no. • Ask teachers to share the reasons for selection. They are free to modify or adapt the ideas as per their lesson or classrooms. • Identify the changes they hope to see in their classroom as a result of using the strategy. • Give teachers 5 minutes to note their reflection in their teacher's diary for ideation and thank them for their participation. • Emphasize that teachers need to work together as a team to build in collaboration. Tell them that they are a great resource for each other in school and by working together on the same activity they can help each other continue to improve, stay motivated and spread the ideas to other teachers as well. <div>  <p>NOTE</p> <p><i>Teachers can chose multiple, different classroom strategies as well, which falls in line with our current theme, suited to their classroom. Also remind them that we will not stop to build connect plan our lessons and use appropriate assessment strategies in our classrooms.</i></p> </div>

STEP FIVE**CLOSING AND NEXT STEPS (10 min)**

- Referring to the handbook, ask teachers to clearly state their plan/timeline of Strategy implementation around elaborative questioning and retrieval practice .
- Suggest teachers to self-reflect on their classroom practices done after the ART meeting in their respective diaries.
- Suggest that teachers can link these activities while revising for examinations and try to assess students' efforts using these classroom practices.
- Tell them that we can continue to discuss what we learnt today with our school teachers in 30 minutes' sessions too.
- Remember to end the meeting on a high!
 - Ask one of them to share a story, positive incident from the classroom or a poem or a small energizer to end the meeting on a positive note.

SELF-REFLECTION



Major Reflections of ART members

Suggestions by PM/MT

Plan for next ART Meeting

Other Reflection Points

Phase 2: Reflection and improvement of classroom strategies that were implemented in the classroom and develop further understanding around 'Teaching Learning Strategies'



MONTHLY ART MEETING - 2






OVERALL OBJECTIVE OF THE MEETING

- To reflect and update on our efforts to implement the 'Teaching Learning Strategies'
- To build on our understanding of the theme 'Teaching Learning Strategies' and discuss ways to implement in our classroom.
- To discuss and create an action plan to strengthen our implementation based on reflections.

Simple Facilitation Guide

Key Steps	Time	Area of discussion	TDC's Notes
Step 1 Welcome, building bond	15 minutes	<ul style="list-style-type: none"> • Welcoming teachers to the second network meeting • Reference to the Community Agreement • Energizer • Brief about the Second Network Meeting aims 	
Step 2 Sharing, Support and Feedback	25 minutes	<ul style="list-style-type: none"> • Reflection on the first meeting 	
Step 3 Develop teachers professional behaviour and mindset	15 minutes	<ul style="list-style-type: none"> • Discussion on Importance of Data and Google Forms. 	
Step 4 Create an action plan	25 minutes	<ul style="list-style-type: none"> • Develop an action in group- Select a Strategy on the basis of reflection and the activities and make plan to implement the same in classroom. 	
Step 5 Next steps, Reminder and feedback	10 minutes	<ul style="list-style-type: none"> • Group Planning – how the team member will support each other in implementing the selected Strategies 	

Detailed Instructions for ART Meeting - 2

STEP ONE	WELCOME, BUILDING BOND (15 min)
<p>Energizer:</p> 	<p>Kick-start the day with an activity:</p> <ul style="list-style-type: none"> Facilitator gives a word or concept (for example: 'adjectives') and a ball is passed amongst the participants. Participant-A has to say an adjective and pass the ball to the Participant-B. Participant-B, as s/he catches the ball, has to repeat the word produced by participant- A and say a new word while passing/ throwing it towards another Participant-C. The game continues till everyone has had a chance or till everyone falls out of the words. The only rule is no word can be repeated. Debrief: You may ask the ART members as to how this game can be implemented in our classroom? What other concepts can be taught through this? ('monuments', 'states', 'key vocabulary from previous chapters', 'Arithmetic Progression', 'mental maths' etc.) Though it was an energizer and fun activity which enables you to retrieve and identify relevant vocabulary/ concepts w.r.t a particular theme/ concept. Remind teachers that they can use this activity with their class at the start of lessons to help get them ready to share with and listen to each other. This can be helpful with our children at identifying and retrieving sub-concepts, vocabulary under a particular theme or even elicit a chain of responses by asking children to add to a particular word without having to fear about right answers. <div data-bbox="295 980 646 1056">  <p>FACILITATOR'S TIP</p> </div> <div data-bbox="383 1045 1449 1110"> <p><i>Please choose an energizer that will take less than 10 minutes.</i></p> </div>
<p>Meeting Aims</p> 	<ul style="list-style-type: none"> To build on our understanding of the theme 'Teaching Learning Strategies'. To build on our understanding of the theme 'Teaching Learning Strategies' and discuss strategies to implement in our classroom. To discuss and share ideas and create an action plan.
<p>Welcome & Community Agreement</p>  	<ul style="list-style-type: none"> As teachers come into the meeting, provide them with relevant handouts and they may use their teacher's diary to note their reflections. Ask teachers to remember what the community agreements were and remind them of the below. It is helpful to have these displayed on a flipchart. You may refer the chart you've used the last time. <ul style="list-style-type: none"> ✓ Avoid putting down of yourself or others (everyone has their own perspective) ✓ Have a Growth Mindset! Be willing to try new things (doing so will help you innovate!) ✓ Listen well ✓ Participate fully – (try not use cell phones at this time) ✓ Be willing to share your reflections Ask and add any other community agreements for the session.

STEP TWO	SHARING, SUPPORT AND FEEDBACK (25 min)
<p>Learning Improvement Cycle</p>	<ul style="list-style-type: none"> Explain that we are going to reflect on the Learning Improvement Cycle <p>1. Further Understanding of Learning Improvement Cycle (LIC)</p> <p>Remind everyone that the Learning Improvement Cycle is an improvement process designed specially to support actual change in classroom practice, as well as to develop teacher professional mindsets and behaviours. Say, “As explained in the aims, today the main focus is on reflecting on what we implemented and further improving our understanding of the theme 'Teaching Learning Strategy'.</p> <div data-bbox="347 556 1465 1017"> <pre> graph TD A[IDENTIFY THE PROBLEM and 'IDEATE'] --> B['REFLECT & UPDATE' on the solution and develop further understanding (Current Meeting)] B --> C['SHARE & EVALUATE' the entire processs] C --> A </pre> </div>
<p>Reflection on the first meeting</p> <div data-bbox="172 1276 274 1414"> </div>	<ul style="list-style-type: none"> Share with teachers the following quote: <ul style="list-style-type: none"> <i>"I will not propose to you that my way is best. The decision is up to you. If you find some point which may be suitable to you, then you can carry out experiments for yourself. If you find that it is of no use, then you can discard it."</i> – Dalai Lama <p>OR</p> <ul style="list-style-type: none"> <i>"Don't blindly believe what I say. Don't believe me because others convince you of my words. Don't believe anything you see, read, or hear from others, whether of authority, religious teachers or texts. Don't rely on logic alone, nor speculation. Don't infer or be deceived by appearances. Find out for yourself what is true and virtuous."</i> – Buddha In pairs, ask teachers to share what this quote means to them and take 2-3 responses. Add to their responses that reflection involves giving deep thought to your teaching. For example, thinking about what works and what doesn't work in the classroom. Thank teachers for their participation in this activity and emphasize how this reflection is an important component to developing the skills of an ART member. Remind teachers that in Network Meeting 1, we looked at the importance of “Teaching Learning Strategies” and that “teachers need to know drill cannot substitute for understanding”. We also planned to use elaborative questioning and Retrieval practice as classroom strategies to improve our classroom practices. Ask 2-3 teachers to recap the strategies through a short description.

- Explain that we are going to look at our successes, struggles and consider options for change, based on the feedback that we will receive from our colleagues. Ask teachers to discuss in pairs/trios and give feedback to each other on the following. Ask them to refer to their self-reflection on ART Meeting-1 for this discussion. If they haven't had a chance to reflect then they can use this opportunity to do the same and then discuss it with teachers as well. :-
 - How did you use Elaborative Questioning and Retrieval Practice in your classroom?
 - How did your children react when you used these strategies?
 - Did these strategies help you to impact learning for your children?
 - What was challenging about using these strategies?
 - What changes would you make to overcome the challenges?
- Ask a representative from each group to present in three minutes. After each representative presents, give them two minutes to receive suggestion from the other groups on how to overcome their challenges.
- Ask teachers to record the suggestions received from their colleagues in their diaries.

STEP THREE

DEVELOP TEACHERS PROFESSIONAL BEHAVIOURS AND MINDSETS (15 min)

Developing Professional Mindset and Behaviour




In the last few weeks we have tried to find out or learn about how we can design our classroom such that it enables an impactful learning process. It is during this process that we need to make informed decisions that will help us to improve. It is for this purpose that we need to ensure that we record our observations and identify areas of successes and challenges. During our LIC's we have been doing this through google forms. Let's look at how google forms help us and why are they important.

Purpose and Importance of Google forms

- TDCs to share a sample of google form and share why google forms are important. Ask teachers showcasing a google form and have a discussion on
- What information can we get when we record our observations in google form?
- Why google forms and data is important?
- *(The purpose is to get feedback on what is working and what are some of the challenges. The data filled by teachers in google forms is not shared with anyone and is used solely for the purpose of getting feedback)*
- Why it is important to fill real time google forms with teachers?
- Where is the data used and shared? (the data shared by each teacher is kept confidential and is used for the purpose of improving the programme)

STEP FOUR	CREATE AN ACTION PLAN (25 min)
<p>Devising classroom specific action plan/ strategies</p>	<p><i>Now that we have developed a deeper understanding of 'Teaching Learning Strategies', let's create an action plan for how to use these strategies and skills.</i></p> <ul style="list-style-type: none"> • Emphasize that teachers need to work together as a team to build in collaboration. Tell them that they are a great resource for each other in school and by working together on the same activity they can help each other continue to improve, stay motivated and spread the ideas to other teachers as well. • Teacher work in groups or pairs to develop an action plan. The action plan should include a plan to use any or both of the strategy in their classrooms, teachers could select specific lessons that they would like to use either or both elaborative questioning or retrieval practice. • As a reminder give them a prompt to fix rationale for selecting the particular strategy. • Identify the changes they hope to see in their classroom as a result of using the strategies. • Ask teachers to make an action plan in their teacher diary.

STEP FIVE	CLOSING AND NEXT STEPS (10 min)
	<ul style="list-style-type: none"> • Referring to the plan of action ask teachers to clearly state their plan/timeline of when they will be using the strategies. • Tell your teachers that in the next meeting they will present their strategy implementation stories. • Share brief about the final Network Meeting (ART Metting-3) evaluation meeting: <ul style="list-style-type: none"> ◦ Evaluation (of self and teaching) plays a critical role in enabling them to build an effective teaching career. In other words, it is a key part in teacher growth and should become a part of day-to-day activities. ◦ Evaluation is a process whereby you reflect on what you've done, collect evidence for positive and negative changes that resulted from your actions, and determine the best way forward. ◦ They will get a chance to present their work with the network teachers and have feedback on the same. Ask them to come prepared with the presentations in the next network meeting. ◦ The Head Teacher, Mentor Teacher and District officials will be encouraged to be in attendance to hear presentations. • Remember to end the meeting on a high! • Tell them a story or a poem or a small energizer.

SELF-REFLECTION



Major Reflections of ART members

Suggestions by PM/MT

Plan for next ART Meeting

Other Reflection Points

Phase 3: Evaluation of the impact of classroom strategies across the school system



MONTHLY ART MEETING - 3



OVERALL OBJECTIVE OF THE MEETING


- To recap the overall aims of the LEARNING IMPROVEMENT CYCLE.
- To analyse the impact of our efforts to implement the strategies in classrooms
- To share presentations individually or in themes about the 'Teaching Learning Strategies' strategies they have introduced in their classrooms and schools.
- Focus on sharing the one innovative practice as per the theme of Teaching Learning Strategy.

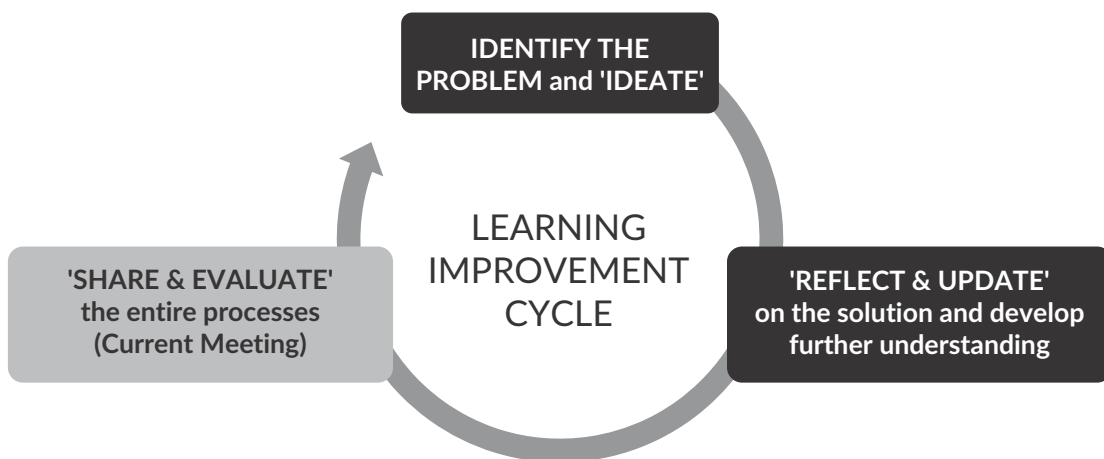
Simple Facilitation Guide

Key Steps	Time	Area of Discussion	TDC's Notes
Step 1 Welcome, building bond	10 minutes	<ul style="list-style-type: none"> • Welcoming teachers to the Final ART Meeting • Reference to the Community Agreement • Energizer - "Magic Clap" • Aims of third network meeting 	
Step 2 Sharing, Support and Feedback	40 minutes	<ul style="list-style-type: none"> • What is evaluation and why it is important • Group presentation 	
Step 3 Develop teachers professional behaviour and mindset	20 minutes	Activity: Crumpled Paper (Mistakes are part of learning)	
Step 4 Create an action plan	10 minutes	<ul style="list-style-type: none"> • Incorporate the feedback to improve the strategy further • Strategies for debriefing among teachers 	
Step 5 Next Steps	10 minutes	<ul style="list-style-type: none"> • Summary of connect and moving to Next LIC • Group Planning – how the team member will support each other in implementing the selected Strategies 	

Detailed Instructions for ART Meeting - 3

STEP ONE	WELCOME, BUILDING BOND
<p>Energizer:</p> 	<p>Create your own energizer and conduct it with your Network OR you can try this one:</p> <div data-bbox="295 398 647 463">  FACILITATOR'S TIP </div> <div data-bbox="384 463 1450 521" style="background-color: #f0f0f0; padding: 5px;"> <p><i>Please choose an energizer that will take less than 10 minutes.</i></p> </div> <p>Time required: 10 mins Equipment required: none</p> <p>Ideal group size: 10+ Age range: 12+</p> <ul style="list-style-type: none"> • <i>This activity helps the group to tune into each other through eye contact, rhythm and focus.</i> <p>Method:</p> <ol style="list-style-type: none"> 1) Everyone in a circle 2) Facilitator turns to person beside them and asks them to clap at exactly the same time. 3) That person turns to the next person and passes the clap. They are trying to clap at exactly the same time. Keep passing the clap around the circle. 4)) Ask the group how they can be even more synchronized. (Eye contact, staying in rhythm, anticipating the clap) 5) Add more claps to go around the circle. These need to be in time with each other, so that even when there are five or six claps going around, they only make one sound. <p>Debrief:</p> <ul style="list-style-type: none"> • Take two minutes to reflect on the purpose of the Energizer (and relate to the term) by asking teachers what they observed and why they think we did this exercise. • You could use the following reflection questions: <ul style="list-style-type: none"> ◦ What was the most difficult part of this activity for you? ◦ What did it feel like to be a person who spoke at the same time as someone else, causing the group to start over again? ◦ What strategy could we have used to achieve our goal? / What strategy did you apply to achieve the goal? ◦ What do you think will happen if we had more people? ◦ How does this relate to the classroom? <p>Debrief:</p> <p>“When your coordination as a group got better, you were able to accomplish the task easily than initial stage. The same goes for our school, if the coordination is good between students, teachers and HOS then the school functions better as a unit. Let's work collaboratively towards the common goal of creating a space in school where everyone learns.</p> <p>Moving on, the goal for this Learning Improvement Cycle was to use high impact Teaching Learning Strategies with our students. Today we are here to evaluate our</p>

	work in the last 4 months to achieve this goal and to discuss strategies through which we can improve our efforts.”
Meeting Aims 	<ul style="list-style-type: none"> • To recap the overall aims of the LEARNING IMPROVEMENT CYCLE. • To share presentations as individual or working teams about the “Teaching Learning Strategies’ strategies they have introduced in their classrooms and schools. • To provide an opportunity to think about how teachers can use learning from other teachers’ presentations to improve their own Teaching Learning Strategies techniques.
Welcome & Community Agreement	<ul style="list-style-type: none"> • As teachers come into the meeting, ask them to write their names into the tracker and ask them to keep their teacher diary handy • Ask teachers to remember what the community agreements were and remind them of the below. It is helpful to have these displayed on a chart. <ul style="list-style-type: none"> ✓ Avoid putting down of yourself or others (everyone has their own perspective) ✓ Be willing to try new things (doing so will help you innovate!) ✓ Listen well ✓ Participate fully - (try not use cell phones at this time) ✓ Be willing to share your reflections

STEP TWO	REFLECTION AND FEEDBACK
Conceptual understanding of Evaluation	<ul style="list-style-type: none"> • Remind teachers that we are now in the fourth Network Meeting and this is the final stage of this Learning Improvement Cycle which focuses on Sharing and Evaluation. <div data-bbox="344 1332 1453 1791">  <pre> graph TD A[IDENTIFY THE PROBLEM and 'IDEATE'] --> B['REFLECT & UPDATE' on the solution and develop further understanding] B --> C['SHARE & EVALUATE' the entire processes (Current Meeting)] C --> A </pre> </div> <ul style="list-style-type: none"> • Remind them that as a school team, we have worked together in identifying/ creating and implementing classroom strategies around Teaching Learning Strategies within our respective classrooms.

- We are now going to evaluate our efforts and impact we have had in terms of impacting our children's learning and selecting/creating strategies to optimise learning opportunities. The presentations are an opportunity for teachers to reflect on the action they have taken this term, evaluate whether these actions have had a positive effect, and determine the best way forward to improve or continue success.
- Make sure to keep linking back to the stage of the Learning Improvement Cycle – evaluation of the changes seen so far and created as a result of the actions taken this term.

Individual or Group Presentations



Emphasise on Connect – Disconnect – Connect framework for giving feedback. It involves :

CONNECT – DISCONNECT –CONNECT FRAMEWORK

- The individual listens to what the person shares and makes notes.
- The individual should try to capture something they “connected” with – the connect is something positive or strong. They should also capture something they did not connect with – the “disconnect” – which is something you feel the person could improve upon.
- The feedback is given to the person in a connect, disconnect, connect structure so that the person can hear positive thing at the beginning and the end. This is more encouraging to the person and gives them a chance to accept the positive and improvement areas.

- Remind teachers that we are now in the fourth Network Meeting and this is the final stage of the Learning Improvement Cycle which focuses on EVALUATION.
- Evaluation is a process whereby teachers reflect on what they have done, collect evidences for (positive and negative) changes that resulted from their action, and determine the best way forward.
- Explain to the teachers that evaluation (of self and teaching) plays a critical role in improving their teaching practices. In other words, it is a key part in teacher growth and should become a part of every teachers' daily development.
- Remind them that as a school team, we have worked together in identifying/creating and implementing strategies to improve the learning environment in our respective classrooms and schools.
- **We are now going to evaluate the efforts and the impact teachers have had through the school presentations.** The presentations are an opportunity for teachers to reflect on the actions they have taken this term, evaluate whether these actions have had a positive effect, and determine the best way forward to improve or continue success.

Kindly encourage your Head Teacher, Mentor Teacher and District officials to be in attendance to hear presentations.

- Form groups of 3-4 teachers based on the classroom observation. The teachers can also focus on individual presentations based on strategy they have chosen. Ask them to prepare their presentation in next 10 minutes.
- Groups take it in turns to **present the efforts they have made, changes they have seen, and challenges they faced in their classrooms/schools** as a result of strategy they have applied to create a positive learning environment.

- Each group will have only 5 minutes to present.
- When one group presents, other teachers will observe, record their feedback in C-D-C format.
- After each presentation, other groups will get 2 minutes to give feedback to the presenting team.



FACILITATOR'S TIP

While the teachers are giving their feedback to other teachers, you could capture some of them in a chart paper to help teachers reflect on those, afterwards. Use the Connect-Disconnect-Connect framework to give feedback to other teams.

Reflecting on the theme: Teaching Learning Strategies

- Start the session by saying: “In the last few months, we have gone through an entire Learning Improvement Cycle (LIC) to create strategies which helped us know our children better and encourage trust in our relationship with them. In the last step of this LIC today, we evaluated our efforts so far to make this process a part of day-to-day our classroom practice. I now want us to think back on this cycle so far and think about what the theme “Teaching Learning Strategies” means to us.”
- Ask teachers to get in **pairs** and then discuss. Encourage teachers to share examples/stories for each of the questions.
 - So far, what Teaching Learning Strategies have you implemented with the children and how are you planning to continue the same?
 - What learning did you have from this LIC?
 - How will you share this learning with other teachers in your school?
 - How will you apply this learning to your classroom?
- Have a few teachers share their responses/reflections at the end of this exercise to the larger group.



NOTE

This activity serves as a reflection for teachers – to sum up the previous session on evaluation. It will also help you as an TDC to gauge how much teachers could grasp and incorporate the LIC and the theme into their practice. This activity is an example of debriefing, an important tool used in experiential learning to allow students or participants to reflect on what happened, how they felt about it, what they learnt, and how they can continue practicing it in their day-to-day teaching and learning.

STEP THREE**DEVELOP TEACHERS PROFESSIONAL BEHAVIOURS AND MINDSETS (20 min)**

Growth Mindset - "Mistakes" are a part of learning: CRUMPLED REMINDER



- Explain that today we are going to discuss how mistakes actually give us a chance to learn.
- Reinterpret the meaning of mistakes highlight and reinforce the idea that mistakes are important for learning and for developing our skills
- Introduce the session to the participants - we will be talking about mistakes and failures, why are they are scary and why is important how we think about mistakes and failures. Tell the participants that in the next 35 minutes, we will do an exercise that will help us understand why we make mistakes. (2 min)
- Ask participants/students to close their eyes (almost meditate) and think about a mistake they have made as a teacher. Ask the participants to really focus on how it made them feel. Give each participant a piece of paper and ask them to channel their thoughts and feelings and write them down - write down the mistake and how they felt. (2 min)
- Ask them to now crumple it up and throw it across the room with the feelings they have when they make a mistake. (3 min)
- Ask them to retrieve the paper, un-crumple it, and color each line with different colors. (3 min) Ask students what they think those lines represent.
- Explain that the lines represent all the synaptic activity that happens when a mistake is made - the brain makes new connections when it is trying to grow and mistake signal that the brain is trying to grow.
- Ask participants/students to keep the paper and stick it into a notebook or folder to look at when they make a mistake. This physical reminder prompts them to use mistakes to strengthen their brain every time they feel stuck. (please remind participants that they do not have to share the mistake if they don't feel comfortable. focus on sharing their FEELINGS and THOUGHTS) 6. (5 min) –
- Lead a discussion using prompts from this - ask participants to make different groups of 4 to discuss the following points. Give 10 minutes for this. Have the prompts written on a flipchart before they start
 1. How do you feel when you make a mistake? Why?
 2. How do you think other people see you when you make a mistake?
 3. Have you ever discovered something new from making a mistake?
 4. Have you ever felt proud of making a mistake?
 5. Has a mistake ever made you think more deeply about a problem? Ask 3 groups to share their discussion and what they learnt from this activity

"The best thing teachers can do is to teach their children to love challenges, be intrigued by mistakes, enjoy effort and keep on learning."

- Dr. Carol S Dweck (Leading Psychologist)

STEP FOUR	CREATE AN ACTION PLAN (20 min)
Incorporating each - others feedbacks	<p>Creating a plan which would provide an opportunity to think about how different groups or individuals can use learning from other teams' presentations and improve their own strategies:</p> <ul style="list-style-type: none"> • Ask teachers to get into their respective groups. • Tell them to reflect on the feedback they received from other teams/individuals and add it in their teacher's diary. • Urge them to highlight when they will do it; how they will support each other; and how they will share it. To be noted it in their Teacher's Diary.
Recognize Head Teachers	<ul style="list-style-type: none"> • You should have Head Teachers present for the meeting. In a special way, recognize them for coming to the Network Meeting. • Remind the groups to debrief their Head Teachers about key learnings from the Network Meetings and quote specific examples of Teaching Learning Strategies.

STEP FIVE	NEXT STEPS (10 min)
Summary of the Teaching Learning Strategies	<ul style="list-style-type: none"> • Thank the teachers for sharing and encourage them to continuously implement different strategies from the different learning improvement cycles that they have completed. • Remember to end the meeting on a high! • Excite them about the learning environment they have built with children through different strategies and how that is going to help them in smoothening the teaching-learning process in coming days.



SELF-REFLECTION



Major Reflections of ART members

Whole School Cycle Reflection

Suggestions by PM/MT

SECTION FOUR

Suggestive Teaching Learning Strategies



IN THIS SECTION

- Strategy 1: Elaborative Questioning
- Strategy 2: Retrieval Practice

Strategy 1: Elaborative Questioning

What is it? This is a method of questioning that aims to encourage learners to give explanations (i.e., elaborate) for their answers, mostly using 'how' and 'why' questioning. Elaboration is a strategy where the student expands the given information by adding other information relevant to it. It is a technique questions are asked either by the teacher or by the student. Thus elaborative questioning is a process which helps the learner to retain things learnt and retrieve the acquired information in a faster pace with the help of series of questions having “how” and “why” components. This helps the students to seek more information to substantiate the given information with reasons and evidences. This is one more simple strategy which helps the learner to develop conceptual understanding of the given topic by asking questions like why and how ? e.g why rivers become dry in summer season ? This strategy encourages the reader to remember the things and derive an explanation for it.

Suggestive methods:

The 'how and why' notes page (any subject)

Encourage students to divide their exercise book pages for writing into 2 sections. The 1st section should be for their regular work, and the 2nd section should be for 'How and why?' to take notes and explain. For example, once students have completed a Math problem, ask them to discuss in pairs why the answer is correct or incorrect, and how the answer was reached. They can take notes on this in their 2nd section. Then choose a selection of pairs to explain to the class.

Making connections (any subject)

Display a selection items on the board that have a common connection, but try to ensure that it is not obvious or there is more than 1 possible answer. Ask students to explain how the words are connected, and where there is more than 1 possible answer, ask them why they choose one particular way of categorizing over another. For example, in English, you might display the following words that students have recently come across: Advocate, horrify, terrorize, pacify.

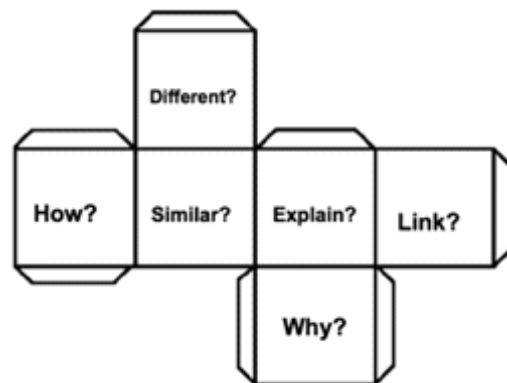
There are several possible links (e.g. all the words have 3 syllables, all could be used as verbs, all could be used within political debate etc.) – the key thing is to push the students' line of reasoning to get them really thinking about the nature of these and other words.

The 'elaboration dice' (any subject)

Here, the class uses a dice that has six different questions relating to elaborative questioning (the teacher can use one dice for the whole class, or make a class set for students to use in pairs). An example as follows:

The way this works is when a particular topic is being discussed or taught by the teacher, the dice can be used to spark questions that will promote deeper understanding. For example, in science, a teacher may just have shown how a particular earth metal reacts with water. The dice could then be used to ask a variety of questions on this, e.g.:

Different: Is the reaction different to any other metals you have seen?



Source: <http://www.learningscientists.org/blog/2017/3/21-1?rq=cube>

How: What is actually happening that is causing the metal to react like this?

Similar: Are there any metals that react in a similar way to this?

Explain: Explain in your own words what you have seen happen.

Elaborative Questioning is a fairly straightforward strategy and involves three steps:

- 1) Read the fact to be remembered
- 2) Turn the fact into a why question
- 3) Answer the why question

As an example, consider the fact – Sea Turtles lay their eggs on land. Using elaborative questioning to remember this fact involves three steps. First, read the fact. Second, turn it into a why question (Why do sea turtles lay their eggs on land?). Third, answer the why question (If eggs are fully submerged in the water, they will drown! Thus everything from sea turtles to crocodiles must come out of the water to lay their eggs on land)

In general, research to this point suggests the answer generated to the question is not important, but it is important that the student generate a reasonable answer.

Why this strategy is effective for the learners?

1. It helps the learner to find new facts and link them with the existing knowledge about the concept.
2. This can help learners to establish connection between existing information or even to add information.
3. Brain storming on the given concept in the pursuit of seeking answers with reasons leads to more understanding of the concepts and also helps the learner to retain the facts learnt.
4. This process not only ensures factual learning but also integrates with conceptual understanding.
5. Questions triggers curiosity in the learner to seek answers, analyse the concepts learnt; it also instigates learners' critical thinking process and thus helps to develop better understanding of the concept or situation.

Let's see how this strategy can work in different subjects

SCIENCE

Topic being taught – Photosynthesis

Concepts taught: The process of photosynthesis in plants and its scientific definition. Students learnt that in this process, O₂ is released and CO₂ gas is taken in by the plants.

Elaborative questions could be –

1. Why CO₂ is released in the process and how does it happen?
2. Why sunlight is important for photosynthesis?
3. Do you think photosynthesis will take place even if a plant is kept in artificially lighted room? Explain with reasons.

Topic – good and bad conductors of electricity

1. Why do you think distilled water is a bad conductor of electricity?
2. Why only metals conduct electricity and non- metals does not ?

Topic – Water

1. How you can convert ice into water and water into vapour? Why this happens?

MATH

Topic – Geometrical shapes

1. How you can prove that sum of all angles in a triangle is 180 degree?
2. How can you derive percentage rise and find out if there is any improvement in the performance of your class in Math?

HISTORY

1. Why India could not get freedom during first war of Independence in the year 1857?
2. What were the factors that led to French Revolution?
3. What were the factors that led to World War I? Do you think it could have been prevented? How?

ENGLISH

1. Why do you think this is true or why do you think the information given to you is correct?
2. How will you justify your answer?
3. How would you like to end the story?
4. How would you expand the story?
5. What would have happened if.....
6. Which character in the story you liked the most and why?
7. Which character in the story you disliked the most and why?
8. What are your suggestions for the writer to improve the story?
9. Which character would you like to change and how?

Strategy 2: Retrieval Practice

What is it? Retrieval practice is the act of trying to recall information without having it in front of you. Put simply, it is revisiting material that has been studied or learned previously, in order to consolidate understanding and embed in long term memory.

Why is it important? The brain has evolved to be incredibly efficient at processing information, where it uses what it deems to be useful and forgets what it doesn't. In this way, our memories are designed to be forgotten over time. Therefore, as teachers we should assume that students will forget what they have learnt unless we help them to remember (Mccrea, 2017).

There are a variety of ways to think about this and when to return to material and get students to 'retrieve' it from their memories, but the important thing is that you give students plenty of opportunities to revisit material over time, rather than teaching something once and only revisiting it before an examination.

WAYS TO USE RETRIEVAL PRACTICE IN THE CLASSROOM

Think-Pair-Share: This quick, low-maintenance strategy can be used at any time to have students recall information, then share it with a partner. You can use think-pair-shares with single-answer questions, or make them more open-ended, like "Think of one thing you learned yesterday about cells." Be sure to have students think on their own before turning to a partner. "It's important for students to retrieve individually as much as possible," Agarwal advises. "If you jump right into pairs, then we all know as educators that some students are retrieving and some may not be." One way to make sure all students retrieve is to have them jot responses down on paper before sharing them with a partner.

Low-Stakes Quizzes: These can be given on paper, ideally, students wouldn't get scores on them at all, but if you must give some points, make them an almost negligible part of students' overall class grade.

Brain Dumps: Have students get out a sheet of paper and, within a certain length of time, write down everything they know about a topic of study. This can be done at the beginning of a unit partway through as a way to reinforce learning, or near the end of a unit. Once students have completed theirs, they can exchange them in a think-pair-share or use them to compile a whole-class brain dump. Then they can return to their texts to see what they missed or what needs correction.

Practical examples:

Any subject – the day after you teach a topic, begin the lesson the next day with a short quiz (5-10 questions) about that topic. A week later, integrate questions from this topic into a quiz along with 2-3 other topics. Another 2 weeks later, repeat this step.

How does it relate to assessment? Part of the reason that students struggle in assessments is because they can't remember things. This is because they usually resort to 'cramming' – trying to memorize lots of material they have previously learnt but since forgotten. This approach is ineffective for two reasons: first, there is too much information for students to try to remember and they become overloaded; and secondly, they cannot remember studying the material and do not understand it, leading to 'rote' learning.

Annexure A: Classroom Practice Development Framework

Note: The purpose of this exercise is purely towards development of classroom practices and will not be reported for anywhere.

Observation Details

Name of the teacher seeking the feedback : _____ Date: _____

Name of the peer providing the feedback: _____

Grade being taught: _____ Subject being taught: _____

Observation focus for the term: Teaching Learning Strategies

The Table below shows all the practices introduced this term. Tick (✓) the ones observed.

Important Note: Please ensure that the teacher shares the lesson plan beforehand. Read the lesson plan before you begin observation.

Practices	Yes /No
Is the teacher demonstrating a practice from the current LIC?	
Please indicate which one: Elaborative questioning <input type="checkbox"/> Retrieval Practice <input type="checkbox"/>	
Elaborative Questioning:	
a) The teacher asks why and how questions to elicit thinking and uses responses to develop concept?	
b) The Teacher prompts learners to explain how they arrived at an answer (e.g. "Can you explain how you got this?")	
c) Specific activities are planned to use elaborative questioning as part of the lesson plan?	
d) Did you observe a specific method like Elaboration Dice, How & Why Notes Page or verbal questioning?	
Retrieval Practice:	
a) The teacher helps students' recall and reflect on previous learning during the lesson?	
b) Specific activities are planned for using retrieval practice as part of the lesson plan?	
c) Did you observe a specific method like Think-Pair share, Quizzes, Brian dumps?	
d) The method used by teachers to help students recall information was low stakes (e.g. it was not graded and used like a test or assessment)?	

Practice: Did you observe any other practices from previous LICs?	Yes /No
a) Building Connect: (e.g. did you observe teacher showing sensitivity, giving thoughtful and considered response when learners share something or ask questions, acknowledging and praising efforts of learners)	
a) Look for understanding & Respond: (e.g. frequently checking student understanding or performance, doing quick check for understanding exercises thumbs up, down etc.)	
c) Lesson Planning: (e.g. opening routine, main activity and closing routine observed)	



Are the strategies new to the teacher (Y/N)?

Was the transaction of the lesson as per the pre decided plan (Y/N)?

OBSERVATION NOTES

<p>Use the space below to describe the teacher behaviours you observe while they are demonstrating their chosen practice. What do you see the teacher do? Be as specific as possible.</p>	<p>Use the space below to describe the student behaviour you observe during the teachers chosen practice. What do you see the learners do? Be as specific as possible.</p>
<p>Use the space below to write down your comments about the teacher's delivery of the chosen practice as well as questions you have for the teacher.</p>	

FEEDBACK SESSION

<p>Introduction Share something you liked in general about the lesson (e.g. 'I loved how enthusiastic the students were, particularly student X always raising his hand!') and ask the teacher how they think the lesson went.</p>	<p>Notes</p>
<p>Specifics Share with the teacher what you saw them do that was really good in relation to the specific practice in focus.</p> <p>'The focus of this observation was on teaching learning strategies. It was great to see you trying out <i>[specific technique tried]</i> and I noticed in the lesson how you <i>[state concrete positive actions teacher took]</i>.'</p> <p>Ask the teacher: <i>What made you successful?</i> <i>How did it feel?</i></p>	
<p>Probe: What is the goal of <i>[technique used]</i>? Do you think the goal was achieved? Why/why not?</p>	
<p>Identify improvement areas: Is there any aspect of your use of <i>[specific technique]</i> that you feel could have been improved?</p> <p>Share with teacher areas where you saw that they could have improved (<i>remember to use your notes from the lesson to give very specific examples</i>). De-personalise the language to emphasise your feedback is based on evidence rather than personal opinion.</p>	
<p>Role play with the teacher the agreed area of improvement Guiding statement (<i>Please can we try out the technique now and see how it works?</i>)</p>	
<p>Action plan Ask the teacher to share with you the specific lesson[s] in which they will practice the improved version of <i>[the technique]</i></p>	

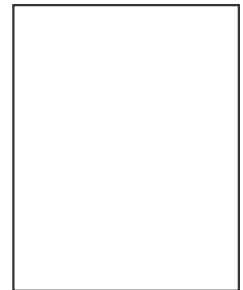
Annexure B: Case Studies of ART Members Captured by TDC Members

Name of Teacher:

Standard:

Suggestive Title of case study/best practice:

Description of case study/best practice:



Name of Teacher:

Standard:

Suggestive Title of case study/best practice:

Description of case study/best practice:



Appendix C: Quality Indicators for ART Meetings

	Level 1	Level 2	Level 3
AUTONOMY	<p>TDC</p> <ul style="list-style-type: none"> • Does most of the talking. • Time is not managed and often little relevant content is addressed <p>TEACHERS</p> <ul style="list-style-type: none"> • Do not listen or respond to each other's contributions. • May be talking, but no evidence it is relevant to the content. 	<p>TDC</p> <ul style="list-style-type: none"> • May be enthusiastic, but they prevent teachers from really being able to engage deeply with the subject matter by talking too much. • Only ask superficial questions - they are virtually no 'probing' questions to promote deep discussion. • Attempts to manage time but not always effectively - some content is left unaddressed <p>TEACHERS</p> <ul style="list-style-type: none"> • There may be some group discussion, but it does not go beyond offering basic answers (e.g. no justification for views). 	<p>TDC</p> <ul style="list-style-type: none"> • Ensures there is approximately 50% EL/teacher talk. • Enthusiastic and asks occasional probing questions • Manages time well, with teachers discussing/practising for at least 50% of the meeting <p>TEACHERS</p> <ul style="list-style-type: none"> • Discussion mostly but does not always stay on track (teachers may misunderstand the point about a particular practice, for instance, and begin talking about something else).
MASTERY	<p>TDC</p> <ul style="list-style-type: none"> • No models of best practice shown for discussion or practice • No circulation to encourage constant improvement <p>TEACHERS</p> <ul style="list-style-type: none"> • Discussions of teaching strategies are either non-existent or so off-track that it is not possible to assess any level of understanding. • There are no opportunities to practise the strategies themselves. • Do not make action plans, and show no evidence of understanding how to translate any of the network meeting content into their own classrooms. 	<p>TDC</p> <ul style="list-style-type: none"> • May circulate but little evidence of probing/helping teachers to improve <p>TEACHERS</p> <ul style="list-style-type: none"> • There is only superficial discussion of practices (e.g. they may say whether they like or dislike a practice). • There is limited opportunity to practise, and they often do not understand how to effectively use this time • May write action plans, but they likely lack specific detail (e.g. 'I will use cold call in my classroom'). 	<p>TDC</p> <ul style="list-style-type: none"> • Ensures that there is clear modelling for discussions/practice sessions • Circulates and probes/feeds back to teachers on how to improve <p>TEACHERS</p> <ul style="list-style-type: none"> • Deeper discussion of classroom practices - may show real insight into how they can use a particular practice in their own classrooms. • Practice sessions are likely to be engaged in enthusiastically, but may not get a chance to re-practise incorporating feedback • Write action plans that are specific and time-bound
PURPOSE	<p>TDC</p> <ul style="list-style-type: none"> • There is little or no mention of student learning, or any rationale given as to why particular content is being focused on or discussed. • Negative body language and tone throughout. • There is no culture of appreciation or recognition within the meetings. <p>TEACHERS</p> <ul style="list-style-type: none"> • Negative body language and tone throughout 	<p>TDC</p> <ul style="list-style-type: none"> • Attempts to explain the rationale for particular meeting content do not relate to student learning and/or they are unclear. • Some enthusiasm but does not spread throughout the teachers. • There is some appreciation and recognition expressed, but this is largely superficial (for example, thanking teachers for giving very basic or even incorrect contributions). <p>TEACHERS</p> <ul style="list-style-type: none"> • A minority show limited enthusiasm or understanding of links to learning 	<p>TDC</p> <ul style="list-style-type: none"> • Tries to tie different activities to student learning, although it may not always be clear how this is the case. • May probe in discussions and practice sessions as to how a particular teacher's response promotes student learning, but doesn't challenge further even if the explanation is unclear or superficial. • Models enthusiasm and recognition consistently throughout the meeting <p>TEACHERS</p> <ul style="list-style-type: none"> • Positivity and enthusiasm amongst the majority; some show clear understanding of links to student learning.

Level 4	Level 5
<p>TDC</p> <ul style="list-style-type: none"> • Ensures majority of meeting taken up by teacher discussion and practice. • Asks lots of timely probing questions to drive quality discussions. • The time is generally managed very well and all activities from the agenda are successfully completed. • Meetings always start on time <p>TEACHERS</p> <ul style="list-style-type: none"> • All on task for the full meeting • May not consistently probe each other to push further, instead relying on the EL to play this role. 	<p>TDC</p> <ul style="list-style-type: none"> • •Usually only interjects beyond set discussion questions to probe further ('how?' 'why?' 'can you give an example?') • Both the teachers and the EL manage the time carefully, and agree as a group whether to investigate a particular topic further or move on <p>TEACHERS</p> <ul style="list-style-type: none"> • The meeting is driven by teacher discussion and activity. • The majority ask and answer questions built on 'how', 'why' and 'what does it mean in my context' for different teaching strategies. • Really probe each other to push thinking further. • There is consistently exceptional punctuality without prompting.
<p>TDC</p> <ul style="list-style-type: none"> • Ensures clear modelling in place and explains these further where necessary <p>TEACHERS</p> <ul style="list-style-type: none"> • Majority can articulate a very strong understanding of how particular practices can be translated into their own classrooms. • Practice sessions are participated in enthusiastically, and they always receive feedback on how to improve • May not always be clear on exactly what the feedback means in practice so don't always use it effectively. • Write clear and quality action plans which in most cases incorporate the feedback they have received. 	<p>TEACHERS</p> <ul style="list-style-type: none"> • Spend significant time planning short lessons, practise delivering them in small groups, and receive feedback on how to improve their delivery in the classroom. • Always clear on ways to translate a general teaching principle into their own specific classroom contexts. • Listen deeply to their feedback and are really clear on how to incorporate this. • Committed to action, and ensure clear action plans for what they will do in the classroom are created based on these practice sessions, and incorporate reflections on previous plans.
<p>TDC</p> <ul style="list-style-type: none"> • Clear on how different activities relate to student learning. • Mostly check that teachers understand this link, although this occasionally may lack rigour (e.g. they might simply ask if everyone sees the link, rather than calling upon teachers to explain and thus genuinely check understanding). • Lots of recognition and appreciation built into the meetings from both EL and teachers <p>TEACHERS</p> <ul style="list-style-type: none"> • There is really positive body language and a sense of purpose throughout the meeting amongst almost all participants. 	<p>TDC</p> <ul style="list-style-type: none"> • All activities in the meeting are explicitly tied to student learning; always checks teachers understand the link • Probes teacher responses where links to student learning are not clear. • Recognition is linked explicitly to student learning or teacher development. • Displays high levels of passion and excitement throughout the meeting. <p>TEACHERS</p> <ul style="list-style-type: none"> • Always link responses to improving student learning • Highly passionate throughout the meeting

