Delhi Case Study
The Teacher Development Coordinator Programme: Providing Support to Teachers from the Middle Tier

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List of Abbreviations

ART	Academic Resource Team
BRP	Block Resource Person
CBSE	Central Board of Secondary Education
CDC	connect, disconnect, connect
DAM	District Alignment Meeting
DIET	District Institute for Education and Training
DoE	Directorate of Education
DPCM	District Progress Check Meeting
LIC	Learning Improvement Cycle
NCERT	National Council for Educational Research and Training
MT	Mentor Teacher
PM	Programme Manager
SCERT	State Council for Educational Research and Training
SMC	School Management Committee
TDC	Teacher Development Coordinator

Executive Summary

In recent years, the Delhi government has made education reform a priority in terms of both focus and budgetary allocations (Sahoo, 2020; SCERT, 2019). As part of these reforms, and in partnership with international NGO STiR Education, the Teacher Development Coordinator (TDC) programme has attempted to enhance teaching and learning outcomes by creating two new support roles in Delhi's middle tier. Each government school has selected one teacher to serve in the role of TDC, and they serve as mentors, role models, and collaborative leaders to other teachers in their school. Likewise, a Mentor Teacher (MT) is typically assigned between four and six schools, and they provide guidance and feedback to both TDCs and teachers on best practices and new strategies. Through this system of peer support, collaboration, and feedback, this programme has acted as a catalyst for teachers to improve both their professional development and motivation.

Utilizing a qualitative research approach that involved a series of semi-structured interviews and focus group discussions, this project aims to better understand the makeup of the middle tier in Delhi while also seeking out those practices that enable its successes. The driving research questions for this project are as follows:

- What roles exist within Delhi's middle tier that serve as instructional leaders? What are their functions in relation to teaching and learning and how are they tasked with leading change?
- How are these role holders recruited and trained? What are the skills, competencies, and behaviours associated with these positions? What role does the middle tier workforce play in informing the design of teaching and learning reforms?
- What wider institutional frameworks act as enabling conditions or existing barriers for the middle tier to act as drivers of change?

The main mission of the TDC programme is to create an improved academic environment among schools and teachers and, in turn, improve student learning outcomes and performance. To do this, it seeks to aid teachers to become intrinsically motivated professionals, with a growth mindset that focuses on facilitating lifelong learning instead of simply delivering content to students. By utilising TDCs and Mentor Teachers, Delhi has created a system of support and collaboration for its teachers through providing needs-based professional development and training. Recruiting highly motivated classroom teachers, Delhi trains its Mentor Teachers and TDCs to role model best practices found both nationally and internationally. Also featuring a vigorous feedback loop, the programme's design team takes information from the classroom, school, and district level in its planning of new strategies and recommendations.

With such an expansive support system for teachers and schools, the TDC programme has had noticeable positive effects since its initial implementation. These can be seen through increased teacher collaboration, a shift to a more professional culture in schools, improvements in student outcomes, greater ownership from Delhi's middle tier over the programme, enhanced usage and application of feedback and data, and strengthening connections to adapt to difficult situations. Even so, the programme has also faced some challenges, including an initial lack of buy-in, feelings of being overburdened with heavy administrative duties, struggles in communication, and job turnover. There remains room for optimism in looking ahead, however, as the

programme continues to gain momentum and Delhi's increased ownership has provided a sustainable foundation.

Considering some key takeaways from this programme, it can offer guidance to education policy makers looking to institute their own programmatic or structural reforms. Focusing on teachers, it seems that aiming to improve their motivation in multiple ways as well as providing them mentors offering solely positive feedback has proven effective. These changes have in turn enhanced student learning outcomes without directly targeting the students themselves. By bridging the gap between theory and practice through its needs-based, interactive training opportunities, Delhi has seemed to enhance its system of teacher professional development. In designing multiple layers of support reaching from the classroom to the state level, this programme has also created a multi-layered system that can adapt to difficult situations such as the COVID-19 pandemic. Finally, by fully utilising the middle tier of its education system to help design and implement large-scale reforms, Delhi has begun to transform the culture and environment in all of its government schools. While Delhi has taken advantage of a supportive political climate and outside help from an innovative NGO to achieve its results, these takeaways can prove useful when designing other structural reforms across diverse contexts.

Chapter 1. Introduction

Overview

With more than 1.6 million students and 1,000 secondary schools under its jurisdiction, the Delhi government school system[1] has a vast network of students and employees to oversee and support (Del E, 2020). To manage such a large system, there is a veritable army of administrators, instructors, and support staff that ensure the decisions and plans from the upper echelons of this education structure properly make their way down to the individual teacher at the classroom level. But who are these middle tier personnel, and what are their roles in contributing to improving the quality of teaching and learning in schools? And how do they ensure that teachers have the support they need while also understanding the bigger picture of reforms and philosophies for the entire Delhi system? While many positions with myriad responsibilities exist in Delhi's middle tier to help answer these questions, two relatively new positions, those of Mentor Teacher and Teacher Development Coordinator, provide valuable insight into the types of highly supportive roles that middle tier personnel can embody.

In recent years, the Delhi government has made education reform a priority in terms of both focus and budgetary allocations (Sahoo, 2020; Sisodia, 2019; SCERT, 2019). This has involved wide-ranging programmes and projects that include major upgrades of infrastructure and new school construction, happiness and entrepreneurship curricula for students, and enhanced support and training for teachers and principals (SCERT, 2019; Sisodia, 2019). While the reforms are broad, they seek out one main goal according to Manish Sisodia, Delhi's education minister: 'that all children should have access to world class education, irrespective of their ability to pay for it.' (Del E, 2018: iv). As part of these reforms, and in partnership with international NGO STiR Education, the Delhi government has attempted to enhance teaching and learning outcomes by creating two new support roles in the middle tier through the TDC programme. Each government school in Delhi has selected one teacher to serve in the role of TDC, and they serve as mentors, role models, and collaborative leaders to other teachers in their school. Likewise, Mentor Teachers are typically assigned between four and six schools, and they provide guidance and feedback to both TDCs and teachers on best practices and new strategies. Through this system of peer support, collaboration, and feedback, this programme has acted as a catalyst for teachers to improve both their professional development and motivation.

As a part of this series of reforms, the TDC programme and other new implementations have contributed to a larger shift in culture throughout Delhi government schools that has led to continued increases in student exam scores (Sahoo, 2020). The TDC programme itself has shown signs of successes in its earlier iterations at the primary level, as past evidence from STiR's efforts in Delhi's Affordable Private Schools has shown that it had a positive impact on teaching and learning outcomes (IDinsight and STiR, 2018). While the programme has also certainly faced its share of challenges, those stakeholders most involved in its implementation (TDCs, MTs, and teachers) now rave about the change in culture and professionalism it has brought to

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[1] When this case study refers to 'Delhi government schools', it only means those under the jurisdiction of the Directorate of Education. In Delhi, all these referred to institutions are secondary schools, as primary schools tend to be run by local municipal councils (MCD schools). There is also a large prevalence of private schools in Delhi, which also fall outside the review of this research. In sum, this case study only explores a programme implemented in public secondary schools (Del E, 2020)

the teaching ranks. One teacher said that in the 'last five or six years there has been a paradigm shift in our schools. Now the teachers have developed the practice of discussing academic issues, issues related to the classrooms'. On speaking about improved culture in their school, one TDC noted that 'before this, there never used to be any sharing. Everyone used to do whichever activity they pleased or not do any activity…but now this sharing culture has started, and it has been very effective'. Thus, this case study seeks out what has led to these successes of the TDC programme both in terms of its specific design and the unique contextual factors it operates within. While no education reform or project is directly transferable to another structure, some of the best practices and impacts of this programme can certainly give ideas to policy makers in other systems.

Research questions and methodology

Posed across the backdrop of a combined IIEP-UNESCO and Education Development Trust study, the research questions guiding this project aim to better understand the makeup of the middle tier while also seeking out those practices that enable its successes. Those driving questions for this project are as follows:

- What roles exist within Delhi's middle tier that serve as instructional leaders? What are their functions in relation to teaching and learning and how are they tasked with leading change?
- How are these role holders recruited and trained? What are the skills, competencies, and behaviours associated with these positions? What role does the middle tier workforce play in informing the design of teaching and learning reforms?
- What wider institutional frameworks act as enabling conditions or existing barriers for the middle tier to act as drivers of change?

To better explore these research questions, this project utilized a qualitative research approach that involved a series of semi-structured interviews and focus group discussions with pertinent stakeholders. In total, 24 interviews and 2 focus group discussions occurred over approximately 2.5 weeks of virtual Zoom meetings. While originally planned to occur in-person, the ongoing COVID-19 pandemic caused all interviews to turn virtual (see *Limitations* section for more details). The interviews spanned the hierarchy of roles in the Delhi education system, to include four Academic Resource Team (ART) teachers, four Teacher Development Coordinators, four Mentor Teachers, three Block Resource Persons (BRPs, also known as District Coordinators), four Programme Managers (PMs) working for the non-governmental organization STiR, four District Institute of Education and Training (DIET) officials, and one state official overseeing the programme (see *Chapter 3* for descriptions of these roles). Both focus group discussions consisted of six ART teachers, with each group of six coming from the same school. The two sets of teachers in the focus groups did come from separate schools in separate districts, however. Interview respondents came from four separate districts out of a total of nine across Delhi, with each district providing one DIET official, PM, MT, TDC, and ART teacher, and three of the four districts providing a Block Resource Person.

By interviewing respondents across separate districts, this case study sought to establish a more holistic view of the programme and its perceived effects in different parts of Delhi. However, the surveyed districts volunteered to participate after queries from STiR officials and should not be seen as randomized or representing the entirety of Delhi's schools. Additionally, by interviewing all levels of stakeholders, a more robust picture developed of the design, implementation, and

impacts of this programme. By seeking out a minimum of three to four respondents at each level (excluding the state representative), this also allowed for the potential of data saturation, ensuring that multiple respondents at each level had a chance to discuss major themes and ideas. Ultimately, this permitted individual interviews to cover some specific topics more in depth to gain deeper insight. For example, one interview with a Programme Manager may have focused follow-up questions on their relationships and interactions with TDCs and Mentor Teachers while another focused more in-depth on their interactions with DIET officials and BRPs.

Interview and focus group methodology

The interviews and focus group discussions took on a semi-structured format, with pre-established interview tools (see *Appendix A*) developed to address the stated research questions. A total of seven tools were developed, one for each category of role holder (i.e., state official, Mentor Teacher, etc.). For the focus group discussions, the tool for the ART teacher interviews was modified to highlight five to six of the most important questions. While these tools served as a guide, they were only followed loosely while conducting the interviews so as to allow for follow-up questioning or redirection based on the answers from the respondents. Furthermore, the entire interview process remained iterative and some questions were added or redacted to the tool as the interviews progressed. Preliminary, informal data analysis and discussions between interviewers allowed for any gaps in initial interviews to be covered in later ones.

Each interview and focus group session had two researchers, one head interviewer who led the questioning and discussions, and a secondary interviewer who served as a Hindi translator. All interviews began in English with introductions, but all participants were immediately given the option to switch to Hindi and encouraged to choose the language in which they felt most comfortable responding. In total, 15 interviews occurred in English and 9 primarily in Hindi, while both focus group discussions occurred in Hindi. For translation purposes, the secondary interviewer would repeat the question from the lead interviewer in Hindi (if required) and then translate the responses in real-time in a private chat window in the Zoom application. This method saved a great deal of time instead of the more traditional method of orally translating each response after the participant had finished speaking. If any additional information or clarifications were needed, the secondary interviewer would simply add oral translations or comments in between questions.

Data analysis

After conducting the interviews and transcribing the audio recordings (all Hindi transcriptions were translated to English for analysis purposes), a thematic analysis was conducted of all collected data with Dedoose, a qualitative research application that assisted with the coding and organization processes. Initially, broad coding categories emerged based off the research and interview questions that had been previously established. These included: system and middle tier structure in Delhi, the mission/vision of the TDC programme, how Mentor Teachers and TDCs are recruited and trained, the attributes that these role holders display, the job description of all those participating in this programme, support and feedback systems, challenges faced in implementation, overall outcomes and results, and the future/sustainability of the programme. As the analysis proceeded, further subcategories were established for each broad category. For example, four major categories of challenges emerged to include reluctance or lack of buy-in, feelings of being overwhelmed or having too much administrative burden, lack of communication or understanding, and high job turnover rates. These categorical and sub-

categorical groupings drove the structure and design of the following chapters. Upon completion of coding pertinent passages from the interview and focus group responses, these categories and subcategories were further analysed to develop nuanced themes and key takeaways.

Limitations

Due to the timing of the research during this project, some major limitations immediately presented themselves which changed the nature of the data collection. Specifically, data collection took place at the height of the global COVID-19 pandemic, which caused countless school closures (to include Delhi's) and travel restrictions around the world. While all interviews and focus group discussions were initially intended to take place in person in Delhi, this became unfeasible due to these restrictions. Much like schooling and the TDC programme itself, all interviews and focus groups thus eventually took place virtually, via Zoom videoconference[2]. Though sufficient to collect the necessary responses and experiences from all interviewees, these virtual meetings had some drawbacks in comparison to an in-person experience. Perhaps most importantly, interviewers did not have a chance to see or experience any Delhi schools or classrooms. While not vital to this case study, visiting classrooms and conducting even the most informal of observations could have assisted in better building this case study's descriptive narrative of the programme and its impacts. Conducting video interviews can also make it more difficult to establish a good rapport between interviewer and respondents as compared to an in-person meeting. Finally, while relatively few technical or connectivity issues occurred throughout the interview process, there were isolated instances where the interviewer or respondent would have a brief pause in internet and have to re-join the Zoom meeting after dropping out. This caused some minor difficulties in establishing a comfortable rhythm and tempo with the interviews that would not have occurred with in-person meetings.

Though not exactly a limitation, the very nature of this project sought out best practices and bright spots within the Delhi system. Therefore, this collection of interview respondents should not be viewed as representative of the whole of the Delhi system. Instead, it was a purposeful sampling that selected teachers and middle tier officials because they have had some measure of success within the programme. This method allowed this case study to highlight the positive takeaways for promoting best practices of middle tier systems.

Ethics

Throughout the entire data collection process, interviewers acted in an ethical manner with regards to data collection and interactions with all interview respondents. Prior to beginning, the interviewers informed all participants of the nature of the overall project, the reasoning for the interviews, and the goals of the study. They also informed respondents that their participation was completely voluntary, and they could decide to withdraw their participation up until the publication of the case study. All interviewees were told they would remain anonymous in the publication of this work, with only their job title identified and not their names or districts in which they work. Prior to the virtual meetings, each respondent was emailed an information sheet that clearly communicated all of these conditions. At the beginning of each meeting, all

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[2] While Delhi closed its physical school buildings to students during the pandemic, lessons continued virtually or by delivering hard copies of work to students. Likewise, the TDC programme continued on schedule through the pandemic to provide support and collaborative opportunities to teachers, even seeing increased participation in ART meetings with more teachers able to attend virtual sessions than the normal in-person gatherings.

respondents were asked to verify that they understood the nature of the project, consented to being interviewed and having its audio recorded, and if they had any clarifying questions before beginning with the interview. Finally, permission was sought and granted from Delhi's Directorate of Education (DoE) to conduct the research project and speak with all interested stakeholders.

Structure of case study

Over the course of five chapters, this case study seeks to explore the middle levels of the Delhi education system while specifically highlighting the TDC programme and its impacts. The first chapter provides an introduction and overview of the topic, as well as the research questions, project and data analysis methodologies, limitations to the study, and the ethics guiding the process. Chapter 2 delivers a more detailed look at the Delhi education system itself, as well as a broad overview of the different levels of its middle tier. This is followed by a brief history of the genesis of the TDC programme and its early iterations. Building on this history and early structure, Chapter 3 takes a more in-depth look at the current TDC programme, focusing on its mission and vision, the role of each stakeholder at various levels in the system, the recruitment and training of Mentor Teachers and TDCs, and the support and feedback systems in place. Chapter 4 provides insight into some of the biggest impacts and outcomes that have come from the programme, the major challenges faced by it, as well as a look to the future. The final chapter analyses some of the key takeaways which can potentially be applied more broadly and some contextual factors that uniquely contributed to this specific programme.

Chapter 2. A deeper look at the Delhi educational system structure and its recent reforms

Before diving into the workings and impacts of the TDC programme itself, it is important to have at least a basic understanding of the Indian and Delhi education system structures. Since the programme works within and through the already established middle tier structures in Delhi, this background provides the foundation to understanding how the programme functions. In addition to providing an overview of the education system's structure, this chapter also explores some contextual circumstances in Delhi that help explain how this programme came about. Finally, it digs into the beginnings of the Mentor Teacher and TDC programmes, and how they came together to form one cohesive unit[3].

India and Delhi education system overview

Though India has national education guidelines and its own ministry of education, it allows individual states and union territories to make many of their own policy-making decisions. For an example of the type of guidelines set nationally, the recently released National Education Policy 2020 has proposed such broad measures as expanding the school structure to bring 3–5-year-olds into the formal schooling system, providing free breakfast and lunch at all government schools, and introducing more vocational education into secondary schools (Jebaraj, 2020; Government of India, 2020). Through the National Council for Educational Research and Training (NCERT), the national government also provides textbooks and recommended curricula for all subjects that states can adopt. Even so, states have the freedom to develop their own curricula, conduct pre- and in-service training for teachers, and even develop strategies to hit national targets for student performance (Government of India, 2020). Thus, state departments of education and State Councils for Education Research and Training (SCERTs) have large, influential roles in determining the culture and trajectory of their school systems.

Shifting focus to Delhi specifically, the state government oversees both government and private schools within their jurisdiction. Historically, government run schools in Delhi have mainly served those students from lower socioeconomic backgrounds, while those families with higher incomes sent their children to higher quality private schools (Sahoo, 2020; Sharma, 2020). More recently, the Delhi government has sought to change this notion, however. One Mentor Teacher talked about this changing vision by stating the education system hoped to show 'that these [public-school] children are equally valued as the children of people who are going to expensive private schools...they are equally important'. With recent increases in spending and the implementation of numerous reforms, student outcomes have begun to reflect this vision. In the past five years, government schools have seen a higher pass rate of Class 12 Central Board of Secondary Education (CBSE) exams than private schools in Delhi. In 2020, the pass-rate in Delhi's government schools reached nearly 98%, the highest of any state in India (Sahoo, 2020).

Hierarchy of Delhi's education system

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[3] Throughout this paper, the term 'TDC programme' is used to refer to all pertinent stakeholders that work with and support the individual TDCs, to include Mentor Teachers. While the Mentor Teacher programme started as its own stand-alone entity, its role has since merged into the larger vision of the TDC programme, as illustrated later in this chapter.

When considering education systems, it can become easy to only think of the highest levels (ministers of education, state or national policymakers) or the lowest levels (schools, teachers, or principals) of the structure. However, the layers between these two, the middle tiers of education hierarchies, can play a critical role in ensuring that new programmes and reforms actually meet their goals. For example, when Delhi decided to implement new curricula, it took middle tier role holders to properly develop the materials and then train and guide teachers on best implementation methods. Thus, to fully understand the dynamics of change within a system, one must first understand its general makeup and structure. For Delhi, classification of different education entities involves both a vertical structure that includes schools, zones, districts, the state, and the national levels, as well as a split between academic and administrative duties. The administrative side is referred to as the Directorate of Education, and every teacher (to include TDCs and Mentor Teachers) ultimately reports to them.

Essentially, the vertical hierarchy breaks down into five separate levels going from the national government to the school, as shown in *Figure 1*. At the top of this chain is the national government, with its Education Policy 2020 and the NCERT providing guidance to states and union territories. The NCERT acts on the academic side of the structure with its focus on curricula and textbooks. Likewise, the Directorate of Education runs the administrative side in Delhi, while the SCERT acts as their academic body and provides curriculum guidance and training for teachers. Delhi's SCERT also acts in support of the state's nine District Institutes of Education and Training in their various roles and responsibilities.

At the district level, the true nature and responsibility of Delhi's middle tier becomes apparent. There are 13 administrative districts supported academically by 9 DIETs (Del E, 2018; SCERT, 2014). Each DIET has a principal acting as its head, and a faculty working across seven different departments focusing on separate areas of expertise: 1. pre-service teacher education, 2. in-service teacher education, 3. education technology, 4. curriculum, material, development, and evaluation, 5. district resource unit (non-formal education), 6. work education, and 7. planning and management. On the administrative side, each district also has a district director overseeing it. Moving down to the zonal and school level, each district in Delhi has two or three zones, which typically have approximately 30-40 schools each. Zones also have an administrative zone director, and the zone serves as a logical separation method for DIETs to conduct academic group trainings or work with a set number of schools. Zones do not, however, have their own academic support body. Of specific note, other states in India sometimes have a level known as 'block', which roughly equates to the zone level in Delhi (Aiyar and Bhattacharya, 2016). Delhi does not have any designated blocks in their system but did borrow the name when designating the 'Block Resource Person' role.

Figure 1. Graphical illustration of Delhi's education system structure

National	•Ministry of Education •National Education Policy 2020 •National Council for Educational Research and Training (NCERT)
State	•Directorate of Education •State Council for Educational Research and Training (SCERT) •28 states and 8 union territories in India
District	•9 District Institutes of Education and Training (DIET) in Delhi •13 administrative districts
Zone	•2-3 administrative zones in each district of Delhi
School	•Approximately 30-40 schools in each zone

Sources: Compiled by author from: Del E, 2020; Bambawale, Hughes, and Lightfoot, 2018

Recent reforms in Delhi

While the TDC programme provides a clear example of new programming targeted at the middle tier of Delhi's education system, it is only one of a vast array of recent education reforms. This push for reform began in 2015 when the state government began focusing heavily on education reform, working to transform the government schools in Delhi through a series of projects and programmes (Sisodia, 2019; BBC, 2015). This push started by doubling the budget allocations for education, raising expenditures to just shy of 25 per cent of Delhi's total budget (Sisodia, 2019; Del E, 2018; Sahoo, 2020).

This wave of spending and reform made up part of a larger vision for the improvement of Delhi's schools that included a more holistic vision of learning (Del E, 2018). According to one state official, they hoped to make 'not just a school, but a learning institution…it's not only learning from the root, it's also an understanding-based learning and an application-based learning'. Reflecting this, reforms have targeted all aspects of the education system, ranging from projects that seek to improve infrastructure, student reading levels, and community involvement. The following descriptions provide brief overviews of some of the biggest changes and improvements that have occurred across several targeted areas of the system.

Infrastructure

With many schools facing problems of overcrowding, unsanitary conditions, or just general disrepair, one of the first priorities of reforms sought to improve the infrastructure of Delhi's government schools. As one Programme Manager described in their district, 'Now they have buildings, earlier they didn't have buildings…there was just an outside structure, or they'd have

class under a tree'. This improvement process started with the construction of around 25 new schools and some 8,000 new classrooms for existing buildings, with 12,000 new classrooms in the works (Sisodia, 2019; Sahoo, 2020; Del E, 2018). Other projects included improving drinking water and toilet facilities, increasing the numbers of desks and computers at classroom level, and creating modern labs and SMART classrooms (Sharma, 2020; Sahoo, 2020; Del E, 2018).

Teacher and principal training

The TDC programme makes up a key portion of the reforms targeting teachers, but other projects have also undertaken measures that target both teachers and principals. Teachers have seen their administrative burdens reduced by removing their requirements to conduct family surveys and progress reports on their following of NCERT curriculum timelines (Sisodia, 2019). Some other improvements targeted the renovations of staffrooms in schools and getting every teacher a tablet or computer (Sisodia, 2019). In a separate collaborative project with the NGO Creatnet Education, the Delhi government has targeted school principals for growth through leadership training. This initiative has included more than 500 principals studying at institutions in India, as well as over 100 visiting programmes in the United Kingdom and Finland (Del E, 2018: 12). Other efforts have been made to seek international best practices, with principals, Mentor Teachers, TDCs, and teachers all getting opportunities to attend training and collaborative sessions in Singapore. One state official commented that they had 'created an environment for teacher-based pedagogy whether it's from Cambridge, Finland, or Singapore'.

Community involvement

To better involve parents and the community in decisions about schools, a renewed focus on the School Management Committee (SMC) has occurred. The SMC consists of parents and community members that provide input to all levels of the education system about their local schools, as well as developing their own solutions to issues (Sharma, 2020; Del E, 2018). Previously, SMCs in many locations existed 'just on paper', and members were often nominated by school principals and fell under the influence of local politics (Sisodia, 2019: 92). However, beginning in 2015, each SMC has been decided by an open election and they have significantly strengthened the partnership between schools and communities (Del E, 2018). Mentor Teachers also work with these groups to help build the school-community relationships. One Mentor Teacher noted that, 'with these SMCs we try to work together to determine solutions to the problems that schools are facing'.

Student interventions

While reforms involving infrastructure, teacher and principal training, or community outreach are all ultimately created to improve the learning outcomes for students, several programmes have directly targeted the students themselves. Perhaps most noteworthy, happiness and entrepreneurship curricula have been added at the lower and upper secondary levels, respectively. The happiness curriculum focuses on mindfulness meditation, inspirational stories, and activity-oriented discussions, while the entrepreneurship programme aims to imbue 'confidence in students to do new things, to do bigger things, [and] to make decisions and work with courage' (Sisodia, 2019: 142, 163). One DIET official spoke to this, saying that 'the children are being given experience and time to relax and meditate and feel happy or listen to nice stories. This is another factor that helps the child get motivated towards the school'.

Separate programmes introduced by the government have targeted basic competencies such as reading, writing, and math to increase student learning outcomes to age-appropriate levels.

History of the TDC programme

Among this recent flurry of reform, the Mentor Teacher and TDC programmes have also come about since the change in government in 2015. However, the roles of Mentor Teacher and Teacher Development Coordinator did not originally begin in the coordinated manner in which they operate today. The Mentor Teacher programme started in 2016 as an experimental way to better mentor and train the teaching corps working in Delhi government schools. In that year, the education minister and his advisors developed a general idea of how the programme would look. They desired to have each Mentor Teacher work with teachers in approximately five different schools to 'create an academic environment in the schools assigned to them' (Sisodia, 2019: 59-60). He then sent a letter to every teacher in Delhi expressing his vision and asking for volunteers (Sisodia, 2019). Around 1,200 teachers wrote back saying they were interested in vying for the 200 available slots. After a rigorous selection process (see *Chapter 3*), the programme immediately got started and mentors started making school visits and working with teachers. While showing some early promise, mentors initially found that they struggled to establish meaningful connections with teachers while having so many schools under their umbrella of support. *Box 1* more specifically highlights some of the major issues that Mentor Teachers had in the early going.

Box 1. Perspectives on the need to adapt the original Mentor Teacher programme

Now what happens is that every Mentor Teacher has about five to six mentee schools allocated to him. Even the Mentor Teacher finds it a little difficult moving forward to coordinate with the master structure of Delhi schools that we have. So, one school might have 150-200 teachers…so if that Mentor Teacher actually has large schools, even if they only have three, that makes it about 600 teachers. And you can't expect them to coordinate with so many teachers. -Programme Manager

Mentor Teachers were working for four to six schools when they could only go to one school about once in a week. Then there was a problem...how would the Mentor Teacher be able to collect problems, to assimilate problems? -DIET official

There was a problem in this mentorship that they were not there to work throughout the year, so they were trying their level-best and all mentors were doing a good job, but the point was they were not there all the time. There was a gap we could visualize. So, okay, the TDC will be appointed by the head of school and the head of school will also share with both mentors. -DIET official

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In contrast, the role of TDC had its origins from two completely separate pilot programmes: one initiated by the Delhi government and one from STiR Education, an NGO which focuses specifically on improving the intrinsic motivation of education officials, teachers, and students. STiR's pilot programme began in 2012 in Delhi with approximately 100 schools in which they created a role called Education Leader. STiR employees served in this leadership role and led Academic Resource Teams of approximately 20-25 teachers to provide encouragement, support, and opportunities to collaborate (Gibbs *et al*., 2019). Through this process, they strove to build teachers' intrinsic motivation through a combination of autonomy, mastery, and purpose (See

Chapter 3 for more details). On the other hand, two interviewees shared that in 2015 the Delhi government began a pilot programme in approximately 50 schools that created and developed the role of Learning Manager. Each individual school selected one teacher to become a Learning Manager who then sought to raise that school's academic environment and culture. They also met with middle tier leaders to discuss strategies and interventions that could help at the school level.

After conducting a randomized control trial that saw positive effects on motivation and some small test score increases for elementary students in mathematics in Affordable Private Schools in Delhi, STiR hoped to expand their operations to approximately 200 schools (IDinsight and STiR, 2018; Gibbs *et al*., 2019). Instead, the Delhi government made an offer to either expand the programme to all the government secondary schools in Delhi or not to expand at all. Even though STiR's CEO felt such rapid expansion would pose numerous difficulties, they eventually agreed to take on the challenge (Jeevan, 2019; Gibbs *et al*., 2019). However, since STiR did not have the human or financial resources for such a large undertaking, each party agreed that this programme should be run and operated by the Delhi government with STiR support.

Thus, the current version of the TDC programme launched in 2017 as a government owned programme. At its core, it sought to continue on the tradition of Learning Managers and Mentor Teachers by improving the academic environment and culture in schools, while heavily borrowing from STiR's model that focused on improving teacher intrinsic motivation and peer collaboration. By assigning a TDC to every government school in Delhi, the state also began to address the lack of coverage that the Mentor Teacher programme had been facing in its early stages. As designed, Mentor Teachers would now work hand-in-hand with the TDCs at the Mentor Teachers' assigned schools, providing them support, guidance, and increased communication with upper levels of the education structure. While Mentor Teachers may only be able to visit a school once per week, TDCs would remain there on a daily basis to communicate with teachers and continue to facilitate collaboration. Though these two programmes are technically separate entities that had their own individual origins, they have now become intertwined into a symbiotic relationship in which it is hard to imagine one role having any success without the assistance of the other.

Summary

With the freedom that India's national education system gives to states and their governments, a change in state priorities and spending lends itself to big changes in schooling. That's exactly what has happened in Delhi in recent years. Through lots of added spending and a host of reforms targeting education, Delhi has seen a great deal of positive momentum in its public school system. Born from these reforms, the TDC programme has found an especially important role in attempting to change the culture and overall professionalism of Delhi's government schoolteachers. Growing from their distinct origins, both the Mentor Teacher and TDC programmes have come together and utilized Delhi's existing middle tier structure to develop into their current model.

Chapter 3. Structure and functions of the TDC programme

Even with their individual origins and distinct job descriptions, the Mentor Teacher and TDC programmes have, in reality, morphed into one cooperative system. This holds true in this chapter's exploration of the objectives of the programme and feedback structures, as well as the overall impacts, challenges, and takeaways in Chapters 4 and 5. However, individual attributes and nuance within the two roles will also still emerge, especially with this chapter's discussion of the overall structure of the programme and the recruitment and training of each role. Having already established the history and origins of these roles, this chapter now seeks to clarify what the current iteration of the programme tries to accomplish while also exploring the nuts and bolts of how it operates.

Objectives of the programme

Though working in tandem towards the same goals through the same programme, STiR and the Delhi government do maintain their own individual definitions and theories of change. However, they each seem to have borrowed terminology from the other, highlighting the integrated nature of the TDC programme. Per STiR's initial system-level theory of change, the programme's intended impact is to create an 'enabling environment for teachers' in which 'Delhi's school system is more oriented towards the prioritisation and development of teachers as a key driver in its "everybody learning" strategy' (Gibbs *et al*., 2019: 46). In looking at the Delhi government's definition of the TDC programme, they use terminology from the original STiR pilot programme and state it is 'to develop [an] "Education Leader" within each school in order to assist the Head of School in creating the culture of collaborative learning in schools' (Del E, 2018: 14). This choice of words again proves analogous to the programme itself: Delhi government owned, with influence from STiR still visible. For its part, the Delhi government still separates definitions for the programmes and describes the role of Mentor Teachers as 'to support teachers from the Delhi Government to leverage creative expertise by providing on-site learning support to other teachers and organise workshops suited to the pedagogical needs of their fellow teachers' (Del E, 2018: 13).

More recently, STiR has expanded their theory of change beyond simply improving intrinsic motivation for teachers by providing enabling environments. Taking it a step further, they have incorporated the intrinsic motivation of students, teachers, and education officials into a broader vision of establishing lifelong learning practices. By building on the ideas of collaboration and closer relationships, STiR envisions role-modelling at all levels of the education system to assist in this process of increasing motivation and building positive behaviours and attitudes. All of this then ideally culminates in a self-sustaining and self-improving education system with a more motivated and energised workforce (STiR Education, 2020).

In shifting to the words of the role holders themselves, they spoke to the mission and vision of the programme mostly in the same terms as the official statements above. Of note for the following subsections, the mission reflects the *what* that the role holders say the TDC programme is specifically trying to accomplish. In conjunction with this, the vision pertains more to the *how* that they say this programme intends to achieve the mission. Admittedly, the answers sometimes overlapped and linked to each other, but the following responses seem to

make clear that role holders have a deep understanding of both what they are trying to accomplish and how they are trying to get there.

Mission

Our immediate goal was to transform the whole education system of Delhi government schools and keeping the child at the centre. -Mentor Teacher

The Mentor Teacher programme's basic objective is to create conditions and conducive learning environments in schools and to create culture, especially academic culture. -DIET official

Respondents did notably provide some variations in their choice of words when describing the mission of the programme. This often depended on the level which they worked, with teachers heavily focused on students and immediate learning outcomes, as illustrated in *Box 2*. At the level of TDC and higher, descriptions often included the creation of a 'system', a 'culture', an 'environment', or 'conditions' that supported teachers and students. They spoke how these improved cultures or systems would then improve teaching and learning outcomes. For example, one DIET official said, 'the mission of the programme is creating or developing a system where everyone has to learn; the teacher has to learn because the teacher has to deliver and ensure the student has also learned'.

Box 2. How teachers view the mission of the TDC programme

*Because ideally what we are focusing on is the learning enhancement of the **child***. -ART teacher

*And through us, I think the program is getting implemented because the target is the **child**. We have to learn, and we have to enhance the learning...the teaching/learning processes has to get better for the betterment of the **children***. -ART teacher

*The main motive is on how to increase connection with the **children** to understand their problems*. -ART teacher in focus group discussion

*The focus of this is on teacher professional development through multiple platforms. I feel the main focus was teacher professional development through multiple platforms with **students'** and **children's** overall development and overall foundational skills, literacy, and numeracy*. -ART teacher in focus group discussion

*The programme is a collaborative network for teachers in which many teachers have connected at a big level, at the 'all DoE' school level. It is all towards the goal of every **child** can read and approach that level of education, to ensure no **child** is left behind*. -ART teacher in focus group discussion

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In describing the overall mission- the what- of the programme, all respondents seemed to agree that the ultimate goal is, as expected, to raise the learning quality and outcomes of students in government schools. The variation in the way they described this goal mainly reflected the level at which they sat in the education system's hierarchy. So, in totality, what is the TDC programme trying to do? According to those most invested in it, the programme seeks to create an improved academic environment and culture among schools and teachers and, in turn, improve student learning outcomes and performance.

Vision

I can say that people are moving forward from the fixed mindset to a growth mindset. -Mentor Teacher

This is the sort of vision that we follow and implement: an intrinsic motivation theme. - Programme Manager

If the mission of the programme describes the 'what' that it is trying to achieve, then the vision describes the 'how' it goes about achieving it. In defining this, the interviewees' responses became somewhat more nebulous with regards to the specific ideas or terminology they used in comparison to the mission. Many spoke of the shift from a 'fixed' to a 'growth' mindset, as the Mentor Teacher quoted above. Others focussed on the shift in pedagogical techniques, as teachers moved away from rote memorization towards a more student-centred approach. Yet others hit on STiR's main focus of improving teacher's intrinsic motivation and lifelong learning, especially through increased autonomy, mastery, and purpose (Gibbs *et al*., 2019; STiR Education, 2020). Eloquently reflecting on all of these themes, one Mentor Teacher provides their own specific vision for the programme in *Box 3*.

> **Box 3. A Mentor Teacher's thoughts on the vision of the programme**
>
> *I must say this is a wonderful program. In fact, I would like this program to be in every state. Because our teachers definitely need support. Because if you get a degree in education you are a teacher. Now, so what? Now go to the field and just deliver the content. We are not meant just for content delivery. This is something that every teacher has to understand: we are not just for content delivery. You can get that from anyone, from any book, anywhere. But we are the facilitators of our children. Once you understand this, we have to work as facilitators for our children and create opportunities for learning. We don't have to force a child to learn we just have to gauge how a child is going to learn. We have to provide the opportunities and situations for learning. The child will learn for themself. This is the basic nature of a child...What we did in the past, we just said this is the chapter and whatever is written on the board write it down and learn it. This is not education at all, and the mentorship program is working towards it. We are working day and night and making the teachers realize, okay your role is a wider role. You're not just delivering content; you are involved in a human-changing phenomenon.* -Mentor Teacher

As a final visionary end goal, several respondents talked about the hope that all teachers in Delhi would one day have the skills and mindset of a Mentor Teacher or TDC. One Mentor Teacher talked about how 'Mentor Teachers are not permanent positions. We are working [with] a different thought: that every teacher must work as a Mentor Teacher, not some of the teachers'. Taking all of this into account, the overall vision of the programme is to aid teachers to become intrinsically motivated professionals, with a growth mindset that focuses on facilitating student learning instead of simply delivering content.

Stakeholder roles and structure within the programme

With a better understanding of the theoretical *what* and *how* of the programme, the question then becomes how does this programme actually go about improving teaching and learning outcomes by creating intrinsically motivated teachers that become role models of lifelong learning? The answer to this starts with understanding all of the stakeholders involved in this process and how they interact with each other through the programme's structure. *Table 1* provides a summation

of each main role holder's position, as well as some brief context of how they fit into the bigger Delhi system structure. The following subsections then detail each individual's role and some of the programme's structuring in greater depth.

Table 1. Overview of role holders' positions in TDC Programme

Role	Role in the programme	Context within Delhi system
SCERT	• Provides big-picture thematic and design inputs, and train DIET facilitators on these topics • Meets with DIET, MT, TDC, and STiR personnel to talk about status of implementation and receive any other feedback	• One Officer on Special Duty (OSD) from DoE who serves as the head of TDC programme. • One SCERT for Delhi which works with all DIETs in the state
DIET	• Lead co-learning sessions for MTs and TDCs as well as assisting in design process • Sometimes attend ART meetings, as well as having monthly meetings with SCERT, MTs, TDCs, and STiR personnel	• 9 DIETs working at the district level of Delhi
Programme Manager *(temporary position to be phased out over time)*	• *Coordinates between all other stakeholders to schedule meetings and ensure open lines of communication* • *Helps coach Mentor Teachers and TDCs, as well as design and facilitate co-learning sessions*	• *Employed by the NGO STiR and working in support of Delhi government schools with the TDC programme* • *9 PMs, one in each district*
Block Resource Person	• Similar role to Programme Manager but working for Delhi with heavy coordination and communication aspects • Will eventually take over all roles and responsibilities of Programme Manager as Delhi takes full ownership of programme and STiR withdraws	• 1 BRP assigned for each district (some positional turnover has caused only 8 to be currently assigned)
Mentor Teacher	• Supports TDCs and teachers by providing guidance, introducing new strategies, role modelling classroom techniques, and conducting	• Approximately 200 in Delhi, with each MT assigned 4-6 government schools

	• supportive classroom observation sessions • Assists with designing and planning Learning Improvement Cycle themes and content as well as facilitating TDC co-learning sessions with DIET facilitators	
Teacher Development Coordinator	• Leads monthly ART meetings in their schools to introduce strategies and practices from co-learning sessions • Role-models techniques and invites other teachers to observe their classroom	• Approximately 1,030 in Delhi, 1 for each government school
ART Teacher	• Attend monthly ART meetings and then take strategies back to their departments and fellow classroom teachers • Often open their classrooms for peer observation and role modelling of new techniques	• Typically 20-25 ART teachers per school, with at least 1 teacher from each department

Source: compiled by author

Notes: Heads of school were omitted from this table and not individually discussed in the programme's structure. Instead, their supportive role is mentioned throughout when describing other aspects and roles within the programme.

The Programme Manager position is in Italics to designate it as outside the Delhi employment structure. The Programme Manager is a STiR employee and will be phased out as the programme gains self-sustainability.

State Council for Educational Research and Training

Sitting at the top of the hierarchy, Delhi's State Council for Educational Research and Training plays an important role in driving the overall philosophy and design of the programme. Members of SCERT's core team (which includes some DIET officials) receive inputs from DIET facilitators, Mentor Teachers, and TDCs to ultimately decide the topics and themes for the programme's upcoming Learning Improvement Cycles (LICs). The LICs form a key cyclical structure within the programme, with each one lasting for three months. Some past LIC themes include building connection, lesson planning, and classroom routines (SCERT, 2019). Aligning with the theme, specific strategies, classroom practices, or pedagogical techniques are emphasized for the duration of the LIC.

Once finalizing the Learning Improvement Cycle's theme, the SCERT also leads a training at the beginning of the LIC for DIET facilitators so that they can then train the Mentor Teachers in their district. *Figure 2* illustrates the progression that new themes and strategies take as they go from the conceptual beginnings at SCERT level down to implementation in Delhi's classrooms. The following sections further describe each role's input and function at each of these levels.

Figure 2. LIC theme dissemination from SCERT to classroom level

SCERT core team decides theme and vision for LIC, then holds training for DIET Facilitators with STiR design team and PM support

DIET facilitators design and lead co-learning session for Mentor Teachers on new LIC with PM and BRP support

Mentor Teachers design and lead co-learning session for TDCs with DIET, PM, and BRP support

TDCs hold monthly ART meetings to discuss and role model strategies for their ART teachers with MT, PM, and DIET support

ART teachers share strategies with their respective departments and, along with the TDC, role model techniques in their own classrooms

Source: compiled by author

Additionally, the SCERT receives feedback from DIET and Mentor Teacher representatives to discuss how programme implementation has gone and what can be improved on the teacher, school, and district level. The SCERT also produces more tangible guidance and reference materials for the programme, to include a TDC handbook. This provides general information and best practices, as well as a means to highlight excellent performances. One TDC noted that, 'if teachers try any activity and it works, they receive a case in the book. Examples in Hindi and English talk about a specific TDC and how they have done some work well. And teachers are also featured along with photos'.

District Institute of Education and Training

Serving as the primary body supporting academics in Delhi's middle tier, the DIET plays a crucial role in all aspects of the TDC programme. Concisely, one DIET official described their role as 'working as facilitators in this programme'. DIET officials are involved in all aspects of the planning and training process, starting with providing inputs to SCERT officials for big-picture themes. After receiving training on new Learning Improvement Cycle topics as described in the previous section, the DIET faculty members selected as facilitators then design and conduct co-learning sessions for Mentor Teachers to pass this information down the chain through role-modelling strategies. Finally, they then work in conjunction with Mentor Teachers to lead a TDC co-learning session to once again pass along major themes and key points of the new LIC through role-modelling and workshopping.

DIET officials also attend coordination and planning meetings in addition to the previously described feedback given to SCERT officials. In the monthly District Progress Check Meeting (DPCM), DIET officials sit down with Mentor Teachers, Block Resource Persons, and Programme Managers from STiR to discuss data, trends, and feedback they have received in

their individual district. This allows them to tailor their plans and support to address school- and classroom-level feedback from their TDCs and teachers. Meanwhile, District Alignment Meetings (DAM) occur every two to three months, and involve DIET officials, Programme Managers, and Mentor Teachers sitting down with DoE district officials to discuss their progress, success stories, and challenges they are facing.

Programme Manager

STiR's Programme Managers act across all levels of both stakeholders and structures of the TDC programme. These Programme Managers work constantly to coordinate the various meetings and trainings to ensure things operate smoothly. Acting as a kind of switchboard, they also ensure that communication occurs both up and down the hierarchical chain as well as across to the administrative side of the system. Programme Managers work in close conjunction with their Block Resource Person to accomplish these coordination tasks.

Programme Managers also play an important supportive role to TDCs, Mentor Teachers, and DIET officials. In talking about their work with DIET officials, one PM described 'establishing very deep connections and relationships with them. And understanding where they are coming from…and trying to understand the system and having formative relationships'. Programme Managers also serve in coaching and supportive roles to Mentor Teachers and TDCs, helping them better understand or implement suggested strategies.

Finally, Programme Managers work through the entire feedback loop of the Learning Improvement Cycle from design to data analysis. They help the SCERT core team and DIET facilitators design materials and training for co-learning sessions, as well as with facilitating the sessions themselves. During implementation, they conduct school visits to observe classes and sit-in on ART meetings. With regards to feedback, Programme Managers assist with data collection and analysis to better understand realities in schools and classrooms. They then take this information to District Progress Check Meetings and district or state alignment meetings to help all stakeholders understand what is working and what needs improvement before starting the process again.

Block Resource Person/District Coordinator

Working for the Delhi government in a kind of mirror role to STiR's Programme Manager, the Block Resource Person or District Coordinator also plays a key part in keeping the programme running smoothly. In time, the vision is for these BRPs to take over all responsibilities from Programme Managers so that the programme can remain fully sustainable with only Delhi government support. One Programme Manager spoke to this, describing that 'gradually the system realized these people are a retainable jewel and slowly they can take over the role of Programme Manager so we can withdraw'. These officials attend meetings, provide support to Mentor Teachers and TDCs, and work in the design and feedback processes just as Programme Managers do.

Though BRP responsibilities mainly reflect those of Programme Managers, one additional aspect of their job that proves vitally important is coordination across all government projects and reforms. Block Resource Persons work with more than just the TDC programme and have great influence in ensuring that these projects align in terms of schedule and implementation practices. With so many reforms and new programmes implemented over the last five years, this has not been a trivial task. While not the most publicly visible position in this programme or in Delhi's

middle tier structure, these Block Resource Persons provide all of the conditions necessary that allow a new programme to succeed.

Mentor Teacher

Mentor Teachers serve their own critical role in Delhi's middle tier system, with one Programme Manager calling them 'the lungs of the programme'. More than simply leading co-learning sessions or providing feedback from classroom observations, the position of Mentor Teacher is a multi-faceted role. Respondents emphasized both the on- and off-site nature of the support that Mentor Teachers provide, with one saying how they 'are available to each and every teacher and principal in our schools 24/7…on phone calls, on WhatsApp, on any social media platform'. If teachers are struggling with any aspect of their work, even if it is outside the realm of the Learning Improvement Cycle or TDC programme, Mentor Teachers still make themselves available as a means of support.

At its core design, the base function of Mentor Teachers is to spread all of the experiences and best practices they have garnered in their training and travels (see *Training* section for more details). They then distribute these practices among the teachers and principals at the five or so schools that they have been assigned. One Mentor Teacher likened their role to that of a bee pollinating multiple flowers: they take best practices and pedagogies from one school and then spread them to many others. Going along with this idea, Mentor Teachers serve only in a positive, supportive role for teachers. This allows teachers the opportunity to feel more comfortable and open themselves to new ideas and strategies without fear of judgement or reprisal from higher authorities.

Mentor Teachers also serve as a hub of communication, coordination, and feedback throughout the Learning Improvement Cycle. In their schools, they tend to sit in on ART meetings and provide feedback to their TDCs on how these meetings went or how they could improve the process. Mentor Teachers then sit in on meetings at the zonal, district, and state level to provide feedback at all levels of the administrative side of the system as to how things are going and what resources or assistance they need to make the programme better. As the programme has progressed, Mentor Teachers have also taken on a larger role in designing and facilitating TDC co-learning sessions. *Figure 3* illustrates all of these tasks through the three-month Learning Improvement Cycle process. It begins with their receiving training from DIET facilitators and then moves to MTs working with those facilitators to design the TDC co-learning session. After facilitating this, MTs go to schools and observe ART meetings and make classroom visits. Taking all of these experiences into account, they provide feedback to all interested stakeholders so they can design the next LIC and begin the process all over again.

Figure 3. Cycle of LIC implementation for Mentor Teachers

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                    ┌─────────────────┐
              ┌────►│  MT Co- Learning │────┐
              │     │     Session      │    │
              │     └─────────────────┘    ▼
    ┌──────────────┐                  ┌──────────────┐
    │   Adapt and  │                  │   Planning   │
    │  Consolidate │                  │ Reflection and│
    │              │                  │   Feedback   │
    └──────────────┘                  └──────────────┘
           ▲                                 │
           │                                 ▼
  ┌──────────────┐                   ┌──────────────┐
  │ DPCM & District│                 │ TDC Co- Learning│
  │   Alignment   │                  │    Session    │
  │    Meetings   │                  │               │
  └──────────────┘                   └──────────────┘
           ▲           ┌──────────────┐      │
           └───────────│    School    │◄─────┘
                       │  Observation │
                       └──────────────┘
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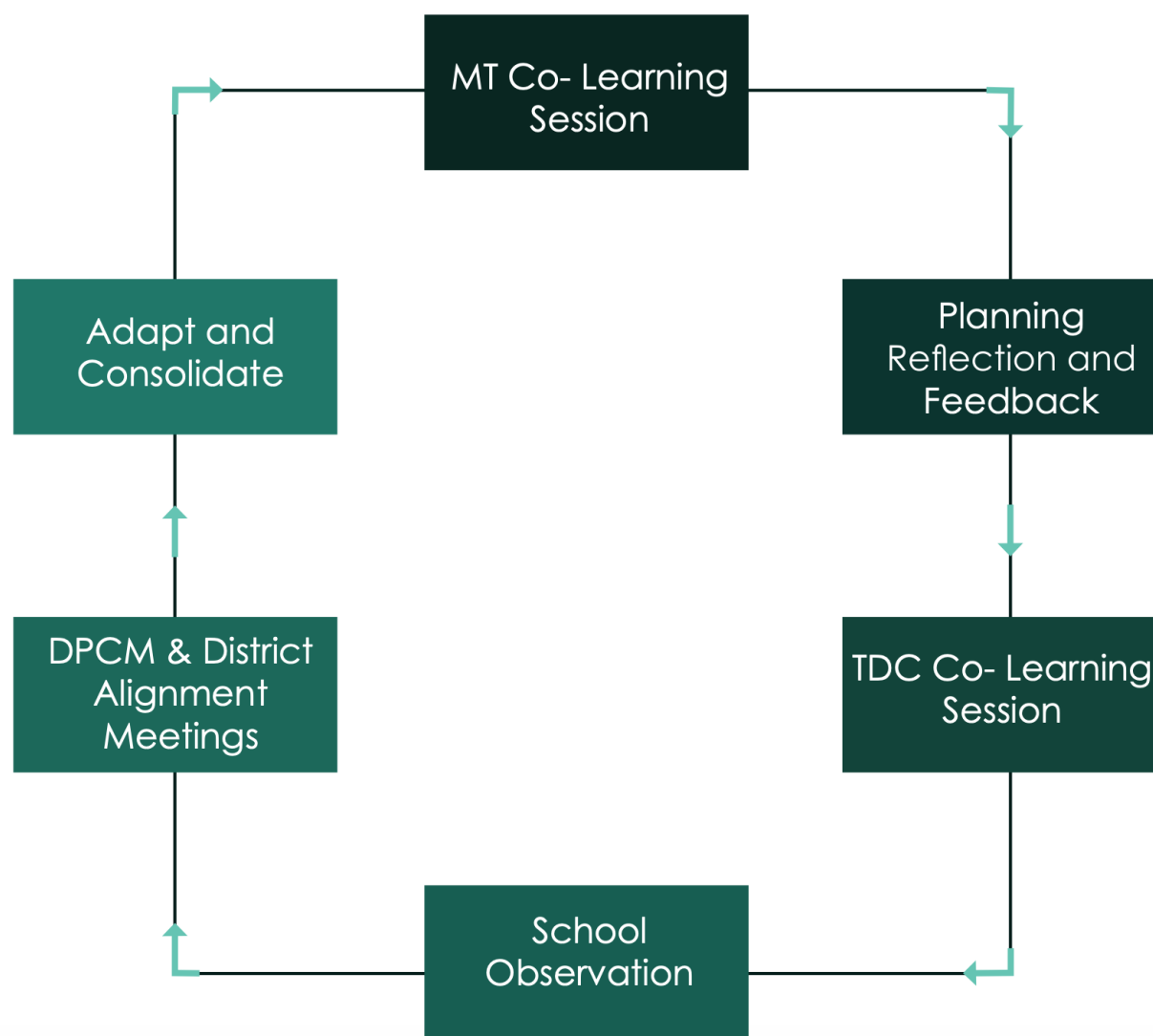
Source: SCERT, 2019: 8

Of note, all Mentor Teachers are classroom teachers that volunteered to serve in the role due to their own motivation and belief in the system. They do not receive any extra pay or other incentives outside of their increased opportunity for training and intrinsic motivation to 'empower teachers and students in other schools', as one Mentor Teacher stated. This role also does not fall within a natural career progression within the Delhi system. While one Programme Manager suggested that some Mentor Teachers have gone on to apply for roles as principals or vice-principals, the programme is designed so that Mentor Teachers return to the classroom after their time as Mentor Teacher has come to an end.

Teacher Development Coordinator

As the other most prominent position in this programme, TDCs oversee the programme at the school level, with every government school in Delhi having one TDC. At their core, TDCs aim to create a collaborative environment among teachers in their school while also raising the level of academic discourse. Taking what they have learned at their co-learning sessions facilitated by Mentor Teachers and DIET officials, TDCs then lead Academic Resource Team meetings with

their ART teachers to pass along strategies and practices. *Figure 4* shows how this process unfolds for TDCs over the course of a Learning Improvement Cycle. Initially, they hold an ART meeting in which they introduce the theme and related strategies. They then conduct classroom observations with teachers, while also opening their own classroom to demonstrate best-practices and provide role-modelling. A second ART meeting occurs the next month to introduce any other associated strategies and give a chance for ART members to provide feedback. This process continues until a third ART meeting occurs in the third month of the cycle and helps bring all lessons learned together for the final portion of the LIC.

Figure 4. Cycle of LIC implementation for TDCs[4] at school level
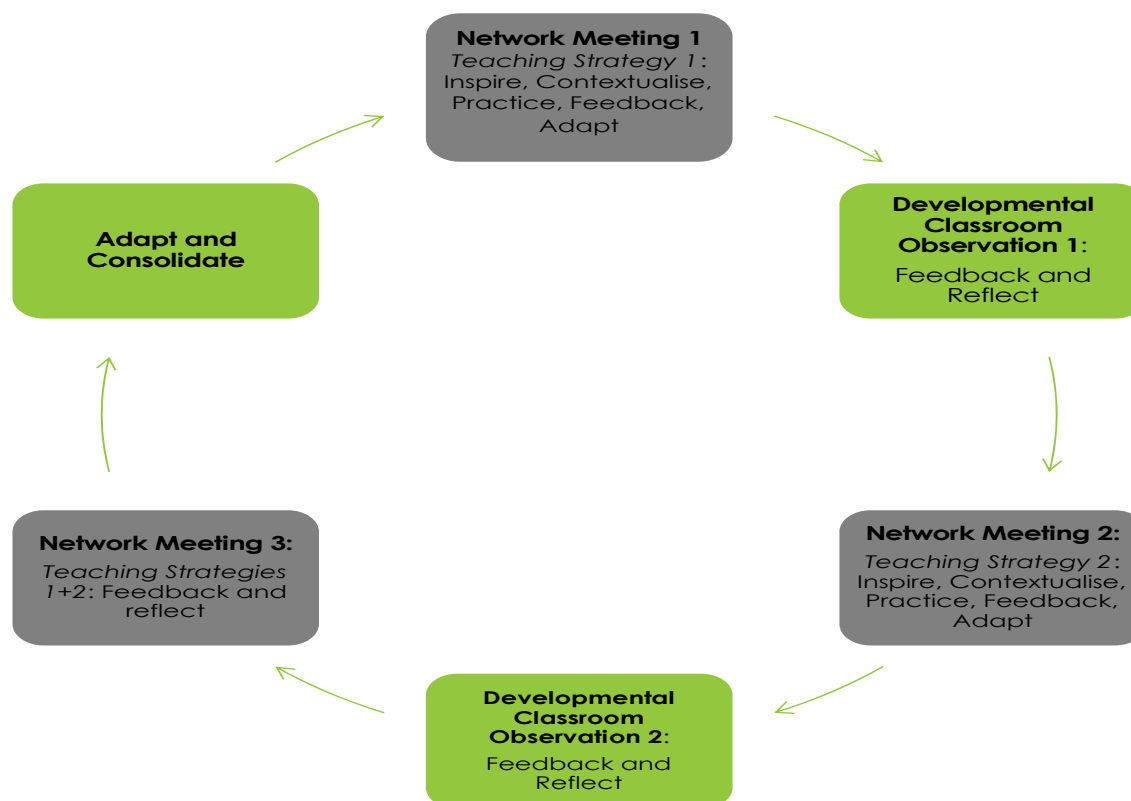
Source: unpublished STiR PowerPoint presentation on programme overview (2020: 20)

While not acting across such a broad spectrum of stakeholders as Mentor Teachers, TDCs also serve as a vital cog in the communication chain. In addition to the ART meetings highlighted above, TDCs also conduct one-on-one sessions and near-daily meetings with teachers to discuss academic and pedagogical strategies. Finally, TDCs also serve as an important link between a school's administration and teachers. One TDC viewed themself as a kind of channel between teachers and their principal, ensuring that any issues or problems could immediately be addressed.

Importantly, and unlike MTs, TDCs also continue to serve in their primary role as classroom teacher while adding these other responsibilities. Many teachers take on a reduced class load to

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[4] The figure uses the term 'Network Meeting', which is synonymous with 'ART meeting'

give them enough time to fulfil all their duties, but this varies from school to school. For example, one TDC only had one fewer class to teach than normal, while another only taught one class in total. These differences tended to depend on the number of available teachers at a school to cover the requisite classes. All TDCs spoke to the importance of remaining in their teaching position at least part-time, however, to role model strategies and form a better connection with other teachers. Like Mentor Teachers, TDCs do not receive any financial incentives for their role and take the position due to high-motivation or to seek their own professional growth.

ART teacher

Academic Resource Team teachers are selected by the TDC or principal, with at least 10 per cent of the teaching staff represented. Ideally, at least one teacher from each department is represented on the ART. After attending the ART meetings described above, these teachers take the strategies and practices they have discussed to their own classrooms as they see fit. With this programme, teachers have no obligation to implement strategies if they do not feel they will benefit them or their students. Then, as they are comfortable doing so, they can choose to open their classrooms and invite other teachers to visit and conduct observations to watch the strategies and practices they have implemented. In this way, ART teachers then role model the new strategies and allow their colleagues to see them in practice instead of simply learning about them in a meeting or professional development training.

With regards to communication and collaboration, ART teachers serve their own important role in this programme. Especially in larger schools, it would prove impossible for TDCs to meet individually with every teacher to foster new ideas or a collaborative environment. Thus, the ART teachers take ideas and strategies back to their department meetings or larger school faculty meetings to share with their colleagues. In this way, all teachers are exposed to the strategies and techniques that originated as a thematic idea at the SCERT level.

Recruitment and selection of Mentor Teachers and TDCs

Though Delhi's middle tier already had an established structure, the positions of Mentor Teacher and TDC were brand new and thus required the selection of entirely new personnel. This recruitment and selection process looked quite different for Mentor Teachers and Teacher Development Coordinators, but one vital aspect was the same: both roles were selected from active classroom teachers. This immediately gave both roles some measure of validity when they seek to collaborate and provide role-modelling or feedback for other teachers. Other similarities shone through when respondents discussed the most important skills and attributes for each role. Since they serve many of the same functions- facilitator, collaborator, and supporter- these similarities align with good reason.

Mentor Teacher

As noted in *Chapter 2*, the Mentor Teacher programme began with 1,200 motivated teachers responding to a letter from Delhi's education minister that asked for volunteers for the role. With such a large pool of candidates and the demanding nature of the position, a rigorous selection process ensued. A state official recalled that:

> *The process consisted of a full day of interaction of the Mentor Teachers…It started with a group discussion and there was a psychometric test in which they were tested to see if they could give 24x7 support to their department. And the third step was to see their*

views on certain topics: they were asked to speak for 2 minutes on a topic given to them on the spot.

In addition to group discussions and the psychometric test, candidates also had to take subject matter tests and display good communication skills. A key aspect of the process involved its strictly voluntary nature, highlighting the motivation required for teachers to apply. One Mentor Teacher shared that 'we got selected through [a process] which we voluntarily applied. No one pushed us or forced us; it was self-motivation'.

Having the proper motivation- or 'attitude', as one DIET official put it- also came up often when interviewees discussed key skills and attributes needed for the role. Respondents also cited communication as one of the most important skills, in terms of both connecting to others and acting as a patient listener. Other skills that role holders listed included open-mindedness or flexibility, facilitation or people management skills, and positivity. *Box 4* provides a more complete list of some of the most important skills and attributes the interviewees named for Mentor Teachers.

Box 4. Key skills and attributes for a Mentor Teacher

The following is a compilation of the responses that interviewees gave when describing the most important skills and attributes necessary for a Mentor Teacher:

- communication skills, to include:
    - deep listening
    - ability to explain and give feedback
    - questioning
- facilitation skills
- people management
- critical thinking
- problem solving
- flexibility
- growth mindset
- patience
- compassion
- positive attitude
- motivation and zeal for the job

A final key aspect of Mentor Teacher recruitment is that it is an ongoing process. Ideally, a new group is recruited every year so that Mentor Teachers only serve a maximum of two years before rotating back to teaching full-time. Aligning with the programme's vision, one Block Resource Person said, 'In this process, we welcome new teachers, and we hope that all teachers transform to Mentor Teachers'. This particular aspect of the programme has not fully been realized, however, as some Mentor Teachers have served in the role for the entirety of the programme's existence. With such a rigorous selection process, the number of candidates reaching the required threshold does not always match the desired number of new Mentor Teachers. This, as well as halting the recruiting process due to COVID-19, have been the major causes of this lack of turnover.

TDC

In contrast to the standardized and rigorous selection process of Mentor Teachers, TDC selection happens at the school level by the head of school. The process looks slightly different from school to school, with some simply selecting a teacher they think would best fit the role while others request volunteers. In many cases, the head of school seeks input from the Mentor Teacher, as they have been working with the teachers and are familiar with who would make a good TDC. A Block Resource Person noted that 'TDCs are selected by the school principal, Mentor Teacher, and senior [teachers]. The principal first orients the teachers about the programme, and the TDC selection process. He shares what characteristics a good TDC should have and other requirements'. No formalized process or selection measures exist for TDCs, though the state does mandate that each school must have one.

When looking towards the skills and attributes of a Teacher Development Coordinator, respondents overwhelmingly talked about communication skills, to especially include connecting with other teachers in their school and a positive, supportive attitude. *Box 5* highlights some additional key skills that role holders in different levels of the programme believe a TDC needs.

Box 5. Key skills and attributes for a TDC

The following is a compilation of the responses that interviewees gave when describing the most important skills and attributes necessary for a Teacher Development Coordinator:

- communication skills
- collaboration
- positive attitude
- supportive and welcoming nature
- patience
- empathy
- motivation
- confidence
- people and relational skills
- facilitation skills
- open-mindedness

Like the selection process, each school makes their own individual decisions on how long TDCs stay in the role. Some have been removed after feedback indicated poor performance, but many others have been serving in the role for the duration of the programme. While TDC is not a prerequisite to moving up to the role of Mentor Teacher, it does also provide a natural progression.

Training

Though the title of 'training' may imply that Mentor Teachers and TDCs undergo formal training, the reality is that 'training' for both roles consists more of exposure to new ideas and workshopping than actual intensive coursework or certification. As with the selection process, the training process and amount of exposure visits are more in-depth for Mentor Teachers, but the process for TDCs is not dissimilar. Each gets an orientation session going over responsibilities and general practices for the role as well as potential site visits to other national

or international sites. Beyond that, most training occurs in the form of ongoing workshopping and strategy sessions.

Mentor Teacher

The most frequently mentioned aspect of the Mentor Teacher's initial training involved site visits to other high-performing education systems. Typically, each Mentor Teacher conducts two visits every year, one to an international location and one to a national site. To get exposure to the best practices of other systems, Mentor Teachers travel in groups of approximately 25-30 for a week or 10 days. They make observations, attend training sessions, and generally try and absorb best practices and strategies from these high-performing systems. A Mentor Teacher described their experiences in visiting other states in India by saying:

> In my first year of mentorship, I got an opportunity to visit Bangalore, and in Bangalore we visited various organizations that are doing some really unique things for underprivileged children. We got an opportunity to learn new things from these organizations…We got to learn so many different things and so many unique strategies, unique pedagogies, and beautiful schools we have visited. This year we were able to visit Kerala and I was mesmerized; I was so overwhelmed to see the structure and see how they are working towards education.

Upon their return to Delhi, they share their experiences with other Mentor Teachers to disseminate their findings as widely as possible. In this way, mentors can keep up to date with new and best practices and bring them back to share with their colleagues, TDCs, and assigned schools.

In addition to these visits, Mentor Teachers also go through workshopping and training sessions back in Delhi. Initially, they go through a weeklong course aimed at strengthening their capacity building and facilitation skills. Additionally, Mentor Teachers occasionally receive more specialized training from outside NGOs on topics such as critical thinking and problem solving. Finally, Mentor Teachers tend to learn and grow from each other's experiences, as they come together during their co-learning sessions and share best practices that they have seen implemented in their assigned schools. This process allows for constant growth and exposure to new ideas and strategies for all Mentor Teachers in Delhi.

TDC

The TDC training path follows a similar model to Mentor Teachers, though typically international visits are less prevalent due to sheer numbers. However, an increased push has been made to also get TDCs to observe best practices from other high functioning systems. One TDC shared their excitement on getting this opportunity, saying:

> I was selected by SCERT and DoE to be sent to Singapore and that gave me a lot of joy. We used to think foreign trips are only for officers and teachers do not see any of this. But we were given an opportunity to learn and understand what is going on in other parts of the globe and learn how to understand this in our country's context.

Another TDC spoke to how Mentor Teachers also freely share their exposure visits with them, saying how TDCs often got to take 'virtual trips' by hearing about these experiences and best practices.

After their own initial orientation training session, the bulk of workshopping and growth for TDCs comes from the co-learning sessions. In these, they receive directed guidance from Mentor Teachers and DIET facilitators on what strategies are coming in the new Learning Improvement Cycle through role-modelled implementation sessions. Other, less formal methods of training for TDCs include sharing experiences with each other at co-learning sessions or through private communication and individual instruction and mentoring sessions with their assigned Mentor Teacher.

Support and feedback structures

While training occurs as a continuous process within this system, so too does a process of support and feedback for all stakeholders. Of all the structural and personnel aspects of the TDC programme, two characteristics of the support and feedback system stand out as particularly noteworthy. The first is the overwhelmingly positive and engaging nature of support from the upper echelons of the system moving down the chain. This entire programme has been designed as a giant support system, with the ultimate goal to build teacher confidence and motivation through positive interactions. The second aspect revolves around the dual nature of the feedback system. While lots of support and feedback come from the upper levels of the education hierarchy to the lower levels (see *Figure 2*), the TDC system also opens avenues for feedback to flow back up the chain as well. This makes teachers, principals, and TDCs feel like their voices are heard at higher levels when district and state officials are weighing decisions.

Support from top to bottom

At all levels of the hierarchy, respondents spoke to the positive nature of support they received from either their supervisors or those assigned to them in a mentorship role.

> *TDCs are very positive towards us. They visit our classes and they very nicely tell us about our shortcomings, in a very positive manner. They tell us very nicely how we can deliver a topic and how we can show the activities in a different way. TDCs are very supportive.* -ART teacher

A common approach to providing positive feedback in this manner is a method called CDC, or connect, disconnect, connect. An ART teacher describes the process by saying how their TDC uses this method:

> *First, she tells us what she liked in what we did. Then she tells us what we could have done differently without making us feel bad. And after this she connects with us again, [saying] 'yes, but what you did was great and can be better'. This theme of connect, disconnect, and connect helps us.*

In this way, all mentors and TDCs strive to give formative feedback and stay away from any form of summative or evaluative observations. This method allows for a certain amount of freedom and confidence in the teachers, as they know that there are no condemnations or harsh words coming their way when they are observed. Instead, they may simply get some helpful feedback and suggestions on things that could assist their classroom practice.

Coinciding with the positivity, the support coming from TDCs and Mentor Teachers also seeks to engage teachers through a system of role-modelling behaviour. Instead of simply telling teachers what to do, TDCs show them by enacting the very same strategies they promote to other teachers in their own classrooms. With an open-door policy, TDCs allow teachers to come and

see these techniques in action. However, this role-modelling behaviour begins even before it reaches the school level. At co-learning sessions and workshops, DIET facilitators, Programme Managers, and Block Resource Persons are modelling approaches for Mentor Teachers and TDCs, as well. One Programme Manager highlighted this, saying, 'I have found my DIET faculty members have been role modelling [strategies] to my Mentor Teachers'. This active engagement allows for better buy-in from all role holders.

Feedback from the bottom up

Though the TDC programme may seem like a traditional cascade model at first glance, the reality is a more robust and complex system of feedback. As highlighted in *Figure 5*, STiR and the Delhi government use a system that not only promulgates philosophies and strategies down the chain, they also have established a feedback loop that leads to needs-analysis based design for future programming. Taking inputs from their students and teachers, TDCs share challenges and successes up to their Mentor Teachers. Mentor Teachers then widely disseminate this feedback, to include zone and district administrative officials as well as DIET and SCERT representatives. In this manner, all stakeholders in the Delhi education system can better understand what is happening in schools while also building stronger relationships with each other.

Figure 5. STiR TDC Programme theory of change
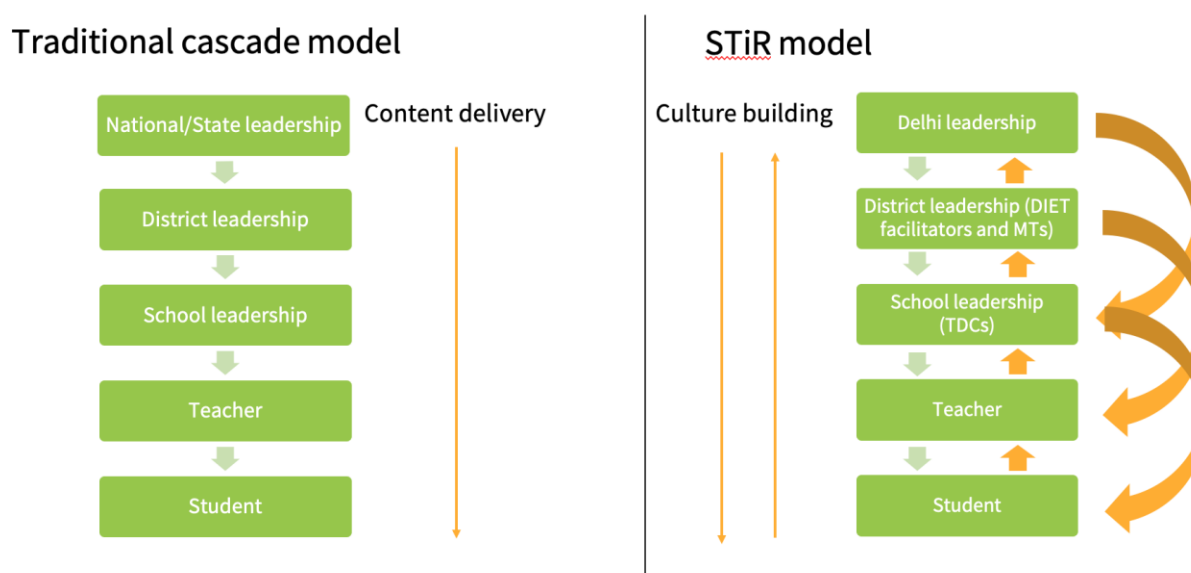
Source: adapted from unpublished STiR PowerPoint presentation on programme overview (2020: 13)

In addition to simple word of mouth or email feedback, the TDC programme has added more robust data collection and analysis techniques to assist in the feedback process, as well. While the most common data points are also taken into consideration (student standardized test scores, teacher attendance at both school and ART meetings), the programme has initiated a standardized Google Form for all stakeholders to fill out on a routine basis. For example, ART teachers, TDCs, Mentor Teachers, and even principals fill out this form for every ART meeting that occurs. This feedback seeks out information about which strategies have worked and which have not, as well as what types of trainings or initiatives that could be beneficial in the future.

Thus, across a single district, middle tier personnel can gather data inputs from dozens of TDCs and hundreds of teachers on a monthly basis.

This feedback system does not serve as some kind of placeholder, either; it plays an active role in every step of the programme's cycle. This provides a connection and motivation for role holders at every level of the system and gives many of them at least some sense of ownership in the decision-making process. One TDC said: 'Yes, I think we've gotten a platform where we can put our views. If there are some issues with the teachers and I know about them, then I discuss them with my mentor whenever we have meetings and I put forth those opinions'. An ART teacher relayed an example in the focus group of how an old social science curriculum had superfluous material on it that made it tough on teachers to get through all of the material in a successful manner. After providing this feedback, officials released a new, more slimmed-down version that better fit the needs of teachers and students. *Box 6* highlights some further reactions from teachers on feedback mechanisms within this system.

Box 6. ART teachers discuss providing feedback within the TDC programme

The mentors came to us and asked us about how much time we have and how much time we can contribute towards new strategies. Then, we were overburdened with paper corrections and charges. They took a first step after our communication with the mentors, and the results from this was the charges we had became computerized…They understood this problem of mine and sorted it out. Earlier I had to do so many formalities with meeting the parents and going to the bank to get the money, and this meant giving lesser time to the students. Now it is all automatic. -ART teacher in focus group discussion

It is convenient now for us to take our matters to them with ease which we could not take to the head of school or mentor or district level earlier. This is a benefit our TDC helps with. The importance of this TDC role is in increasing connectivity, too. Whatever problem or suggestion we have, we can take this forward through them easily. - ART teacher in focus group discussion

I believe that in the system I, too have a voice and I, too am doing something for the system, though now I am at a lower level… it comes to my mind that in our school before I had become an ART member, no one used to accept me but today everyone accepts what I have to say and my voice. I feel that I, too can do something for the system. I feel that I can raise my voice and really make a change, this is the confidence I have now. -ART teacher

TDCs have a group at the district and state level, too. If we have any problems, they take it to the district level. Our problems and successes reach there, too. Screenshots from our WhatsApp group reach there, and we get their appreciation. DIET Principals have given us appreciation. This makes us want to do better. We receive appropriate commendation for the work that we do. - ART teacher in focus group discussion

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Therefore, by having open lines of communication and a robust feedback system moving up the structural hierarchy, Delhi strengthens its system in two major ways. Initially, it allows planners and content designers to create needs-based content that has a targeted effect on schools and teachers. Additionally, though, it gives teachers a critical feeling of importance and having a voice in this process. While teachers may be removed from the design and development of the newest Learning Improvement Cycle, they feel more like part of the process if their feedback is being heard.

Summary

Fairly simplistic in theory- to build collaboration and motivation among teachers through support and mentorship- the TDC programme takes on many added levels of complexity when explored in depth. From competing ideas for the exact mission/vision of the programme, to numerous stakeholders at various levels of the Delhi system, to robust feedback systems, the programme has a lot of moving parts. Even so, as the programme has progressed and evolved, it has become more defined and ingrained into the overall education system. With these deeper insights into how this programme actually functions, the following chapter will explore what effect it has had on teachers, students, and schools.

Chapter 4. Impacts, challenges, and looking ahead

With such an expansive support system for teachers and schools, the TDC programme has had noticeable positive effects since its initial implementation. Simultaneously, with such a new programme that has many levels of stakeholders trying to figure out new roles, it has also faced its share of challenges. This chapter tackles both these high and low points of the programme thus far, beginning with the overall outcomes and impacts. When speaking to these changes and improvements, the interviewees' optimism and pride in the programme became nearly palpable. When shifting to talking about some of the issues the programme has faced, respondents spoke candidly about the challenges they have confronted. They also provided some paths forward by speaking to the methods they have used to overcome these issues. Therefore, while this chapter underscores the difficulties in implementing any new educational programming, it also illustrates that few rewards can come without some degree of risk.

Impact and major outcomes on the Delhi system

Even with some initial challenges to overcome, the TDC programme has seemingly had a positive impact on the Delhi government school system. Highlighted in the following subsections are six key areas in which the programme has found particular influence. Some, such as increased collaboration or a shift in culture, are directly tied to the stated goals in the overall mission. Some second level effects such as an increased usage of data and the ability to adapt to unforeseen circumstances have also come about in this programme. Overall, these impacts cover a wide range of topics.

Increased collaboration and communication

As the primary goal of the programme, the first level impact of the TDC programme has been an increase in collaboration and communication among teachers. Specifically, TDCs and ART teachers have begun opening their classrooms and role modelling new strategies to initiate conversations and ideas among their colleagues. As the main recipients of this new collaborative process, all teachers highlighted it to some degree in their discussions of the programme's impact. Some examples include:

> *Overall, the TDC programme brought about a harmonious environment by which we started listening to each other, we started sharing, adapting, accepting, and most importantly, appreciating*. -ART teacher

> *Whatever I learn in the ART, we take and give somebody else, other members who are not there or non-ART members. So, we hold lots and lots of discussions of what we have done, and we devise other strategies*. -ART teacher

> *Furthermore, a very harmonious environment was created between us, through which we could easily discuss our strategies and problems with one another. We also started visiting each other's classes so that our abilities and practices could improve*. -ART teacher

> *We are seeing that after we have meetings with the TDCs and then with the mentors and later with our other teachers, we are learning about the techniques of our friends…Through this, we realised that the teacher-to-teacher connection has become better*. -ART teacher in focus group

After this programme, it is about 'this worked in your class and I want to use this strategy as well'. As a subject teacher, I now share my subject matters with other teachers, and they get influenced by me. -ART teacher

While TDCs have fostered collaboration among teachers within schools, Mentor Teachers have furthered collaborative thought among separate schools.

Because they are working with five to six schools, and they are actually able to bring those schools together, bring those ideas together, by saying 'you know, School B has done something about it, and it has really worked well so why don't you apply it in your school?' -Programme Manager

Assisting in this collaborative facilitation, Mentor Teachers and TDCs also openly communicate and collaborate with each other to provide better support to their teachers. One main example of this is when a Mentor Teacher or TDC needs to support a subject outside their area of expertise.

Because if I am a Hindi teacher and I have to support a math teacher then it is extremely difficult for me to be proficient in that subject. So that is when the group comes into the picture. The mentor group works a lot together. -Mentor Teacher

That is the beauty of this program, that TDCs belong to different subjects…So at these co-learning sessions, I have all these subjects to which the TDCs belong and the mentors also. We have this very connected, interdisciplinary approach and I think that is why we have been able to implement these strategies in a better way. We keep getting ideas...for example it was fascinating how a language teacher could motivate and inspire me to implement a strategy in science. -TDC

Through this supportive, collaborative environment, the TDC programme has allowed for the sharing of strategies and pedagogical techniques that teachers otherwise may never have been exposed to. Going a step further, this process has shifted the environment and culture among teachers in Delhi's government schools.

Shift in culture, professionalism, and motivation among teachers

Nearly without exception, respondents relayed that one of the primary impacts of the programme was in the dramatic change in culture of the teaching staffs of schools. By building an open system of collaboration and sharing, teachers began to shift their conversations between classes or in the staff room from general to more academic topics.

Whenever we get together, it has become a more productive time related to discussing teachings and learnings. It has become more constructive in terms of discussing our challenges in the classrooms, what successes we achieved in our implementation of the strategies, what went wrong, or what more could be added to it. -TDC

The biggest achievement of this program I think has been building of an academic environment in the school. I won't say it wasn't there previously, but the discussions among the teachers have become much more productive in terms of academic discourse. -TDC

With such openness to new ideas and strategies, many respondents also spoke of the switch from a fixed to a growth mindset. One Programme Manager recalled that 'many times my Mentor Teachers actually reflected on the growth mindset that they have seen developing in themselves

and also in their teachers and heads of these schools'. This idea of openness and growth seemed to be infectious, spreading to all personnel in a school.

Going along with this rise in collaboration and professionalism, teacher motivation has also started to increase. One ART teacher related that:

> *For me, this TDC programme has motivated me a lot…I am so motivated by this programme that now I am able to- even in front of a big meeting- I am able to say what I want to say. That much confidence has been evoked in me, and I have been motivated a lot.*

A TDC noted that 'due to this sharing culture that has started, appreciation and motivation has increased'. Seemingly, this collaborative process has ignited teachers' passions and curiosity and led to better work culture overall. In turn, this has also assisted in providing an environment more conducive for their students to learn.

Student and learning outcomes

Through the increases of professionalism, collaboration, and motivation of teachers, respondents also spoke to how these changes have had a positive influence on students. While correlating increased standardized test scores to the TDC programme is well beyond the scope of this study, many individual examples of improved learning outcomes emerged from interview responses. Specifically, teachers and other stakeholders spoke to increased engagement and connection with students at the emphasis of newly introduced strategies. This led to better classroom environments and student participation. *Box 7*[5] highlights some of these specific examples from strategies that were introduced in Learning Improvement Cycles 1 and 5.

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[5] Specific strategies mentioned in *Box 7* include 'No Hands' and 'Do Now'. No Hands refers to a technique which the teacher asks the class a question but does not allow any students to raise their hands and volunteer an answer. Instead, the teacher selects students to respond in an attempt to have greater participation and build confidence in students who normally may not participate in class discussions. Do Now refers to an activity at the beginning of the class that the students complete as they enter the classroom. It typically involves review questions from previous days' topics and serves to both provide structure to the students while highlighting key concepts.

Box 7. Examples of successful student and learning outcomes from Learning Improvement Cycle strategies

In LIC 1, the theme involved building connection, and one strategy involved having students wear name tags to make them feel more recognized. One ART teacher shared the following:

There was one girl who was not able to clear her 9th standard. I don't know what it was, but when I went to her class, it was an altogether new class for me. So those name tags we had made…she was sitting in the class and I address her with the help of that name tag and in the first half I said okay, let us introduce ourselves. She got up and said okay ma'am, and we had an interaction and slowly and gradually she started opening up with me. I asked her 'why were you not able to clear the science exam last time'? She told me at length about her problems and whatever financial and other problems she was having. And I said okay I will help you with whatever I can. And she improved on her math and reading, so I talked to other teachers, also. And everybody started paying so much attention to her, because she was a very quiet child sitting in the corner just not saying anything to anybody. But because of that connection I was able to build, because of that small name tag, because that was a moment for her...'oh ma'am you know me? Have you seen me before'? So now I say, 'because we'll be together for 2 more years now, so I think we should know each other better'. And this year she has prepared for her exams and managed to get very good scores.

LIC 5 focused on classroom routines, with activities such as 'Do Now' or 'No Hands' garnering a lot of responses from teachers. The following examples show how two teachers successfully utilized these strategies in their classes.

Through the LIC, we saw the techniques like 'No Hands' and 'Do Now' through which we can keep the students engaged. The students were involved in this manner and we are working as a facilitator and providing an environment for them to work in…Through this we observed the student is being involved more in the classroom and it helps us bring discipline inside the classroom, too. -ART teacher

I've used all the strategies in my class, let it be 'No Hands', or let it be the 'Do Now' activity, all these activities have made the teaching/learning process so interesting for the students. Before, it was like only the brightest students were given the opportunity by the teachers to speak in class. But by using the 'No Hands' strategy, the opportunity is given to all the students…Now, when the teacher is asking a question, it's not like I'm only pointing out a few students to stand up and tell me the answer. No, 'No Hands' means no one is allowed to speak before the teacher points out the student to stand up and speak. -ART teacher

In another example of how the programme can benefit students, a DIET official spoke to how middle tier leaders in the programme pooled their expertise to address a specific problem. The official explained how many students sat right on the border of passing or failing their 10th standard math exam, and they hoped to try and figure out a way to push these students to success:

> *We talked to the mentors and we visited schools, but there were so many [borderline students] coming in mathematics in particular. So…we talked to the mentors, especially the math mentors. We got all of them and said, okay what are their teaching/learning strategies?…What we did was prepare questions for the students… And with the help of*

that question bank, you won't believe that many students did so well…Not by rote memorizing, but with understanding…So it really helped them.

Whether it promotes new learning strategies for the classroom or allows for the collaboration of middle tier specialists, these examples show how the programme can positively affect students. As the programme progressed and more success stories like these started spreading, even more teachers and middle tier officials started fully buying into the programme.

More ownership and initiative as the program progressed

Though the first three outcomes mainly focused on effects for students and teachers, Delhi's middle tier has also seen a big impact from the TDC programme. To wit, they have begun to fully embrace, and even take ownership over, the entire programmatic model. All STiR Programme Managers spoke in depth to this process, noting that in the beginning STiR employees had to take the lead with most of the design and facilitation. However, one Programme Manager said:

> *I think this year there has been remarkable handling of the stakeholders to get on board with what it was that we were doing. Most of the designing part was done by [STiR] until last year. It's only been this year that we've been able to involve DIET faculties from all the DIETs across Delhi as representative to design. And not just the DIET faculty, but we've also actually been able to bring Mentor Teachers into designing what they want to discuss in an ART meeting- what strategy would they like to improve- so basically the design part now involves the DIET faculty plus the Mentor Teachers.*

Another Programme Manager noted that:

> *When I joined, I used to actually lead the meetings that the Mentor Teachers have to gather at every month. And I did that for about six or seven months. Then the DIET faculty all attended, but they did not really lead anything. Then for another three or four months they started leading parts of it; I would do some and they would do some. Now, I'm in a position where even if I don't attend the meeting, I know it will be conducted, I know they will lead it, and I know that there will be discussions going on.*

These breakthroughs may seem minimal at first glance, as these outcomes do follow the intended plan of the project. But middle tier ownership- especially at the DIET level- is a vital outcome for both the current and future success of this TDC programme. These DIET faculties have had to adjust their thinking and philosophies along with the classroom teachers, and many of these officials have been working in the education sector for decades. The simple fact that these middle tier leaders are buying-in to a system that promotes such open collaboration, support, and building intrinsic motivation for teachers speaks volumes to the programme's effectiveness thus far.

Enhanced usage and application of data and feedback

Another way in which middle tier personnel have been impacted by this programme is through their usage and application of the data and feedback they receive from Mentor Teachers, TDCs, teachers, and principals. This is especially reflected at the monthly District Progress Check Meeting, where DIET officials, PMs, and Mentor Teachers sit down and review the data they have collected. They analyse the Google feedback forms completed at each ART meeting that ask about the quality of the meeting, the usefulness of the strategies promoted, whether the

teachers understood the purpose of those strategies, and what issues are occurring at the school or classroom level. In addition to these qualitative measures, they also analyse some quantitative aspects such as teacher attendance at ART meetings and the number of peer observations conducted. However, it has taken some time to get to a point where all stakeholders embraced the value of a robust feedback system. One Programme Manager recalled:

> *When I joined in 2018, we received feedback forms after the network meeting, and it was 40 people. Only 40 TDCs in the district had submitted feedback forms…There was a lot of apprehension. They feared monitoring and they felt that the data will be revealed, and they will be sent a memo by the government. After a regular discussion by me and in collaboration with the DIET officials, we identified why this is happening, why they are not filling out the forms. Then we tried to fill that gap, and now, in 2020, I can see 86 TDCs are filling out the feedback forms and submitting them in spite of the COVID situation, in spite of so many challenges…So that is a huge shift I could see in the mindset of the stakeholders based on the data. Now they are more focused on the data with their decisions.*

As the programme progressed and stakeholders felt more comfortable filling out these Google feedback forms at each ART meeting, this data become an important aspect of the design and decision-making processes. One Mentor Teacher reflects on this, saying:

> *That data is taken, district wide and then Delhi wide, and compared. And then we have a meeting at the DIET level, we call it the DPCM, every month where this data is shared with us. And we hear how many TDCs filled out the form, how many ART members filled out the form, what the results were, what their feedback was, how many strategies work, how many things work, what do we do to improve, what are the best practices. We have all of this data shared with us and we talk about it. And then we also think of ways to improve.*

While Programme Managers still tend to lead the analysis portion of the data collection process, many DIET officials and Mentor Teachers have begun to take a bigger role.

> *I've always tried to involve [a senior DIET lecturer] in the process and I have always tried to make sure that he takes up the ownership of presenting the data to my Mentor Teachers…They were open to understanding the data aspect and reflect on it as well and seeing where good work is being done and where we need to put more effort together. Now when I see them in the co-learning sessions…I have seen my Mentor Teachers doing the sessions with their TDCs and in that session they are presenting the data to the TDCs.*
> -Programme Manager

This process of data collection, analysis, and needs-based programmatic design has been somewhat slower in evolving than some of the other outcomes, but it is an important impact of this programme. It allows a tailored, adaptive approach to both addressing current deficiencies or trouble spots as well as designing needed trainings or strategies for future cycles. Even so, DIET faculties and Mentor Teachers still seem to lack holistic guidance on how to analyse and apply all the data that they collect. Many in these positions still spoke to relying on STiR for data collection and analysis and noted that they did not yet feel confident in this aspect of the programme. For Delhi to take complete control of the TDC programme, this area will need continued focus and improvement.

Strengthening connections to adapt to unforeseen circumstances

The final major impact from this programme has made itself apparent due to the circumstances surrounding the COVID-19 pandemic. With all schools across Delhi forced to shut down and students trying to learn from home, the TDC programme provided a pre-established framework for collaboration that proved vital during this difficult period. One of the TDCs shared a specific story that related this, noting that some teachers initially struggled with some technological hurdles:

> *There were one or two teachers who were saying we are not at all technology friendly and were like how will we motivate the students and what will we do about it? Lots of apprehensions regarding this, since if we don't know technology how are we telling our students to do this? But then there was this motivation from me and from other ART members to just give it a try, don't think that you have to do all the things alone. Let the students get the autonomy to do whatever they feel like, just guide them to what is to be done. And you know that morning when she posted the video of the students in that small group where they had performed an activity, they were in their homes, they recorded some videos, they made some posters, and then they collaborated in the video. And the moment she posted it and the appreciation she got, she was more than happy, and she was like...wow, I think I also can do it.*

Prior to having an established collaborative network through the ART, that teacher would undoubtedly have struggled through this transition to online learning. However, with the support and encouragement from her TDC and fellow teachers, she became confident in adapting to the situation. Another important adaptation during the pandemic has been the most recent Learning Improvement Cycle theme: social and emotional well-being. Worried about more than their students' academic health, teachers and middle tier officials have employed strategies to check in on the overall health of their students. One ART teacher shared:

> *In this lockdown, the theme of social and emotional wellbeing is going on. They are at home all the time; they don't get to come to school and don't get to meet their friends, either. They aren't getting the time to share with their friends. In this LIC theme, we gave them questions and they answer them. It is not related to the syllabus. They reply with all their problems and they share everything now. From what they get scared the most about to whose birthday they get the most excited at and what they prepare for this. In this, students get to write and talk about everything they are facing.*

Whether it is fellow teachers helping out a less tech-savvy colleague or a student getting an outlet from a difficult situation, this programme has provided an established scaffolding of support. Though not a cure all solution, this system has been able to ease some of the difficulties faced by teachers and students during a very challenging time.

Challenges in implementation

Though all participants praised the programme and its overall impact on schools, teachers, and students, challenges and difficulties in implementation still emerged. Many of these issues resolved themselves to a degree as the programme became more established, but they still prove important to dissect and understand. Although specific to Delhi and this programme, these types of issues could prove indicative of similar difficulties that may arise with the establishment of similar programmes in other contexts.

Reluctance and a lack of buy-in

When reflecting upon challenges they have faced, respondents most often spoke of an initial reluctance or lack of buy-in to the programme as their biggest hurdle to overcome. This occurred at all levels, with junior teachers, senior teachers, heads of school, and middle tier personnel all having exemplified reluctance to fully embrace the TDC programme at some point. Initially, many teachers had concerns about someone coming into their classrooms to observe their teaching practices. Not fully understanding the programme's goals, teachers often worried that this was some sort of evaluation or fault-finding mission.

> *Initially this culture wasn't there that one person goes to another person's class and sits behind and observes their entire one-hour class. There was no acceptance in this culture from the people.* -TDC

> *Initially, everyone was sceptical about me as a TDC and [asking] what is she going to do? Is she going to observe us? Find faults with us? Is she going to tell us what to do? Who is she to tell us what to do? And there were so many other thoughts in their head. And they were right. Nobody has asked us to open our classrooms to each other before. We were like exclusively to ourselves and, suddenly, you have to share practices, you have to learn new strategies.* -Mentor Teacher (who previously served as a TDC)

Some more senior teachers also provided pushback, citing the fact that they had years of experience and did not need or want to learn new strategies after so long in the classroom. A Mentor Teacher describes some of those doubts by saying:

> *I do get lots of resistance from some of the teachers actually. Most of the time, when we are introducing anything new or we are trying to break the barriers, we are asking them to unlearn something. To assure a mature teacher to unlearn something or do something new or change their practices they have been practicing from so many years takes a lot of time.*

In the same manner as many teachers, some heads of school also had reservations about letting outside observers into their school's classrooms. Part of this issue stemmed from feeling like they were ceding control of the oversight of their teachers, and the rest came from worry that their own performance was going to be scrutinized based off the findings.

> *The principal didn't like it when [Mentor Teachers] came and observed because they felt they were at a higher position and they didn't need to be observed. So, the Mentor Teachers weren't supported at the start.* -state official

Finally, some middle-tier personnel also had trouble adapting to new ideas and strategies at the early stages of the programme's implementation. This transition became even more complicated with the model taking on many of STiR's strategies that Delhi's middle-tier personnel may not have been exposed to before. One Programme Manager discusses the difficulty they faced in trying to convince district-level officials to buy-in to STiR's methods:

> *Because we are working with DIET faculty who have as much experience as my age, so it becomes really difficult to get your job done. And to go and tell them, you know what you've been doing for the past three years must have worked really well for [you], but there is a better and a more efficient way of doing it. Please adapt to that. There is a resistance.*

Though this problem proved the most prevalent, it also tended to have a straightforward solution to overcome it. This involved some combination of time, patience, a positive attitude, and open lines of communication. Essentially, as the programme became established and started to gain some momentum, more and more school and middle tier personnel started to buy-in. Wary in the beginning, a state official describes how principals built acceptance after gaining a better understanding of the programme's goals:

> *But later on, when the principals realised that the Mentor Teachers were important, and they weren't faultfinders but in fact they were helping in figuring out what's lacking so they could improve; that's when they started accepting them. And not only that, but they also started asking the Mentor Teachers to contribute while they were planning at the school level.*

This type of description proved common for teachers and middle tier personnel, as well. As with any new programming measure, Mentor Teachers and TDCs simply needed some time to prove that their positions added value to the system and win other stakeholders over.

Feeling overwhelmed or too much administrative burden

In addition to simply feeling wary of a new programme that they do not quite fully understand yet, many stakeholders also felt overwhelmed or burdened by adding something else to already busy schedules. For some context, one Mentor Teacher describes that 'in Delhi, principals and teachers…everyone is a state functionary as well. We have to deal with so many beneficiary schemes and so many other things for the students'. Acknowledging this, one TDC described their struggles to initially get ART meetings going, saying, 'Teachers have a lot of things to do in the school, so if I have to ask them to come and sit in this meeting for 1.5 hours, it was a bit difficult for them'.

On top of all of this, with so many reforms and new programmes coming down from Delhi in recent years, some level of fatigue began to show. In the first years of this programme, teachers and heads of school wondered whether all of these new initiatives were just flashes in the pan like previous attempts at reform:

> *[One] challenge initially was the attitude of the teachers. They were not positive in the start. They felt that this was like any other programme that will come and go. -DIET official*

> *When the TDCs went back to their schools after their training and told them about how this works and can be implemented, the school principals were not very keen. They felt this was another burden or another assignment on them. -DIET official*

Several combining factors helped to overcome these feelings of being overburdened. Mentioned previously (see *Chapter 2*), another reform enacted in conjunction with this programme sought to reduce the administrative load on teachers and free them up to focus more on students and professional development. A second factor involved teachers and principals seeing this programme gain momentum and not die out after one or two LICs. This assured them that time and energy invested in this process would not be wasted. Finally, and potentially most importantly, the TDC programme started to have positive effects on teachers and earn a good reputation. Thus, a 1.5-hour meeting once a month that *seemed* like a burden before suddenly became an important opportunity for collaboration and professional growth. Whereas TDCs initially struggled to get their core ART teachers to meetings, several reported that they had non-

ART teachers now clamouring to come to the monthly meetings. This exemplifies just how much momentum the programme has gained.

Lack of communication

With so many stakeholders performing multiple functions at different levels of the Delhi education system, issues with communication and coordination pose a constant challenge. This proved especially true in trying to get the academic and administrative sides of the system in alignment. While Mentor Teachers report to representatives of the Directorate of Education, they mainly work in schools and to develop new content with DIET faculties. Thus, trying to get all of these entities on the same page and engaged in meetings together proved difficult.

> *The educational administrators- the Deputy Directors who are the main authority of a particular district- initially we felt that they were not very convinced with the programme. But what we felt during our meetings is that they weren't aware of the details of this program, that at the state level such a big intervention has been initiated. And they weren't very aware of the importance of this programme and the changes it could bring. -DIET official*

Adding in new forms of support and communication also took time to take effect. Suddenly, heads of school had more outlets to pass up issues that differed from what they were used to.

> *The administrative body of the government was used to just going to school, conducting an audit for a visit and coming back…The head of the school was not really comfortable going to the director and saying this is what my teachers require. So, there was no communication actually. -Programme Manager*

The first solution to this issue presented itself with time in the same manner as the first two challenges. As the programme gained momentum and found favour at all levels of Delhi's education system, DoE officials who initially lacked interest began to buy-in. Communication lines opened up and meetings became easier to schedule.

> *Before, [DoE officials] would always request [DIET officials] write an email and request four days in advance. But now if I call them and tell them and say that tomorrow we have a meeting...they still meet. I think that's a great testimony to how we've actually been able to improve communication via the program. -Programme Manager*

However, the Programme Managers and Block Resource Persons truly drove these improved lines of communication with their constant efforts at coordination. By having these positions that sought at all times to connect stakeholders at all levels of the system, they ensured this process saw rapid improvement.

Job turnover

Although not as prevalent as the other issues mentioned, job turnover did cause some challenges. This proved especially true in the middle tier levels, with one Programme Manager describing how frustrating this could be when officials have turnover:

> *The practical challenge is there that when you are actually trying to build that relationship and in the midst of that, they might get transferred. So, a new person comes, and you might have to start with that person all over again.*

This issue has especially affected personnel in the DoE offices, contributing to the difficulties in communication noted above. Another Programme Manager spoke to how 'we have two new [district officials], and in this program it's very difficult for a new person…Yeah, this is one of the main reasons that gaps arise'.

Unfortunately, this issue has few viable paths to solution other than the programme becoming more established within the system over time. Since there is little chance of middle tier officials ceasing to promote or transfer, the programme itself must eventually become a source of continuity. Once every other stakeholder knows their role within the programme and how it operates, one new official will not cause too much disruption to the overall process. In the meantime, other personnel (to especially include PMs and BRPs) will simply need to keep working to ensure open communication and the overcoming of any issues caused by job turnover.

Future of the program

Having examined the progression of the programme through its growth, challenges, and successes, what then lies in its future? All respondents seemed to feel that the programme was sustainable, but that it needed more time to become fully established in Delhi's educational structure. Specifically, they felt that another couple of years needed to pass with Delhi officials taking full ownership of the programme to allow STiR support staff to slowly pass over all of their duties and responsibilities. In general, though, the future of the programme appears bright.

Sustainability

Stakeholders had a positive view on the potential for sustainability of the programme, especially with its targeted strategies and adaptable nature. One Block Resource Person described the content as 'need-based' and emphasized how important it was that this programme continue for teachers. A DIET official highlighted the need to continue to include teachers in the decision-making processes, as the best way forward was to develop new strategies that directly addressed the issues they faced in the classroom. With a programme designed to address pertinent, classroom-level issues, both of these stakeholders felt that the programme had excellent prospects for sustainability. Many interviewees also pointed to the successes and improvements they had already seen with the programme as a positive sign towards continued sustainability.

Even so, some respondents noted that there was still room to grow and become more established. A DIET official spoke to how the Delhi system needed some more time to take full ownership, saying that 'at this juncture, without STiR Education, then this program will not sustain. But after two or three years, if they withdraw their support, then we can sustain this program'. In one positive sign, a department has been established at the SCERT level that aims to takeover full ownership and vision of the TDC programme in the future. One Programme Manager discussed this, saying:

> I feel it is quite sustainable now that we have an established TDC cell at the SCERT level, which has been a great achievement from our side I feel…So overall, when we see we have created a community, we have created an ecosystem where there will definitely be ups and downs, but that's the trend to reach to any new destination…So, we have been able to make it sustainable at the SCERT level, and the ownership level at the DIET has considerably gone up.

Thus, it seems that a solid foundation has been built at all levels of the Delhi system for this programme to achieve sustainability. While nothing is certain moving forward, the pieces seem to be in place for the TDC programme to continue well into the future.

Vision moving forward

More than just sustainable, the programme also continues to drive forward to accomplish the overall vision of the programme as highlighted in *Chapter 3*. Aiming to get all teachers intrinsically motivated and into a growth mindset that truly facilitates lifelong learning, this programme does have plenty of work left to accomplish. One Mentor Teacher reflected:

> *If you are working as a Mentor Teacher, and working on Head of School, working on TDC, working on other teachers, if a TDC becomes capable of doing the work of the Mentor Teacher, they do not need a Mentor Teacher. If the ART members are capable of doing the work of the TDC, then there is no need for a TDC. And if other teachers are doing the same, there is no need for other posts. If this [progression] increases, then the mentorship program and the TDC program will have no need, because the purpose is to strengthen the teacher for the students…Unless this situation arises, I think we require this current process.*

With such an ambitious and hopeful vision of strong and motivated teachers, it seems that the programme and its rigorous support structure will need to remain for the foreseeable future. This is especially true since the evaluation process will take several more years to better understand its full effects. A state official said that 'it's been a very short duration of four or five years. You can implement new initiatives forcefully, but you can't change their mindset or their heart. It will come slowly'.

Other respondents had some different opinions on how best to achieve these goals moving forward. One TDC felt that the corps of Mentor Teachers should be reduced now that TDCs had started to gain a better understanding of how the process works. '[Mentor Teachers] need to stay connected with the students and they have a lot of knowledge, too. The children are not getting the benefit of this knowledge. Instead of the mentors getting knowledge, I feel the students need to get it'. In contrast, one DIET official felt the exact opposite way, saying 'It would be better if each Mentor Teacher has only two schools each, maximum of three: but not five to six schools for each. What happens is that there are only five days in a week and each Mentor Teacher has five to six schools, so around two schools get left behind'. This approach implies hiring yet more Mentor Teachers, which would provide additional means of support but also take additional highly motivated teachers out of the classroom.

One issue the interviewees did not address involves how Mentor Teachers will readjust once they re-enter the classrooms as teachers. If the programme executes in accordance with its vision moving forward, all Mentor Teachers will only serve for two years and then go back to being regular teachers. However, this transition back to a position with relatively less influence and leadership opportunities could be a difficult transition for some teachers. On the other hand, if Mentor Teachers serve longer than the envisioned two years, will their intrinsic motivation continue to drive them in such a demanding and time-consuming position? Or will some extra form of compensation in terms of either money or career progression need to come about to keep these Mentor Teachers happy and motivated? These are important issues for the Delhi government to monitor as the programme moves forward with new cycles of Mentor Teachers in the coming years.

Perhaps the one thing that all parties can agree on, it is going to take a great deal of work, cooperation, and imagination. One DIET official said, 'If you want this program to continue, then we have to plan properly. Because I'd say that one big task we've completed, we have prepared the base; now we should come up with something new. Maybe with something new, we can take off'. With the progress the programme has already made and the successes it has found, there is no reason to think that it will not.

Summary

Even though the TDC programme came about in a time of many reforms across all areas of the education system, it appears to have found a way to leave its own mark. Increasing collaboration, opening up lines of feedback, improving motivation, and shifting the professional culture, it has left perhaps its deepest impacts on Delhi's teachers. However, students and the middle tier stakeholders tasked with running this programme have also reported that they have seen improved outcomes and growth because of it. While many challenges have arisen, most of them have been worked through to come out stronger and more established in the end. Taking all of these outcomes into account, the final chapter of this case study will explore some higher-level takeaways that can potentially be applied to other education systems.

Chapter 5. Takeaways and final conclusions

The TDC programme has found widespread support at all levels of the Delhi system, while boasting of positive impacts on teachers, students, and overall culture. Examining these impacts, this chapter provides some key takeaways for policymakers and planners seeking to implement similar programmes in their own systems. Additionally, this chapter also addresses some key contextual factors that greatly contributed to Delhi's success.

Key takeaways from the programme

Providing more than simply the outcomes and impacts to the Delhi system discussed in *Chapter 4*, this programme also can provide insights into how middle tiers can operate in other education systems. Keeping in mind that all systems and contexts are unique, the following takeaways highlight some more potentially universal takeaways for planners and policy makers. Additionally, these ideas could be applied more broadly in different applications as well.

Design positions to focus specifically on support and positivity

The first key takeaway revolves around the exclusively positive and supportive nature of the TDC programme. As a fully supportive system based in the middle tier of Delhi's education structure, the programme falls outside of the classroom teacher's evaluative chain of command. Thus, both mentors and teachers can focus on best practices and improving any issues in performance in contrast to teachers worrying about being judged in terms of a performance evaluation or job security. While monitoring and oversight certainly have their own place and importance, this system of entirely separating those two processes has seemed to allow teachers a greater sense of freedom and openness. One DIET official described their view of the middle tier stakeholder's roles in this programme, saying, 'We are not there to monitor [teachers]. They are the judge and the master of their class; we are not there for them to fail. We are only there to help and support as desired by them'. Similarly, one TDC described how:

> The system with which our TDC programme works is that we don't ever feel that someone is observing us or that there is some authority above us. I have always felt that we all are coming together and working, so I don't feel like I have to report to someone. It just feels like I am sharing it with them. I don't feel like I have to show my achievements to anyone.

Teachers have seemingly responded well to this system, with many describing how beneficial this positive approach has been to their work. One said:

> We discuss how to ensure [students] learn, how to increase sharing, how to ensure they are creative, and how to ensure they can be positive. Earlier it used to be done forcefully; the Head of School used to ask us to discuss and solve things. But now it isn't like that. Now even in our lunch breaks we discuss [these things]. -ART teacher

Other stakeholders have also noticed the improvement and commented on the change in atmosphere for teachers, with one Programme Manager saying:

> The teachers feel really supported. Now they know that now there is a space, there is a platform, there is an equal system where they exist and where they can take their challenges very easily without having to worry about what the other person will think or being judged; as simple as that.

In looking towards how other systems can apply this knowledge, it seems that having a platform or position tasked exclusively for teacher support can prove valuable to teacher morale and motivation. By having others observe their classes without worry of judgement or reprisal, teachers can begin to open up with others about strategies and methodologies in the classroom. With this type of supportive environment, teachers may not only increase their motivation but also improve their teaching practises and outcomes.

Improve teacher motivation in multiple ways

More than simply providing teachers a positive atmosphere and support system, the TDC programme aims at improving teacher motivation from multiple angles. Reflecting STiR's core goals of improved autonomy, mastery, and purpose, the programme has worked hard to improve these facets of a teacher's intrinsic motivation. Focusing on autonomy, teachers always have the option to implement only the practices and strategies that they like or think would work. While presenting them new ideas, allowing a choice lets teachers keep a sense of agency as to what goes on in their classroom. Another key facet of motivation lies in the drive for mastery in their teaching craft. By creating a culture of professional curiosity and ongoing development, the programme has sparked teachers to continue their own learning paths.

> *Now the teachers are becoming learners. Earlier there was a resistance to learning anything new. Earlier there was a resistance to going out of their comfort zone. Now they are eager to learn. Now the teachers are truly trying to become action researchers. This is what they are doing...they are keen to learn new things now. They are in the flow of transformation. This is one of the biggest achievements.* -Mentor Teacher

Finally, by creating a collaborative environment, the programme has fostered a shared purpose and vision for teachers moving forward.

All of these varied techniques help assure that teachers at least have the proper environment to build their intrinsic motivation. Moving beyond the simplistic motivational dichotomy of stick (threat of reprisal) or carrot (offering of reward), the TDC programme has created a culture and environment that promotes increased intrinsic motivation in Delhi's teaching corps. Though more difficult to establish, this improved culture has greater long-term benefits than simply punishing wayward teachers or enticing them with one-time extrinsic motivational incentives.

Enhance learning outcomes without directly targeting students

Reflecting on the mission of this programme, improving student and learning outcomes remains the core objective. Even so, the structure and design take a much bigger picture and longer view in trying to achieve this goal. This goes to building a more fully functional education system than simply trying to throw more programming or work at students. While targeting rote memorization for a standardized test can offer short-term solutions, building complex networks of support and collaboration for teachers can enhance learning outcomes in deeper ways. This systemic growth leads towards the professionalization of teachers and the more holistic learning for students that Delhi is attempting to achieve.

Thus, while middle tier personnel rarely assist an individual student or even a single class in raising their test scores or understanding a new concept, they provide the systemic support and structure that lead to healthy education systems. Without the support and mentoring of a TDC or a Mentor Teacher, the ART teachers interviewed in this study may have never been exposed to classroom strategies like Do Now, No Hands, or Think, Pair, Share. Or, without STiR assisting

the SCERT core team and DIET officials, perhaps the young girl highlighted in *Box 7* would have never gotten the individual support and attention that she needed from that teacher. While these are small, anecdotal examples, they begin to paint a picture of bigger potentialities for a healthy, active middle tier system.

Bridge the gap between theory and practice

One of clearest takeaways from the TDC programme is how important it is that teacher training and professional development find the right blend of theory and practice. Through its core design and implementation, the entire process embodies the philosophy of providing practical guidance and support to teachers instead of highly theorized lectures. With so much of this programme's structure built on role-modelling, demonstration, and collaboration, it heavily leans into this philosophy. Delhi has not always embraced this type of system, but stakeholders up and down the system's hierarchy seem to have completely bought in.

> *We have a workshop, and every three months we have this training. This is called a 'workshop' and not a training. It is not about preaching but about exactly how we should do the work.* -TDC

Embodying this ideal, role-modelling occurs up and down the programme's structure to ensure understanding and full participation in the process. It begins with all levels of the co-learning sessions, where the main strategies and techniques intended for classroom teachers are role-modelled for DIET facilitators, Mentor Teachers, and TDCs at workshopping sessions. Thus, before they are finally applied by the TDC and ART teachers in open-door classroom settings in actual schools, these methods have gone through multiple levels of educational professionals modelling them and receiving feedback on their perceived effectiveness. While not ensuring a 100 per cent effectiveness rate, this dynamic, participatory process certainly allows a more engaging approach than a lecture in which a group of teachers listens to an instructor drone on about pedagogical techniques.

Develop need-based training for teachers through robust feedback cycles

By heavily emphasizing feedback and data collection, this programme has allowed for teacher trainings that directly reflect the needs and desires of teachers and schools. This process can both better engage teachers for new training opportunities and directly address the most pressing needs in the classroom. Discussing how this programme has changed the Delhi system, a state official said,

> *The training for teachers used to be like an outside resource person would come with one thought and based on that, the training was given for all the teachers. But now it's need-based training, it's a workshop-based training…The teachers themselves sit down and decide on what they should be trained on.*

This type of training can also shift perceptions of in-service training opportunities from a burden to a growth opportunity among teachers. Finally, with ongoing monitoring and feedback within the programme, designers and facilitators can continue to update trainings or overall programmatic design to best suit the needs of teachers and students.

Adapt to personnel and contextual needs

Throughout the duration of the programme's history, it has shown an ability to reinvent itself or adapt to unforeseen needs and situations. Initially, this occurred in the very creation of the role of

TDC, as officials quickly realized that Mentor Teachers could not provide enough support to teachers while having to visit five separate schools. More than this though, the ability to adapt was built into the very essence of the programme's structure by designing a different theme every three months with the onset of a new Learning Improvement Cycle. More recently, programming and strategies have come about to try and adapt to the new realities brought forth by the COVID-19 pandemic. One state official spoke to the programme's adaptability:

> *We should change, we should adopt the program according to the situation. We never thought about the pandemic situation like this. The programme we had earlier wasn't ready for the pandemic but when the pandemic started, we suddenly changed our programme. Now we have online classes going on and we are sending worksheets. Every programme should be dynamic. Even the curriculum should be dynamic.*

Though nearly any case study of a new educational programme will have adaptability as a key takeaway, this does not lessen this point's importance. Whether it involves job descriptions, implementation methods, or even the structure of the programme itself, any educational programming needs to have some form of adaptability to meet unforeseen circumstances. Such dynamism allows for both growth and rising up to meet unexpected challenges in creative ways.

Support the supporters

A surface level examination of the TDC programme would reveal to any observer that Delhi's teachers receive support from Mentor Teachers and Teacher Development Coordinators, two new middle tier roles. And yet, when conducting a more in-depth analysis, the sheer depth and layering of support all the way through the system truly starts to emerge. One TDC, themselves tasked in a support role, spoke to how much that their Mentor Teacher's support means to them:

> *My mentor has played a big hand in evoking my confidence and motivating me as a programme manager. She is ideal for me. When I had my first training, I used to wonder how I would talk to my teachers and the ART members, how I would make them understand. So, during that time, my mentor guided me as to how I should have a meeting with them, and this really benefited me. I got so much confidence. Before when I used to talk to them, I used to be speechless.*

At the next higher level, Mentor Teachers also have multiple avenues of support for whatever they may need. If they are having trouble with classroom techniques or other academic issues, they have DIET faculties and their fellow mentors to lean on. If they need help with facilitation, leadership, or coordination, they have STiR Programme Managers or Block Resource Persons. DIET officials have those same resources and can also reach up a level to those at the SCERT.

A state official spoke to the close nature of this supportive relationship in the entire system:

> *They are like my family members; I feel like we are a family of about 200-210 Mentor Teachers and it's like a family. The 1127 TDCs feel like a part of our family so as a guardian of the family, I am always ready to listen to the family members. I'm here with them and if any support is needed- the DIET, SCERT at the state level is ready to support.*

Once again, this takeaway of providing support for the supporters highlights the need for a whole-system approach. The TDC programme goes well beyond simply adding two new roles in support roles for teachers. Additionally, these two roles have whole armies of other stakeholders

ready to support them at the middle tier as well. This just continues to underscore the importance of a high-functioning, healthy education system at all levels.

Utilize the middle tier to scale programming

As noted repeatedly throughout this study, the TDC programme has sought to change the culture and professionalism among teachers in Delhi's government schools. However, to realize such a lofty and all-encompassing goal, it has taken all levels of the education structure working to this end. Middle tier officials have provided support, guidance, training facilitation, data collection and analysis, communication, and coordination as the TDC programme grew from fewer to 100 schools to more than 1,000. There is little reason to think the programme would have found any success without the effort of these middle tier leaders.

Though this case study has highlighted the importance of the middle tier in the TDC programme's inherent design for Delhi, these types of roles could also help scale other reforms in differing contexts, too. No matter the type of reform being implemented, having that level of official providing support, data analysis, and feedback will contribute to reforms growing and spreading through entire systems. Policy makers, principals, teachers, students, and parents remain vital cogs in any type of education reform, but middle tier leaders should play their own important role.

Important contextual considerations

This case study has highlighted numerous positive impacts and key takeaways from the TDC programme. Yet, a couple of major contextual factors certainly played a large role in the success of this programme. Any policymaker or planner should consider Delhi's unique situation if and when considering the design or implementation of a similar programme in a different system. These include both a highly supportive government and ministry of education, as well as the support from an outside organization with the human resources and expertise to provide valuable assistance. Without both of these positive sources of support, it is doubtful the programme would have found the success that it has in its first several years of implementation.

Full support/initiation of the program from the highest levels of government

As highlighted in *Chapter 2*, Delhi's government took on broad goals of reforming many key institutions beginning in 2015, to include education. In the past five years, the state government has made great strides towards these goals by introducing numerous reforms and greatly increasing education spending. This trend seems like it will continue in the future, with a review of current and proposed budgets finding that education spending remains approximately 25 per cent of Delhi's budget for the 2019-2020 (29 per cent) and 2020-2021 (23.8 per cent) fiscal years (Delhi Department of Planning, 2020).

While it's impossible to say how a programme similar to this one would have fared with a less supportive government, this situation has provided numerous benefits. With increased budgets for education, the state has been able to afford some of the extra expenses that this programme and its structure bring about, to especially include the national and international travel. Also, there is a vested political interest in the success of this programme and all educational reforms that have been implemented. One of the central campaign strategies in the most recent election of the political party holding power revolved around the improvements in education in terms of infrastructure, student test scores, and overall culture. With the highest levels of officials in the

state government backing this programme, some middle tier personnel may take a more vested interest themselves. While not impossible to start a similar programme without an enormous budget or support from the highest levels of government, having these things at their disposal certainly made implementation easier in Delhi.

Support from a partner organization with experience and resources to help with broad implementation

One other source of support from this programme came from STiR Education. Working with their programmatic model across multiple states in India and also in Uganda, and now spreading to Ethiopia and Indonesia, STiR has a great deal of expertise and experience with teacher motivation and collaboration. Without their ongoing support efforts with regards to design, coaching, and general coordination and facilitation, this programme would have undoubtedly had a much bumpier road in its initial years of implementation. Like the government support discussed in the previous section, initiating a project similar to the TDC programme does not require a partner organization providing guidance and expertise to a public school system. However, the positive effect that STiR has had on this programme cannot be underestimated when discussing its early successes.

Final thoughts

There is an old saying that asserts it takes an entire village to raise a child. Likewise, it takes an entire system to educate one. Positions such as Mentor Teacher, Teacher Development Coordinator, or Block Resource Person may not be household names throughout Delhi, but these role holders are playing a critical part in the education of every student passing through government schools. Positions and programmes such as these that are initiated and run by the middle tier of an education system provide the support and mentorship necessary for teachers and students to find success in the classroom.

It is easy to understand how a great teacher can have an important influence and effect on a student. What proves harder is understanding the systemic structures that allow that teacher, and potentially all of their colleagues, to be great. This is where the middle tier of an education system comes into play. By providing support and mentoring, needs-based professional development, and facilitating collaboration, the middle tier can foster all of the conditions necessary for teachers to improve their craft. Once these conditions have begun to emerge, the middle tier can then act as a conduit to disseminate best practices throughout the rest of their schools or districts. Thus, these middle tier role holders ensure the overall health and vitality of an entire education *system*.

Delhi has potentially created a blueprint for how just such an effective middle tier structure can run. Taking advantage of support from an outside NGO and an increased budget from a highly supportive government, they have begun a cultural transformation in their government schools. With constant opportunities for collaboration, positive, supportive feedback, and an increased voice in the system, it is easy to see how Delhi's teachers have become more professional and motivated in their work. From this, it is up to policymakers in other locations to take note and apply these lessons to other education systems that need more systemic support.

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Appendix A. Interview tools

1. Programme Managers (4 interviews, ~1 hour each)

Intros and consent *~5 minutes*

Could you describe your role in the programme? *~5 minutes*
- What do you do on a day-to-day basis? *(What are your main tasks/ responsibilities? What type of activities take up most of your time? Can you outline a rough percentage of time you spend doing each?)[6]*

Can you describe the mission/vision of the programme? *~5 minutes*
- How does this fit into broader reform efforts in the Delhi education system?
- In general, how is Delhi trying to use the TDC programme to secure sustainable improvement?

Can you talk about the role of Mentor Teachers and Teacher Development Coordinators? *~5 minutes*
- How did the roles of Mentor Teacher and TDC come about?
- What were/are the overall goals of these roles?
- How do these roles fit into the Delhi education system? *(Get them to briefly describe the hierarchy of schools, zones, blocks, and districts within Delhi and how these roles fit in that hierarchy.)*
- How do you personally work with MTs and TDCs? *(Can you describe a normal interaction with an MT? What is that relationship like?)*

Focusing on Mentor Teachers, can you talk about how they are selected? *~5 minutes*
- What kinds of training do they go through?
- What does it take to do well as a Mentor Teacher? What skills or attributes do you think help an MT?
- What challenges do they face in the programme and why?
- Do they have any professional development opportunities for themselves? If so, can you describe those?

Shifting to Teacher Development Coordinators, how are they selected? *~5 minutes*
- What kinds of training do they go through?
- What does it take to do well as a Teacher Development Coordinator? What skills or attributes do you think help a TDC?
- What challenges do they face in the programme and why?

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[6] All comments and questions in italics and parentheses are intended as a reminder to make sure the interviewee covers these topics. These will not be asked directly but instead I will prompt the interviewee as necessary to cover these topics through discussion.

Feedback and support *~10 minutes*
- What kind of ongoing support do MTs and TDCs receive and from who? *(Who is supporting them from above? How?)*
- What feedback processes are in place? *(How do they know they're doing well? How is that information shared with them? How do they apply it in terms of both thin outcome data and nuance?)*
- Have these processes improved since the beginning of the TDC programme?
- How are activities and responsibilities co-ordinated between different actors? *(i.e. DIET officials and Mentor Teachers, how do Block Resource People fit in?)*
- How is information communicated across the system? How has it changed since the start of the TDC programme? *(Try and understand if communication has improved and how)*

Can you describe the results you have seen due to the TDC programme? *~10 minutes*
- How do you track or measure results and progress? *(make sure they discuss teaching and learning)*
- Can you give an example of something positive that a Mentor Teacher has achieved? A Teacher Development Coordinator? *(try and build on an example here – how did they achieve this change – what steps did they take?)*
- How is that information being used or applied across the whole programme?

Can you describe any challenges or issues that you have faced with the programme? *~5 minutes*

What has been the impact of the MTs and TDCs - can you explain how they do this? *~5 minutes*
- What do you think the future of the programme looks like? Is it sustainable?
- What could help strengthen the programme moving forward?

2. District Institute of Education and Training (DIET) Officials (4 interviews, ~1 hour each)

Intros and consent *~5 minutes*

Could you describe your role? *~5 minutes*
- What do you do on a day-to-day basis? *(What are your main tasks/ responsibilities? What type of activities take up most of your time? Can you outline a rough percentage of time you spend doing each?)*
- Do you feel motivated in your job? Can you give an example of a really great day at work you had? What did it look like and what happened that made it so great?

Can you talk about the role of the DIET Office *(How do you support schools, teachers and students?)***?** *~10 minutes*
- How does this role fit into the larger Delhi education system structure? *(Get them to briefly describe the hierarchy of school, blocks, and districts within Delhi and how these roles fit in that hierarchy.)*
- Who at the state level do you work most closely with? How is your relationship with them? (*Get them to describe the nature of the relationship, i.e. supervisor etc…, but also try and get an indication of how their personal relationship is do they interact often, is this interaction constructive for the DIET official?*)
- Who is your supervisor at the district level? How is your relationship with them? (*Get them to describe the nature of the relationship, i.e. supervisor etc…, but also try and get an indication of how their personal relationship is do they interact often, is this interaction constructive for the DIET official?*)
- Has your relationship changed after implementing the TDC programme? *(Do you talk more about academic problems now and how to solve them versus more administrative before?)*
- In your opinion, do you have the power to influence change at the state level? At the district level? *(If no, why not?)*
- Currently, how effectively do you think your department runs? Can you give some examples? (*If effective try and understand what is contributing to this. If not effective try and gain understanding of what bottlenecks might be there*)
- Do you believe you are making an impact through your role in the DIET? Can you expand on this? *(Get them to elaborate on 1- what kind of impact their believe they are making, 2- to whom they are impacting, and 3- how delivering this impact makes them feel.)*

Can you describe the mission/vision of the TDC programme and what you hope the Mentor Teachers and Teacher Development Coordinators can achieve? *~5 minutes*
- How did the programme come about?
- What were/are the overall goals of the programme? Of the two roles?

Focusing on Mentor Teachers, can you talk about how the district interacts with them? *~5 minutes*
- Does the district have any impact on selecting Mentor Teachers? If so, please describe.
- How does the district initially train Mentor Teachers?

- Do they have professional development opportunities? If so, can you describe those?
- What does it take to do well as a Mentor Teacher? What skills or attributes do you think help an MT?
- What challenges do they face in the programme and why?

Shifting to Teacher Development Coordinators, can you talk about how the district interacts with them? *~5 minutes*
- Does the district have any impact on selecting TDCs? If so, please describe.
- Does the district work to train Teacher Development Coordinators?
- What does it take to do well as a Teacher Development Coordinator? What skills or attributes do you think help a TDC?
- What challenges do they face in the programme and why?

Support and Feedback ~10 minutes
- What kind of ongoing support do MTs and TDCs receive and from who? *(Who is supporting them from above? How? Role modelling? General feedback?)*
- Have you used any role modelling with Mentor Teachers or TDCs? *(As in, have you shown key behaviours and supported them to achieve these?)*
- What feedback processes are in place? *(How do they know they're doing well? How is that information shared with them? How do they apply it in terms of both thin outcome data and nuance?)*
- Have these processes improved since the beginning of the TDC programme?
- How are activities and responsibilities co-ordinated between different actors? *(i.e. DIET officials and Mentor Teachers, how to Block Resource People fit in?)*
- How is information communicated across the system? How has it changed since the start of the TDC programme? *(Try and understand if communication has improved and how)*

Can you describe the results you have seen due to the TDC programme? ~5 - 10 minutes
- How do you track or measure results and progress? *(make sure they discuss teaching and learning)*
- How is that information being used or applied?
- Do you share information/data with other districts?
- Can you give an example of something positive that a Mentor Teacher has achieved? A Teacher Development Coordinator? *(try and build on an example here – how did they achieve this change – what steps did they take?)*

Can you describe any challenges that you have faced with the programme? *~5 minutes*

What do you think the future of the programme looks like? Is it sustainable? *~5 minutes*
- What could help strengthen the programme moving forward?

3. Mentor Teachers (4 interviews, ~1 hour each)

Intros and consent *~5 minutes*

Could you describe your role in the programme? *~5 minutes*
- How do you support the TDC programme on a day-to-day basis? *(What are your main tasks/ responsibilities? What type of activities take up most of your time? Can you outline a rough percentage of time you spend doing each?)*
- What was the perception of the role when it was introduced? Was there any resistance?
- What was your previous role?
- Do you feel motivated in your job? Can you give an example of a really great day at work you had? What did it look like and what happened that made it so great?

Can you describe the mission/vision of the TDC programme? What are the objectives? *~5 minutes*
- How did the programme come about?

Can you talk about how you fit into the education structure/hierarchy? *~5 minutes*
- Who do you report to? *(Get them to briefly describe the hierarchy of schools, zones, blocks, and districts within Delhi and how these roles fit in that hierarchy.)*
- How is your relationship with them? *(What do you like best about it? What would you like to see more of?)*
- How does the programme sit within the broader reforms in Delhi?
- In general, how is Delhi trying to use the DIETs and TDC programme to secure sustainable improvement?

Looking at your position specifically, can you talk about how you were selected? *~5 - 10 minutes*
- How were you trained initially? Did this training make you feel prepared for the role?
- What kind of ongoing support and feedback do you receive and from who? *(How do they interact with others in the system?)*
- How helpful is this support? Did you see this support change over the course of the TDC programme? *(Give an example of how it's helping them)*
- Do you have your own professional development opportunities? If so, can you describe those?
- What does it take to do well as a Mentor Teacher? What skills or attributes do you think help you as an MT?
- What challenges do you face in the programme and why?

Shifting to Teacher Development Coordinators, how are they selected? *~5 minutes*
- How are they trained initially?
- What does it take to do well as a Teacher Development Coordinator? What skills or attributes do you think help a TDC?
- What are the objectives of a Teacher Development Coordinator?
- What challenges do they face in the programme and why?

What feedback mechanisms are in place? *~10 minutes*
- What kind of ongoing support do you provide to TDCs? What is that relationship like? *(Do they use role modelling? General feedback?)*
- What feedback processes are in place? *(How do TDCs know they're doing well? How is that information shared with them? How do they apply it in terms of both thin outcome data and nuance?)*
- Have these processes improved since the beginning of the TDC programme?
- How are activities and responsibilities co-ordinated between different actors? *(i.e. DIET officials and Mentor Teachers, how to Block Resource People fit in?)*
- How is information communicated across the system? How has it changed since the start of the TDC programme? *(Try and understand if communication has improved and how)*
- How do you influence decision making at the district or state level?

Can you describe the results you have seen due to the TDC programme? *~10 minutes*
- How do you track or measure results and progress?
- How is that information being used or applied?
- Can you give an example of something positive that you have achieved? *(try and pick up something that the respondent has mentioned in the conversation until now and ask them to expand their answer. We're looking for an example of how they have applied their skills)*
    - Describe the situation
    - How did you identify the problem?
    - What did you do to solve it, who did you work with and how have they responded?
    - What was the outcome?
- How about something positive a Teacher Development Coordinator has achieved and why?

What do you think the future of the programme looks like? Is it sustainable? *~5 minutes*
- What could help strengthen the programme moving forward?

4. Teacher Development Coordinators (4 interviews, ~1 hour each)

Intros and consent *~5 minutes*

Could you describe your role in the programme? *~5-10 minutes*
- How do you support the programme on a day-to-day basis? *(What are your main tasks/ responsibilities? What type of activities take up most of your time? Can you outline a rough percentage of time you spend doing each?)*
- How do you split your time between teaching and your role as a TDC?
- What was the perception of the role when it was introduced? Was there any resistance?
- Do you feel motivated in your job? Can you give an example of a really great day at work you had? What did it look like and what happened that made it so great?

Can you describe the mission/vision of the TDC programme? What are its goals? *~5 minutes*
- How did the programme come about?

Can you talk about how you fit into the education structure/hierarchy? *~5 minutes*
- Who do you report to? *(Get them to briefly describe the hierarchy of schools, zones, blocks, and districts within Delhi and how these roles fit in that hierarchy.)*
- How is your relationship with them? *(What do you like best about it? What would you like to see more of?)*
- Do you coordinate with teachers or other TDCs at other schools? If so, is that facilitated for you or do you do it on your own?

Can you talk about how you were selected? *~10 minutes*
- How were you trained initially? Did this training make you feel prepared for the role?
- Do you have your own professional development opportunities? If so, can you describe those?
- What does it take to do well as a Teacher Development Coordinator? What skills or attributes do you think help a TDC?
- How have you been received by other teachers participating in the programme?
- Do you find specific attributes make some teachers more likely to participate *(i.e. new versus experienced, grade level, subject, etc.)*?
- What are the objectives for a Teacher Development Coordinator?
- What challenges do you face in the programme and why? What challenges does the system face?

What does feedback look like, especially with your Mentor Teacher? *~10 minutes*
- What kind of ongoing support do you receive from your Mentor Teacher? What kind of support do you provide to teachers? *(Role modelling? General feedback?)*
- What feedback processes are in place? *(How do they know they're doing well? How is that information shared with them? How do they apply it in terms of both thin outcome data and nuance?)*
- Have these processes improved since the beginning of the TDC programme?
- How do you influence decisions at the school level? The district level?

- What does it take to do well as a Mentor Teacher? What skills or attributes do you think help an MT?
- What else could Mentor Teachers do to better support or help you?

Can you describe the results you have seen due to the TDC programme? *~10 minutes*
- How do you track or measure results and progress? How is that information being used or applied? *(make sure they discuss teaching and learning)*
- Can you give an example of something positive that you have achieved? *(try and pick up something that the respondent has mentioned in the conversation until now and ask them to expand their answer. We're looking for an example of how they have applied their new skills)*
  - Describe the situation
  - How did you identify the problem?
  - What did you do to solve it, who did you work with and how have they responded?
  - What was the outcome?
- Can you describe a positive outcome for a teacher in your network?

What do you think the future of the programme looks like? Is it sustainable? *~5 minutes*
- What could help strengthen the programme moving forward?

5. Network Teachers (4 interviews, ~1 hour each)

Intros and consent *~5 minutes*

Could you describe your experience with the programme? *~5 minutes*
- How long have you been participating?
- What does it involve as a teacher?
- What's the time commitment like? How often do you meet?
- What was the perception of the programme when it was introduced? Was there any resistance from teachers?

Can you describe the mission/vision of the programme as you understand it? *~5 minutes*
- What are the overall goals? *(How does it apply to teaching and learning?)*

Can you talk about any other opportunities for teacher professional development offered in Delhi? *~5 minutes*
- What kind of professional development or in-service training have you participated in before?
- Was/is this training mandatory? Who led it?

Can you talk about how you were selected to participate? *~10 minutes*
- What kind of ongoing support and feedback do you receive in the programme? Can you describe a situation where this support has helped you?
- What skills or attributes do you think help a TDC?
- What does the TDC do that helps you the most? Can you talk about a specific example.
- What else could your TDC do to better support or help you?
- What challenges do they face in the programme and why?
- Have you had any colleagues that do not want to participate in this programme? If so, why? What do you think would convince them to try it?

Can you describe the results you have seen due to the TDC programme? *~10 minutes*
- How do you feel that the programme has affected/influenced you in the classroom?
- Has it had any change that you notice on your teaching or your students' learning?
- Can you give an example of something positive that you have done or achieved as a result of participating in this programme? *(try and pick up something that the respondent has mentioned in the conversation until now and ask them to expand their answer. We're looking for an example of how they have applied their new skills)*
  - Describe the situation
  - How did you identify the problem?
  - What did you do to solve it, who did you work with and how have they responded?
  - What was the outcome?
- How do you track or measure results and progress?
- How is that information being used or applied?

What feedback mechanisms are in place? *~10 minutes*

- Have you personally seen or been affected by other recent reforms in the Delhi education system? If so, what do those look like?
- How is information communicated across the system? How has it changed since the start of the TDC programme? *(Try and understand if communication has improved and how)*
- Does your TDC talk to you about goals from the District or State level?
- How do you influence decisions that are being made in your school?

Can you describe any challenges that you personally have faced with the programme? *~5 minutes*

What do you think the future of the programme looks like? Is it sustainable? *~5 minutes*
- Would you have any interest in becoming a TDC? Why or why not?
- What could help strengthen the programme moving forward?

6. Block Resource Persons (3 interviews, ~1 hour each)

Intros and consent *~5 minutes*

Could you describe your role? *~5 - 10 minutes*
- What do you do on a day-to-day basis? *(What are your main tasks/ responsibilities? What type of activities take up most of your time? Can you outline a rough percentage of time you spend doing each?)*
- Do you feel motivated in your job? Can you give an example of a really great day at work you had? What did it look like and what happened that made it so great?

Can you talk about the role of the Block Office? *~5 minutes*
- How do you support schools, teachers and students?
- How does this role fit into the Delhi education system structure? *(Get them to briefly describe the hierarchy of schools, zones, blocks, and districts within Delhi and how these roles fit in that hierarchy.)*
- In general, how is Delhi trying to use the DIETs and Block Offices to secure sustainable improvement?
- How do you and your block office work with MTs and TDCs? DIET offices? What are those relationships like?

Can you describe the mission/vision of the programme and what you hope the Mentor Teachers and Teacher Development Coordinators can achieve? *~5 minutes*
- How did the TDC programme come about?
- What were/are the overall goals of the programme? Of the MT and TDC roles?
- How does this fit into broader reform efforts in the Delhi education system?

Focusing on Mentor Teachers, can you talk about how the block interacts with them? *~5 minutes*
- Does the block have any impact on selecting Mentor Teachers? If so, please describe.
- How does the block initially train to Mentor Teachers?
- Do they have their own professional development opportunities? If so, can you describe those?
- What does it take to do well as a Mentor Teacher? What skills or attributes do you think help an MT?
- What challenges do they face in the programme and why?

Shifting to Teacher Development Coordinators, can you talk about how the block interacts with them? *~5 minutes*
- Does the block have any impact on selecting TDCs? If so, please describe.
- How does the block help train Teacher Development Coordinators?
- What does it take to do well as a Teacher Development Coordinator? What skills or attributes do you think help a TDC?
- What challenges do they face in the programme and why?

What feedback mechanisms are in place? *~10 minutes*

- What kind of ongoing support do MTs and TDCs receive and from who? *(Who is supporting them from above? How? Role modelling? General feedback?)*
- What feedback processes are in place? *(How do they know they're doing well? How is that information shared with them? How do they apply it in terms of both thin outcome data and nuance?)*
- Have these processes improved since the beginning of the TDC programme?
- How are activities and responsibilities co-ordinated between different Mentor Teachers and TDCs?
- How is information communicated across the system? How has it changed since the start of the TDC programme? *(Try and understand if communication has improved and how)*
- What kinds of issues are escalated to your level?

Can you describe the results you have seen due to the TDC programme? *~10 minutes*
- How do you track or measure results and progress? *(make sure they discuss teaching and learning)*
- How is that information being used or applied?
- Can you give an example of something positive that a Mentor Teacher has achieved? A Teacher Development Coordinator? *(try and build on an example here – how did they achieve this change – what steps did they take?)*

Can you describe any challenges that you have faced with the programme? *~5 minutes*

What do you think the future of the programme looks like? Is it sustainable? *~5 minutes*
- What could help strengthen the programme moving forward?

7. State Official (1 interview, ~1 hour)

Intros and consent *~5 minutes*

Could you describe your role? *~5 minutes*
- What do you do on a day-to-day basis? *(What are your main tasks/ responsibilities? What type of activities take up most of your time? Can you outline a rough percentage of time you spend doing each?)*

Can you describe the mission/vision of the reforms over the past 5 years in Delhi? *~5 minutes*
- How does the DIET and TDC programme fit into this overall vision?
- How did the programme come about?
- What were/are the overall goals of this specific programme? *(How does it apply to teaching and learning?)*

Can you talk about the selection process for MTs? What skills or attributes do you think help contribute to a successful MT? *~5 minutes*
- Please discuss the philosophy of training and ongoing professional development for MTs.
- What challenges do they face in the programme and why?

Can you talk about how the state supports Mentor Teachers and Teacher Development Coordinators? *~5 minutes*
- What kind of ongoing support do MTs and TDCs receive and from who at the state level? *(How do they interact with others in the system?)*
- Who do you interact with at the district offices and what does that relationship look like?

How does the state provide feedback to various levels of the programme? *(What is the feedback loop like? How do they know they are doing well? How is data shared with them and then applied?)* *~10 minutes*
- How much oversight is provided to the programme from the state level? What is the reporting and accountability structure like?
- How is information communicated across the system? How has it changed since the start of the TDC programme? *(Try and understand if communication has improved and how)*
- Do you think that policies and goals from the state level are effectively shared with each district? Each school? Each teacher? Have these processes improved since the beginning of the TDC programme?
- What kinds of issues are escalated to your level?

Can you describe the results you have seen due to the TDC programme? *~10 minutes*
- How do you track or measure results and progress?
- How is that information being used or applied across Delhi? *(Does it vary district to district?)*
- Can you give an example of something positive that a Mentor Teacher has achieved? A Teacher Development Coordinator? *(try and build on an example here – how did they achieve this change – what steps did they take?)*

Can you describe any challenges that you have faced with the programme? *~5 minutes*

What do you think the future of the programme looks like? Is it sustainable? *~5 minutes*
- ▪ What could help strengthen the programme moving forward?