

Teacher Development Coordinator (TDC) Program : An Evaluative Study



2019



District Institute of Education & Training (N/E)

(State Council of Educational Research & Training)

J&K Pocket, Dilshad Garden, Delhi-110095

Major Shifts in Pedagogy and Classroom Processes

From	To
• Teacher centric, stable designs	• Learner centric, flexible process
• Teacher direction and decisions	• Learner autonomy
• Passive reception in learning	• Active participation in learning
• Learning within the four walls of the classroom	• Learning in the wider social context
• Knowledge is given and fixed	• Knowledge as it evolves and is created
• Disciplinary focus	• Multidisciplinary, educational focus
• Linear exposure	• Multiple and divergent exposure
• Appraisal, short, few	• Multifarious, continuous



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Project Coordinators

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PREFACE

An evaluative study on Teacher Development (TDC) Program has been conducted at DIET Dilshad Garden, in the schools (DoE) of district north east, Delhi with the purpose to examine the impact of this program on the various aspects of classroom-teaching learning process and skill development of the teachers. The study is also inclined to understand the perspectives of all its school level stakeholders about the program.

The Teacher Development Coordinator (TDC) Program is launched in all the schools of Directorate of Education, Delhi, in the Year 2017 by Delhi government with the aim to support schools in their endeavor to bring academic development in schools. In this program, through multi-level capacity building and support, the teachers are expected to devise and implement new classroom strategies for the better achievement of learning outcomes.

We, at DIET Dilshad Garden, are always concerned with the quality of programs launched in schools. For this purpose we perform researches to understand the nature and status of the implemented programs. To make the TDC program more effective and supportive to schools in making the classroom and students' learning more interesting and insightful, it was also considered important to study its present status and perception of its stakeholders about the program.

The present study has helped us to get insights from all its stakeholders, the Head of the Schools (HoS), Mentor Teachers (MTs), Teachers Development Coordinators (TDCs) and Academic Resource Team (ART) Members, who have been an integral part of the program since its inception. The findings of the study further paves the way in the improvement of the design of the program, as per the recommendations of the stakeholders as they play a pivotal role in the whole process.

I render my thanks to all those who make this research work possible. This research work was not possible to be performed at DIET without the support of SCERT. It was also complementary to get the support from officials of The Directorate of Education (DoE), and STiR (NGO). I would like to express my special gratitude to Associate Head Mr. Manab Singla, and Mr. Waseem Ahmad , Program Manager from STiR for their constant guidance and facilitation during the entire process of the study and for providing support wherever and whenever it was required.

I am also grateful to all those Heads of the Schools (HoS), Mentor Teachers (MTs), Teachers Development Coordinators (TDCs) and Academic Resource Team (ART) Members, who were the part of the research work, for their cooperation and support during data collection in schools. On behalf of DIET Dilshad Garden I also extend my gratitude to the Parents, Students and Teachers of sampled schools for their support during data collection. I am also thankful to the faculty members and trainees of my DIET for supporting me in sparing time from the daily schedule of the DIET, for this research work.

I owe my special thanks to Dr. Sunita S. Kaushik, and Mr. Shailendre Sharma Advisor to DE, DoE who provided their valuable support in carrying out this research study.

Regards

Dr. Anil Kumar Teotia

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1.0 Introduction

It is getting difficult day by day to comply with the sweeping changes in our age. While we are still trying to transform into an information society, it is of significant importance that teachers, who are responsible for educating students, are able to follow contemporary approaches. The fact that information has become a critical resource in the current information age has increased the importance and responsibilities of educated people within society. Teachers must possess qualities that are in accordance with the requisites of the philosophy of lifelong learning, which is necessary for satisfying the requirements of the 21st century (Sonyel, 2004). The most important factor in fulfilling the values of the society expected from education is the teacher. The higher the level of educational attainment by teachers, the higher the level of educational standard in the country. No wonder the national Policy on Education asserted that no level of education can rise above the quality of its teachers. Further, the ways in which the role of the teacher has altered all over the world, have obviously had major implications for their training, both at pre- service and at in-service level. If teachers are to perform their functions effectively and efficiently, it becomes imperative for them to require training in new skills and modern methodology.

The Journal, Voice of Teachers and Teacher Educators, an initiative by MHRD has also highlighted the vital role of teacher education in India, as the country is poised to provide quality education to all its children, irrespective of gender, caste, creed, religion and geography. The National Curriculum Framework (NCF)-2005, the National Curriculum Framework for Teacher Education (NCFTE)-2009 and the Right of Children to Free and Compulsory Education Act (RTE)-2009 all reflect this commitment and underline the principles that make such an effort necessary and also spell out the strategies for it. The challenge is to augment the role of teachers in shaping the social transformation that India is witnessing, have a long lasting impact on the quality of education, and making education equitable. Teachers and all those concerned with education need to recognize that their ownership and voices are important and that they can and do learn not only from their own experiences but also from each other through collective reflection and analysis.

The history of teacher education in India is fraught with neglect and adhocism, despite best intentions, amidst which the Report of the Justice Verma Commission stands as a landmark in the history of teacher education in the country. The Report of the Commission emphasized the symbiotic relationship between school and teacher education. It highlighted the fact that while 80% of elementary school children were educated in State schools, 90% of teacher education institutes are in the non-government space, thus necessitating an appropriate regulatory framework for quality standards in teacher education. The concern expressed by the Report of the Justice Verma Commission regarding the quality of teacher education is manifested in the poor quality of teachers, and therefore poor learning outcomes in schools.

Regulation of all programs of teacher education is done by the National Council for Teacher Education (NCTE), established by an Act of Parliament (Act No.73 of 1993) “with a view to achieving planned and coordinated development of teacher education system throughout the country, the regulation and proper maintenance of norms and standards in teacher education system and for matters connected there with”.

In addition to NCTE, the National Assessment and Accreditation Council (NAAC) is an autonomous body established by the University Grants Commission (UGC) of India to assess and accredit institutes of higher education in the country. It is an outcome of the recommendations of the National Policy on Education (1986) which laid special emphasis on upholding the quality of higher education in India. To address the issues of quality, the National Policy on Education (1986) and the Plan of Action (POA-1992) advocated the establishment of an independent national accreditation body. Consequently, the NAAC was established in 1994 which established assessment norms for higher education institutes providing professional programs, including teacher education institutes.

CBSE in the year 2019 is going to introduce the concept of Collaborative Learning Hub (CLH) which envisages five or more schools sharing resources, organizing training for teachers & cultural events, quizzes and helping each other in capacity building of teachers. Under this scheme 22,000 affiliated institutions have been grouped into 4500 district hubs. A paradigm shift in school education has been welcomed by government and private school community. According to Anurag Tripathi secretary CBSE, “Many schools don’t have resources and in others they are not put to optimum use. This step taken by CBSE again gives emphasis on the need of school development and capacity building of the stakeholders by creating avenues where educators can come together and learn from each other.

(http://timesofindia.indiatimes.com/articleshow/68758795.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst).

From leading Australian researcher Ben Jensen, the new report *Beyond PD: Teacher Professional Learning in High-Performing Systems* **analyzes the way four high-performing systems provide professional learning to their teachers. Shanghai, British Columbia, Singapore, and Hong Kong all score near the top of all jurisdictions tested in mathematics, reading and science on the Programme for International Student Assessment (PISA).**

While these systems are quite different, the key to all of them is that collaborative professional learning (teachers working with other teachers to improve curriculum, instruction, school climate, etc.) is built into the daily lives of teachers and school leaders. This is reinforced by policies and school organizations that:

- Free up time in the daily lives of teachers for collaborative professional learning
- Create leadership roles for expert teachers who both develop other teachers and lead school improvement teams
- Recognize and reward the development of teacher expertise
- Enable teachers and school leaders to share responsibility for their own professional learning and that of their peers.

Professional learning Leaders In High-Performing Systems: Who Are the and what do they do?



Form Beyond PD: Teacher Professional Learning in High-Performing System

1.1 National Curriculum Framework

India has made considerable progress in school education since independence with reference to overall literacy, infrastructure and universal access and enrolment in schools. Two major developments in the recent years form the background to the present reform in teacher education—the political recognition of Universalization of Elementary Education (UEE) as a legitimate demand and the state commitment towards UEE in the form of the Right of Children to Free and Compulsory Education Act, 2009. This would increase the demand manifold for qualified elementary school teachers. The country has to address the need of supplying well qualified and professionally trained teachers in larger numbers in the coming years. At the same time, the demand for quality secondary education is steadily increasing.

The National Curriculum Framework (NCF) 2005 places different demands and expectations on the teacher, which need to be addressed both by initial and continuing teacher education. The importance of competent teachers to the nation's school system can in no way be overemphasized. It is well known that the quality and extent of learner achievement are determined primarily by teacher competence, sensitivity and teacher motivation. It is common knowledge too that the academic and professional standards of teachers constitute a critical component of the essential learning conditions for achieving the educational goals. The length of academic preparation, the level and quality of subject matter knowledge, the repertoire of pedagogical skills the teachers possess to meet the needs of diverse learning situations, the degree of commitment to the profession, sensitivity to contemporary issues and problems as also to learners and the level of motivation critically influence the quality of curriculum transaction in the classrooms and thereby pupil learning and the larger processes of social transformation. Teacher quality is a function of several factors: teachers' status, remuneration, conditions of work and their academic and professional education. The teacher education system through its initial and continuing professional development programs is expected to ensure an adequate supply of professionally competent teachers to run the nation's schools. Initial teacher education especially, has a major part to play in the making of a teacher. It marks the initiation of the novice entrant to the calling and as such has tremendous potential to imbue the would-be teacher with the aspirations, knowledge-base, repertoire of pedagogic capacities and humane attitudes. (NCTE document, 2009).

NCF requires a teacher to be a facilitator of children's learning in a manner that helps children to construct knowledge and meaning. The teacher in this process is a co-constructor of knowledge. It also opens out possibilities for the teacher to participate in the construction of syllabi, textbooks and teaching-learning materials. Such roles demand that teachers be equipped with an adequate understanding of

curriculum, subject-content and pedagogy, on the one hand, and the community and school structures and management, on the other.

The launch of the Sarva Shiksha Abhiyan (SSA) in 2002 and the financial commitment and education cess to augment the UEE mission have underscored the need to prepare the teachers adequately to address the growing demand for quality education. The continued decline in quality of the state school system and the proliferation of sub-standard unregulated private schools pose several challenges to the national declaration of catering to the basic learning needs of all children in the 6-14 age group through the elementary education system. Increasing privatization and differentiation of the school system have vitiated drastically the right to quality education for all children. In addition, the pressures of globalization leading to commercialization in all sectors including education and increasing competition are forcing children into unprecedented situations that they have to cope with. It is expected that the Right of Children to Free and Compulsory Education Act will play a major role in arresting some of these trends dictated by the market forces. There is now a public acknowledgement that the current system of schooling imposes tremendous burden on our children. This burden arises from an incoherent curriculum structure that is often dissociated from the personal and social milieu of children as also from the inadequate preparation of teachers who are unable to make connections with children and respond to their needs in imaginative ways. Teachers need to be creators of knowledge and thinking professionals. They need to be empowered to recognize and value what children learn from their home, social and cultural environment and to create opportunities for children to discover, learn and develop. The recommendations of the NCF on school curriculum are built on this plank. Educationists are also of the view that the burden arises from treating knowledge as a 'given', as an external reality existing outside the learner and embedded in textbooks. This view of education points to the need to take a fresh look at teacher preparation. Education is not a mechanical activity of information transmission and teachers are not information dispensers. Teachers need to be looked at as crucial mediating agents through whom curriculum is transacted and knowledge is co-constructed along with learners. Textbooks by themselves do not help in developing knowledge and understanding. Learning is not confined to the four walls of the classroom. For this to happen, there is a need to connect knowledge to life outside the school and enrich the curriculum by making it less textbook-centered.

The training of teachers is a major area of concern at present as both pre-service and in-service training of school teachers are extremely inadequate and poorly managed in most states. Pre-service training needs to be improved and differently regulated both in public and private institutions, while systems for in-service training require expansion and major reform that allow for greater flexibility. There

exists a wide variation in the status of teachers and the need for teachers at different levels of school education across the country. It is important to develop a broad framework that can address some of the crucial issues common to teacher education across different levels with a view to enable states to respond to needs specific to their contexts. Moreover, the diversity in the institutional arrangements for school education in terms of alternative schools, government and private schools places its own demands and will also need to be addressed. Diversity also exists in terms of the set of agencies that conduct teacher education programs. These include state institutions, university-based institutions and private institutions that have grown enormously in number in the recent past, contributing to the commercialization of the process of teacher education.

1.2 Teacher Education and Secondary Education in India

There is also a dire need to critically review the secondary teacher education system. The one-year Bachelor's degree (B.Ed.) model seems to have outlived its relevance. With the proliferation of B.Ed. colleges, particularly with privatization and commercialization, B.Ed. programs have become weak both in theory and practice. Even the few institutions, which keep struggling to make this program meaningful, find it difficult to overcome the structural constraints that the short duration of the program poses. While the Bachelor's degree model may still be relevant, it is imperative that this needs strengthening in terms of intensity, rigor and duration. Teacher education institutes continue to exist as insular organizations even within the university system where many are located. This precludes the larger academic debates on equity, gender and community to enter the day-to-day discourse of teacher educators. Institutes of teacher education have become breeding grounds of academic stagnation and resistance to change. The training of teachers happens in insular, intellectually impoverished environments that are severed from ground realities as well as the aims of education they espouse. Such an intellectual isolation actively discourages educational theorization and the growth of disciplinary and interdisciplinary enquiry. It is desirable within a finite time frame that the existing one-year Bachelor of Education (B.Ed.) degree program is structurally transformed to a two year one, with deeper and more protracted engagement with school-based experience and reflective and critical engagement with theory. In the transitory phase, however, the existing one-year program can work towards better utilization of the time available, greater emphasis on school internship and emphasis on reflective practice based on perspectives on the learner and her context, contemporary society, basic concepts of education and curricular and pedagogic alternatives. (NCTE,2009)

Secondary Education (classes IX and X) is a crucial stage for children as it prepares them for higher education and also for the world of work. It is very

essential to provide good quality education available, accessible and affordable to all our children in the age group of 14-16 years. To achieve this, there is a need to strengthen the secondary school education by providing opportunities to teachers for improving their professional capabilities/capacities. In majority of the schools, untrained teachers are handling secondary classes. Even the trained teachers are facing lot of challenges to handle classes at secondary stage of school. Teaching profession is a field of occupation which has social-cultural, economic, scientific and technological dimensions concerning with education sector, which is based on specialist knowledge and skills in the field, which requires academic study and professional training in the professional status (Basic Law of National Education, 1973; Aydin, 2006). A growing diversity of student population, a dynamic society and its needs, continuous changes in expectations about the quality and assessment of education, rapid changes in information and technology, lead schools and instructors to face with tasks and greater expectations with respect to parents and society. In fact, the issues for teacher and teacher's education to fulfil these requirements are continuing and complex (Moeini, 2008). Everyone concerned with the educational system's performance agrees that the improvement of teaching qualities is a high priority in any educational programs. Teachers are assigned the role of change agents and are presented with new challenges, e.g. to make education global and permanent, flexible enough to serve in any environment (in or out of the classroom) for life, and reflective of the community. Teachers have to learn to adapt creatively to changes in science and technology and to prepare generations who are universal, critical, and creative and who have firm identities with their socio-cultural background.

The fundamental element of being a developed country is to train qualified people. Education system training these types of people and teacher, the most important element of the system, has to adapt to changes occurring in each area and renew themselves constantly. Teacher education and school education have a symbiotic relationship and developments in both these sectors mutually reinforce the concerns necessary for qualitative improvements of the entire spectrum of education including teacher education as well. To meet the growing needs of education in a global economy it becomes imperative to provide sound in-service education for teachers to update their skills, knowledge and experience. The system must be subject to reforms and repositioning as static education system do not transform societies.

With the similar aim and vision, Delhi government has initiated two in-service teacher development programs for the secondary school teachers named– Mentor Teacher Program (MTP) and Teacher Development Coordinator (TDC).

1.3 Delhi Government and State Council of Educational Research and Training (SCERT) Initiatives

The Delhi government is investing in building new schools and training teachers to rectify the education system's biggest maladies — poor infrastructure and shortage of teachers. Delhi is served by 1029 government secondary schools with about 45,000 teachers and around 16 lakhs students. All these schools are provided with the set of trained teachers but to maintain the synergy with the changing needs with the time it is equally important to upgrade the skill and knowledge level of these teachers. So considering the importance of this aspect SCERT and government has taken two initiatives named Mentor Teacher Program (MTP) and Teacher Development Coordinator (TDC) to provide in-service training to these teachers employed at government secondary schools.

1.3.1 Mentor Teacher Program (MTP)

Mentor Teacher Program was launched by the Delhi Government in March, 2016, with the goal of leveraging the creative expertise of a group of 200 teachers, to enhance the pedagogic and academic capacities of more than 45000 teachers who work in Delhi Government schools. Each Mentor Teacher has been assigned 5-6 schools, which she/he visits at least once every week, to assist and support teachers of that school, by providing learning and assessment material.

1.3.1.1 Selection process of the Mentors

A letter from the Delhi Education Minister mentioning the concept of Mentor Teacher Program was sent to the HOS of all the Delhi government schools. Along with the letter, application form was also sent to all the schools, Teachers were requested to apply for the position of Mentor with the consent of the HOS. Applicants had to go through extempore round and give psychometric test designed by collaboratively by DIET and Crate net.

The Delhi Government has taken initiative to provide support to the teachers and enhance classroom teaching learning process. From 1,100 applicants, the Directorate of Education had selected 200 teachers who served as “mentor teachers” for their colleagues in other schools. This program, the first round lasted for two years and was open to guest teachers as well. The group comprised of current teachers of Directorate of Education who are motivated and dynamic and who would work continually for quality enhancement. The teachers chosen to be in the MTG get additional opportunity, exposure and support to sharpen their own knowledge and skills. In return, they are expected to help the teachers in the system through facilitating capacity enhancement sessions and onsite support. In the second year, it was decided by the Government that only regular teachers would be selected as Mentors. The program completed its third year in 2019 and is

continuously evolving.

1.3.1.2 New Learning Opportunities for Mentor Teachers

The selected teachers for MTP will be involved in self learning, training, mentoring process and provide onsite support to teachers of their allocated cluster. They would be encouraged to design and conduct specific research on any topic related to school education. They would be motivated to write articles for journals. They would be attending workshops on different training methodologies, teaching practices and onsite support techniques in order to prepare them for their role as mentor. They would be sent on exposure trips to observe best practices of teaching learning in different parts of India or abroad.

1.3.1.3 Task of Mentor Teachers (MTs):

- To conduct the training of teachers on teaching methodologies to achieve specific learning goals for students.
- Each Mentor teacher shall be assigned about 5-10 schools of Directorate of Education. He/she would be required to visit their assigned schools once a week, observe the class process, talk to the teachers about the activities conducted by them, and get the teachers feedback on any specific support/input that they need, arrange for that support with the help of their peers and others.
- To facilitate sessions of sharing experiences of teachers where they can reflect upon their own learning and find solutions through each other and experience as a group.
- To review different types of teaching learning material (inducing audio-visual) and shortlist those that can be used by the teachers in furthering the learning of children.
- To help their schools in tracking the learning progress of their students and communicate the same to the parents/guardians.
- Each mentor teacher would maintain data about their daily activities. MTs provide feedback to teachers through classroom observations and support TDCs to lead effective teacher collaboration in their schools. MTs provide excellent coaching to TDCs to improve their teaching skills.

1.3.2 Teacher Development Coordinator (TDC) Program

Teacher Development Coordinator Program is another initiative undertaken by the Delhi Government. Taking forward the government's Mentor-Teacher program, which was introduced in the year 2017, and with the vision of creating a collaborative network of teachers teaching in all DOE Schools (1029)

where ‘everyone learns together’, Delhi government has launched the Teacher Development Coordinator (TDC) program.

To fulfil this vision, following priorities are set:

- Improving teachers’ classroom practice to be more engaging and support learning with understanding
- Classroom observation and support through constructive feedback
- Teacher’s collective and individual capacity and career development

TDC program is reaching out to all the 13 districts of Delhi State, 1029 schools. The academic lead of TDC program is DIET. Nine DIETs’ with 24 facilitators which includes DIET Principals, DIET lecturers and BRPs across Delhi are playing a central role in the operation and facilitation of the program. 200 Mentor Teachers are also moving into the role of mentors and providing the continuous on-ground support to TDCs. Nine Program Managers from STiR education , (an international NGO) one in each DIET, are actively supporting the TDC program in the districts.

Through the program various avenues, platforms of engagement, like- daily 30 minutes’ sessions, one-on-one sessions, monthly meetings etc. have been created in schools for the professional development of the teachers.

1.3.2.1 Stakeholders involved in TDC Program and their roles and responsibilities.

(A) Teacher Development Coordinator (TDC)

A TDC is appointed by the HOS and is preferably a TGT in that school. Thus each school has one teacher development coordinator. A TDC is supposed to be the most active and most motivated teacher of that school having the ability to demonstrate best teaching practices, self-motivated as a teacher and is ready to undertake the responsibility of influencing others.

A teacher development coordinator has role similar to that of a mentor teacher but is confined only to his/her respective school where he/she has been working as a regular teacher. A TDC lead focused, structured teacher collaboration and provide feedback to improve classroom practice in his/her own school and teacher development. Apart from the task of TDC program, TDC is assigned other tasks by the HOS and thus plays a crucial role in providing overall academic support to the school. This study will focus specifically on the role and responsibilities of the TDC in TDC Program.

Within the purview of TDC Program a Teacher Development Coordinator is expected to: -

- Facilitate teachers to share learning and experience of classroom

practice

- Provide developmental, focused feedback following classroom observations
- Focus on improving teaching across the schools

Within the purview of TDC Program a Teacher Development Coordinator is expected to Teachers–

1. They work hard to make classroom practice more engaging and support other teachers to do the same.
2. Observe each other's classrooms to gain perspective about classroom practices.
3. Choose practices to bring to their own classroom based on their observations
4. Be part of the school level drives to bring positive changes to schools and classrooms.

(B) Academic Resource Team (ART)

This is a diverse group of secondary teachers (at least 10 % of total teachers with minimum 5 teachers) who have come forward voluntarily to implement and share new classroom strategies on the theme. They can be both regular teachers and guest teachers. An art team consists of at least one representative of faculty. They are usually a group of most active, innovative and self-motivated teachers in the school. Each school has a group of ART members. These members are supported by TDC, MT, HOS and District officials.

The composition of ART is to be decided by TDC with support of HOS and Mentor Teacher.

ART members are–

1. Open to trying new classroom practices and sharing their experience with colleagues.
2. Focus on all students' learning and encourage a growth mindset.
3. Welcome colleagues into their classrooms to observe them.

Task of ART members:

1. ART members lead by example in improving their classroom practice and influence other teachers in their department to do the same.
2. ART works with TDC and HOS to build the culture of academic discussions within the schools.

3. To be part of monthly ART meeting with TDC. Implement the strategies discussed in these meetings to role model for other school teachers.
4. Support TDCs in effective facilitation of 30 minutes' sessions (Subject wise discussions, class wise discussions, student's specific discussions)

SOME CURRENT MODELS OF ACADEMIC RESOURCE TEAM

How do they look like?

- (i) A team representing at least one teacher from each subject (TGT/PGT), who attends monthly ART meeting and facilitates different 30 minutes' sessions subject wise/class wise.
- (ii) A team representing at least one teacher from each secondary class (TGT/PGT) who attends monthly ART meeting and facilitates different 30 minutes' sessions subject wise/class wise with TDCs support.
- (iii) A team representing at least one Senior (PGT) faculty from each subject who attends monthly ART meeting and facilitates different 30 minutes' sessions subject wise/class wise with TDCs support.

How are they functioning:

1. Monthly attending ART meeting and Implementing Classroom Strategies based on the current theme.
2. Creating a weekly/monthly plan for 30 minutes' sessions, where ART members -
 - a. Facilitate 30 minutes' sessions for teachers of same subject, teachers of same class, etc.
 - b. A group of teachers (subject specific, class specific) attends session once - twice a week depending upon their turn as per monthly/ weekly plan.

1.3.2.2 Role of Various Stakeholders under the purview of TDC Program

(A) Head of the Schools—Head of the School ensures that teachers are given the opportunity to collaborate and actively sustain a focus on improving classroom practice. HOS regularly invites teachers to share teaching ideas that they have found to be effective with the wider staff. Asks teachers about their teaching regularly and model a focus on teaching and learning and encourage teacher innovation and creativity and Champion teachers who go the extra mile.

(B) Mentor Teacher

1. Provide excellent coaching to TDCs focused on helping them be more effective in improving teaching in their schools.

2. Provide access to resources and ideas to help TDCs think through different elements of their pedagogy.
3. Model excellent facilitation to TDCs and spread a positive, constructive tone focused on improving teaching and learning.

(C) SCERT: SCERT is working to empower teachers who will ensure that every child in Delhi shall receive learning that helps them to be happy, responsible, healthy and productive citizens. Furthermore, the SCERT has a focus on improvement in quality of school education by improving attitudes of teachers and increasing application of knowledge through skills enhancement, augmenting the quality of teaching and learning through exploring and developing innovative teaching techniques in government schools in the districts in accordance with the plan. SCERT plays vital role in supporting the implementation of the program in 9 districts in Delhi. SCERT provides with necessary permissions to coordinate at different levels, with districts, zones, schools, teachers including with other government and/or partner organizations and facilitates the building of working relationships with other areas of the districts, zones, state government and other similar departments within the state government infrastructure. SCERT core design team plays pivotal role in program designing based on the needs of the school.

(D) DIET Facilitators: They lead the facilitation of TDCs development session and use my influence to ensure they have the backing of the system in leading improvement in classroom practice at their schools. They model excellent facilitation to TDCs and spread a positive, constructive tone focused on improving teaching and learning. They also act as champions within the system to avoid TDCs and teachers being distracted from improving teaching—ensure that all meetings/discussions relate to improving learning and regularly communicate to the DIET, DDE and others in the system about the progress they are seeing teachers make.

(E) STiReduction: STiReduction is a non-profit-organization, headquartered in London and operating in India (Uttar Pradesh, Karnataka and Delhi) and Uganda (at national level). STiR's core mission is to support government officials to ignite and sustain teacher intrinsic motivation (TIM) across entire education systems. STiR does this in order to improve classroom practice and student learning, and in the process, boost financial efficiency for education systems. The core insight that underlies STiR's mission is the motivation-mastery cycle for teachers. The evidence is clear that teachers make the biggest in-school difference to student learning and little improvement in teachers or their practice can take place without igniting and sustaining teachers' intrinsic motivation. In TDC Program, STiR support SCERT to improve teacher intrinsic motivation, classroom practice and facilitate better student learning outcomes; develop teachers' professional mindsets, behaviors and motivation to continue mastery in improving classroom culture and pedagogy.

(F) Program Managers (PMs): Program Managers are appointed by STiR education, one Program Manager for each DIET. They lead the facilitation of TDCs development session and work to align everyone in the system around the main priorities. They actively work to support the DIET and DDEs in aligning their District teams around the agreed priorities–structure meetings and agendas in to this end. They provide resources and platforms to recognize teachers’ and schools’ progress and share knowledge and provide useful data to all stakeholders and set up structures to analyses and plan based on the data.

(G) DDEs: DDEs keep everyone in the District focused on improving classroom practice, actively reduce distractions for my TDCs, HOSs and MTs and act as a positive supporter for the change being led by teachers. They remain very focused on the core priorities and align all resources and meeting agendas around these priorities. DDEs Share knowledge and ideas with other DDEs around what is effective in supporting teachers to improve learning and also model openness to new ideas and creativity by enabling teachers, TDCs and others to contribute ideas about improving learning and recognize schools that are making progress

(H) DIET: They observe the functioning of the TDCs to exchange ideas on ways of teacher training and coordinate with TDCs to gain information on common challenges our schools. They plan subject zonal trainings that align well with the TDCs program and work closely with each TDC to plan subject group discussions

1.3.2.3 Key activities and role of Stakeholders in TDC program

Stakeholder		Nature of the role	Major activities
State	SCERT Core Team	<ul style="list-style-type: none"> • DIET Principal and facilitators of some DIETs • Mentor Teachers of some districts • STiR Education representatives from the Design and Program teams 	<ul style="list-style-type: none"> • Program designing as per the needs of schools • Alignment with other programs and amplifying the impact • District level progress check • Producing supportive circulars and orders
	TDC Facilitators	<ul style="list-style-type: none"> • DIET Principal, DIET Faculty and DIET Facilitators • Block Resource Persons (BRP) 	<ul style="list-style-type: none"> • Support to Mentor Teachers for TDC programs • Lead facilitator of TDC co learning session and MT CLs
District	Mentor Teachers	<ul style="list-style-type: none"> • Teachers volunteer to be a Mentor • Each MT allotted 5-7 schools • MTs do not work as a teacher during their tenure as a mentor. • TDC program is one of their engagements apart from other engagements as a Mentor. 	<ul style="list-style-type: none"> • Co- learning sessions • School visits (Dist. officials) • Monthly progress check and planning (DIET and MT) • District Alignment Meetings (DDE, DIET and MTs)

School	Teacher Development Coordinator	<ul style="list-style-type: none"> • One TDC in each school is selected by HOS • TDC is an existing permanent teacher of that school • Usually is the most motivated teacher of the school 	<ul style="list-style-type: none"> • Monthly Academic Resource Team discussions • Peer observations in classrooms and feedback • Daily 30 mins academic discussions
	Academic Resource Team	<ul style="list-style-type: none"> • 10% of the most motivated teachers of each school • Attend Academic Resource Team monthly meetings facilitated by TDC 	<ul style="list-style-type: none"> • Academic Resource team meeting • Peer feedback • Classroom practice Implementation
	Program Manager	<ul style="list-style-type: none"> • One program manager for each district. 	<ul style="list-style-type: none"> • Support to Mentor teachers for School Visits • Support to DIET for conducting DPCM and co learning session. • Classroom observations and ART meetings

1.3.2.4 Component of TDC program -

Different components of TDC program which provides platform to the TDC, Mentor teacher and ART member to interact with each other and also with all the teachers in a school for academic discourse and professional development with focus on academics.

(A) Monthly ART Meetings

Academic Resource team (ART), as the name of team suggest, is a core group of teachers who will support the academic needs of the school.

- On average, 10% of the school teachers of a school consisting of motivated and a highly diverse (consisting of all subject, grade, etc.) group of teachers to the extent possible are selected to be part of these meetings.
- ART is perhaps the only way a TDC can reach (or have a touch point) with all the teachers.
- ART Meetings are conducted once in a month.
- These are facilitated by TDC with the support of the MT.
- These meetings serve as a platform to disseminate the learning received by MT and TDC during co learning session.

(B) Daily 30-minute meeting

- The aim of the 30-minute meeting is to develop a culture of academic discussions in school focused on developing it as an excellent learning

organization and therefore achieving part of the overall vision of “An education system where everyone learns”.

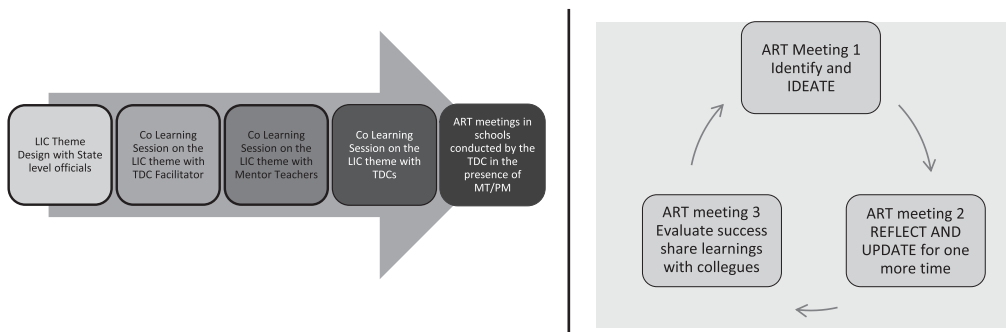
- As a TDC, it provides you with an opportunity to initiate discussions centered around the three main priorities, namely:
 1. Techniques that can improve students’ foundational skills (Literacy and Numeracy levels) as well as the overall student learning outcome
 2. Classroom practices that are engaging, and supports learning with understanding
 3. Teacher’s collective and individual capacity and Professional development

Both the programs have been invested with both human and financial resources. Looking at this initiative of the state it is important to undertake an evaluation of these two programs so that the learnings can be used both to make suitable changes in the program and also to guide future initiatives of both the state and other states.

1.3.3 Program components focusing on the Capacity Development of the different stakeholders

(A) Learning Improvement Cycle (LIC) - The Learning Improvement Cycle is an improvement process designed specially to support the actual change in classroom practice as well as to develop teacher professional mindsets and behaviors. By providing teachers with opportunities to see progress, create something together and work towards a shared goal, it includes all the ingredients required to build motivation and support behavior change. Each learning improvement cycle revolves around the theme and pans out over a period of three months i.e. one quarter. The first theme was “connect” (August-17 to December-17), the second theme was “Look for understanding and respond” (January-18 to March-18), third theme was “Lesson Plan” (July 2018 to Oct 2018) and fourth theme is “Teaching strategies: Elaborative Questioning and “Retrieval Practice”.

To ensure effective implementation of these themes, two to three days training sessions with different stakeholders are organized. Training sessions are designed in consultation with the State representative officials, following which training through two day co learning sessions are imparted to the TDC facilitators. Similar two days co learning sessions are organized for Mentor teachers by TDC facilitators in the respective DIETs of each district. The co learning sessions end with the 3 days training of TDCs facilitated by the mentor teachers with the support of TDC Facilitators/DIET Facilitators.



ART Meetings– After the TDC Co Learning sessions, one ART meeting in each month with the ART members is organized and facilitated by the TDC with the support of MTs in their respective schools. These meetings in each LIC serves as platform for the teachers to identify and ideate on the theme introduced, prepare lesson plans and implement the strategies in class, reflect upon the classroom processes, evaluate and share their learning with other teachers.

(B) Implementation level of LICs (along with timeline)

(i). LIC -1, Theme - CONNECT (August 2017 to Nov 2017)

The theme connect served as a platform for different stakeholders to establish and strengthen their rapport with each other. Majority of the teachers shared that the theme helped to understand the children and develop empathetic approach towards them. It helped the teachers to understand the socio economic status of the child, challenging family background and subsequent psychological and emotional needs of the children, if not fulfilled poses a challenge for enhancing their learning level. The theme also gave the platform for teachers to discuss child centric classroom issues and encouraged them to devise strategies to surmount these hurdles together. When asked about the impact of these efforts to connect with the children on their regularity in school, 31% TDCs across Delhi shared that children have now started coming to schools regularly.

35% TDCs shared that teachers have now become more observant towards children's needs and 61% TDCs shared that students have now started asking questions to their teachers in state of doubt.

One of the TDCs shared her experience on connecting with the children, “it is very essential for a teacher to connect with the children and it is possible to do that if a teacher makes efforts. A classroom situation starts improving when a teacher changes her mindset from “fixed” to “growth” i.e. she is open to learn new things.”

(ii). LIC -2, Theme - LOOK FOR UNDERSTANDING AND RESPOND (Jan 2018 to March 2018)

The strategies introduced in this theme revolved around assessing the children to gauge their conceptual understanding of the concepts, identify learning deficits and individual learning needs of the children through various strategies like mind mapping, exit ticket, group learning and peer learning etc. 60% of the TDCs shared that they found these strategies very relevant to their classrooms and they were able to implement these strategies effectively in their respective classes. 96% TDCs shared that the strategies proposed in LIC -2 were implemented by them in their schools.

(iii). LIC -3, Theme - LESSON PLAN (July 2018 to Oct 2018)



Cumulative Reflection on LIC-1 ,LIC-2 and LIC-3

- ✓ 5967 ART Meetings conducted
- ✓ 59,240 ART members participated (approx 9-10 ART members/meeting)
- ✓ 90% DIET officials showed interest in working on google form data before DPCM

The theme on lesson plan focused on daily lesson plan prepared by the teachers encompassing three broader aspects—Opening Activity, Main Activity and Closing Activity. The need for a brief structure of lesson plan was laid by the fact that majority of the teachers evaded writing elaborated lesson plan for each class due to their multiple engagements in school. The idea was to inculcate the culture of writing daily lesson plan amongst the teachers so as to have a more structured classroom ensuring effective time management.



Figure 1: Lesson Plans and TLMs maintained in files by teachers in GGSSS Gokulpuri, Dist. North East

Majority of the teachers welcomed this concise structure of lesson plan which was less time consuming and at the same time helped them to have a more structured plan before entering the class. 94% TDCs showed that the discussion in ART meetings were on lesson plan and majority of the TDCs agreed that teachers have started writing the lesson plan. More than 80% TDCs agreed that discussion during the ART meetings includes learning level of the children, challenges faced in the preparing lesson plan and innovative ideas to resolve the challenges.



TDC showing elaborative dice and ART members sharing their classroom experiences on LIC-4 theme during ART meeting.

(iv). LIC-4 - Theme - TEACHING STRATEGY (Dec 2018 to March 2019)

The theme teaching strategies revolved around Elaborative Questioning and Retrieval Practices. Since the theme was introduced during the exam months, majority of the TDCs showed acceptance towards the strategies mentioned in the handbook. Strategies suggested to facilitate Elaborative questioning process in class were—use of elaboration dice, establishing connection between different concepts/ topics/ subjects and why and how activity. Similarly, for retrieval practice suggested strategies were - Brain dump, think-pair –share and low stake quizzes.

Feedback shared by the TDCs reflected that till 15th Jan in 578 schools ART -1 Meetings were conducted across Delhi. TDCs shared that in 578 schools, 5544 ART members participated in the meetings and out of 1071 ART members out of 5544 stated that they invite other teachers to observe their classroom. Based on the discussion of PMs with the TDCs, HOS and MTs, it was found that in most of the cases, all the stakeholders displayed acceptance for these strategies and implemented them in class. This is also substantiated by the qualitative feedback given by the PMs after the classroom observation.

Theme	Summary	Suggested Strategies	Visible changes
LIC 1: Building Connect (August, '17–October, '17)	Supported teachers to build a culture of trust and positive communication in the classroom, ensuring that students feel valued.	Name Tags Class Tree	Changes were based upon strengthening relationships among teachers and students, TDC with other teachers, HoS and MTs. 35% of TDCs shared that teachers have now become more observant towards children's needs and 61% of TDCs shared that students have now started asking questions to their teachers in state of doubt.
LIC 2: Look for Understanding and Respond (January, '18–March, '18)	Supported teachers to use assessments to identify gaps between teaching and learning and adapt teaching strategies to fill those gaps.	Mind mapping, exit ticket, group learning and peer learning	The theme was related to strategies and revolved around assessing the children to gauge their conceptual understanding of the concepts, identify learning deficits and individual learning needs. 60% of TDCs shared that they found these strategies very relevant to their classrooms and they were able to implement these strategies effectively in their respective classes.
Pre-LIC: Mission Buniyaad (May, '18–June, '18)	Helped teachers learn more about developing reading skills in students. ART members discussed Mission Buniyaad and how it can be strengthened in their schools.	Linked to the strategies suggested by the material developed for Mission Buniyaad by the state	This was a short term LIC for 40 days where major focus was to make TDC a nodal pointer for the Mission Buniyaad program. It was inferred from google forms that more than 75% of the total ART members were involved in Mission Buniyaad
LIC 3: Lesson Planning (July, '18–September, '18)	Helped teachers plan and sequence lesson activities in a way that is engaging. Planning also helped teachers be more deliberate in the strategies and questions they used.	Opening Routine Main Activity Closing Routine	The theme focused on daily lesson plans prepared by the teachers encompassing three broader aspects–Opening Activity, Main Activity and Closing Activity. Most of the TDCs agreed that discussion during the ART meetings included the learning level of the children, challenges faced in preparing the lesson plans and innovative ideas to resolve the challenges.

(C) TDC facilitators offsite Co Learning Sessions–

TDC facilitators are the DIET Principal, DIET faculty and DIET facilitators. Every year an offsite co learning sessions is organized for them by SCERT. The objectives of this offsite co learning session are

- To Build cohesiveness within the group and a shared purpose
- To Understand 'facilitation' and 'continuous feedback'
- To Build an understanding about intrinsic motivation and switch theory of behavioral change
- To Create district specific plan for upcoming cycle

The co learning sessions are designed to set positive atmosphere and give the participants an opportunity to reflect back on their life and values. Moreover, it helped the participants to understand each other. The session on growth mindset and intrinsic motivation were designed to develop understanding of the participants on the need of teacher development program, need of intrinsically motivating the teachers and how the system can support in devising strategies to develop growth mindset in teachers and also to motivate the teachers.

Teacher development program thus aims to cater to the developmental needs of all stakeholders in various ways.

1.4 Rationale and Need of the Study

When a teacher begins career, the knowledge and skills acquired in college serve only as basic necessities or minimal requirements to launch the work. The first few years of teaching will lead the new teacher to identify, re-examine and evaluate the goals of subject teaching, methods, the nature of the content and one's own personal aspirations. An excellent education for subject teaching can merely provide the basic tools for the creative teacher to implement, supplement, and modify knowledge to meet the everyday challenges of young people in a school classroom. The Subject teacher, like any other professional, does not commence with a complete understanding of methodology of teaching the subject to the students. It is necessary to learn not only from day-to-day teaching experience but also from the many opportunities that are available.

HK Dewan, 2008 on the quality of in service teacher training pointed out, 'Crucial issues regarding the duration, content and process of training are decided by an arbitrary process. Speediness, rather than quality is the criterion for deciding who will train, the argument being that unhurried training did not guarantee quality. Moreover, the process was highly centralized—field-level personnel had no input into the pace of the training. Our discussions showed that while they were not sure of the areas that should be chosen for interaction or the content of training sessions, they were convinced that the current modules were not appropriate. One could sense the constant conflict between cynicism and resignation towards status quo and the hope that the structure would allow honest choice, review and reflection' (H K Dewan in Sharma and Ramachandra, 2008, pp). In order to promote competence and nurture talent among teachers, the education system needs to prioritize these aspects and operationalize them throughout the system. This means, for example, that teachers should be chosen on the basis of aptitude and interest, not only on the basis of marks. Promotions and salary increments should be awarded for effective teaching, not only on the basis of seniority. Supervision should encourage innovative practices, not punish them. And training programs should aim to help teachers think for themselves about what they are doing, not merely to do as they are told. Most of all, these different areas of educational policy must be coordinated so that they all

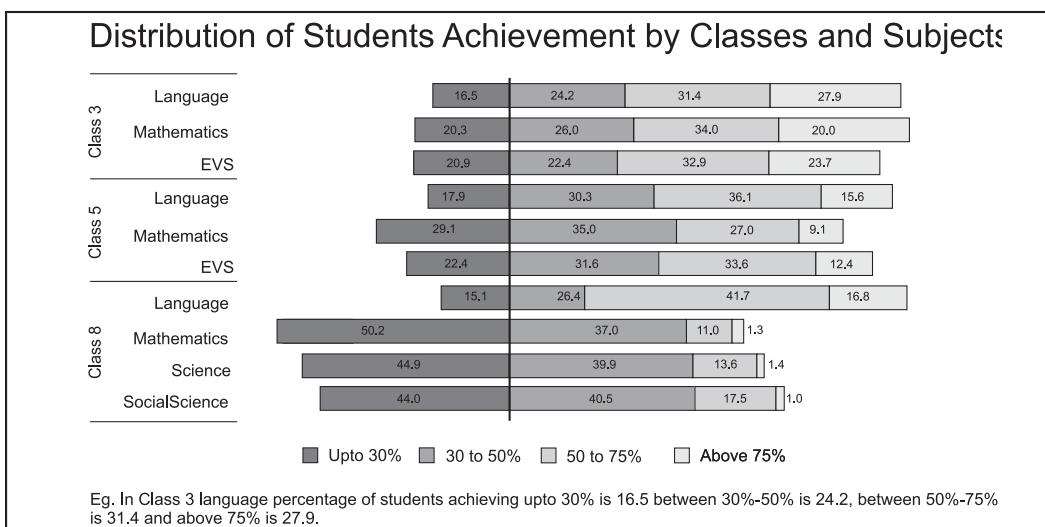
push teachers in the same direction, towards better teaching practices. (This section of the paper draws on Khandpur, KD Nimrat research paper ‘Operationalizing the Quality of Teacher Education Institutes: Principles and Challenges’, published in the Journal Voices of teacher and teacher educator (Vol, VII, ISSUE -1): 2455-1376.)

According to the study released by NITI AYOJ there is need to change the traditional strategies for improving the quality of education through a multi - pronged approach. Despite years of effort and projects on changing syllabuses, teacher training as well as student assessments, the situation has not improved due to structural flaws. Based on the findings of Annual Status of Education Report, which indicates that nearly half of class 5 children cannot read a class 2 text, teachers themselves struggling with subject knowledge and the ability to teach it, 70% teachers don’t know grade level competencies, Niti Ayog suggested that students should be taught based on their learning levels rather than grades.

The report further suggested the need of customized training for teachers. Teachers should have some platform to share their knowledge.

The other focus area, said the authors, is in implementation of such strategies. Communication channel between education directorates and schools are completely broken. There is little data on learning being generated in schools and feedback—so decisions how to improve education programs are often educated guesswork. Truly transforming public education will require bold measures like changing the way we manage public finances and making education budgets more flexible,” says the report. (Times of India, March 30, 2019)

The National Achievement Survey (NAS) was conducted throughout the country on November 13, 2017 for Classes 3, 5 and 8 in government and government aided schools. The survey tools used multiple test booklets with 45 questions in Classes III and V and 60 questions in Class VIII in Mathematics, Language, Sciences and Social Sciences. The competency based test questions developed, reflected the Learning Outcomes developed by the NCERT which were recently incorporated in the RTE Act by the Government of India. Along with the test items, questionnaires pertaining to students, teachers and schools were also used. The learning levels of 2.2 million students from 1,10,000 schools across 701 districts in all 36 States/UTs were assessed. Of the 10262, class 3 students who participated in the survey, percentage of students giving correct responses to the survey were 54% in Math, 55% in EVS and 58% in Language. In class 5, 10,945 students participated in the survey out of which 44% students in math, 49% in EVS and 52% in Language gave correct responses to the questions asked during the survey. Similarly for class 8, 10066 students participated in the survey, 55% students in Language, 32% in Math, 34% in Science and 36% in Social Science gave correct answer.



The findings of NAS 2017, very less percentage of students could score above 75% and majority of them could score from 30 to 50% in all subjects. This again highlights the need of collaborative efforts by the education departments in order to enhance the learning outcomes of the students.

ASER 2018 (Annual Status of Education Report) was conducted in 596 districts in rural India. A total of 5,46,527 children in the age 3 to 14. ASER data indicates that in the year 2018, 44% children in class V and 69% children in class 8 could read a class II level text book. From year 2008 to year 2018, the trend shows that the proportion of reader grows from 1.4 to 1.5 times by the time they reach Std VIII means that as children continue to use books more children learn to read fluently even though not at the desired level. It also suggests that while efforts have to be made to ensure that 100% children are reading fluently by the time they reach Std V, efforts to improve reading ability should be continued even after Std V.

Table : % Children in government school who can read a class II level text, class V & class VIII						
India	2008	2010	2012	2014	2016	2018
Std V	53.1	50.7	41.7	42.2	41.7	44.2
Std VIII	83.6	82.0	73.4	71.5	70.0	69.0

According to the ASER data, 40% children from class 8 and 22% children in class 5 can do simple division (which indicates all basic mathematical operations).

NCERT has been conducting the National Achievement Survey (NAS) since 2001. It has successfully conducted four cycles in Classes 3, 5 and 8 and in the verge of completing the 2nd cycle for Class 10. The present NAS, 2017 conducted

for Classes 3, 5 and 8 based on learning outcomes developed by NCERT. The major objective of conducting National Achievement Survey is to have a system level reflection of its effectiveness. An accurate assessment of the learning outcomes at different stages of education can provide important insights as to whether the inputs made into the elementary education system had helped in improving the educational health of the nation. NCERT conducted the National Achievement Survey based on learning outcomes in November, 2017. NCERT has been implementing these surveys on sample basis at the State/UT level to provide evidence on health of education system and learning levels of children in key curricular areas at classes 3, 5 and 8. Learning outcomes in the report of NAS was based on the data collected from approximately 1,20,000 schools, 2,70,000 teachers and 22, 000,00 students through tests and questionnaires from 701 districts of the country. According to the findings, learning outcomes on which performance was found to be 30% or lower requires special care and immediate intervention. Amongst other recommendations, NAS report also suggested the need for training of teachers on evolving learning strategies to achieve learning outcomes. Student learning levels at all stages of education have remained well below expectations. The National Achievement Survey for class 3 conducted by NCERT in 2014 concluded that the national average for performance in language and mathematics were 64% and 66%, respectively. (http://www.ncert.nic.in/programs/NAS/pdf/DRC_report.pdf).

Teacher Development program should focus on enhancing the learning level of the children. Nowadays, the teaching profession requires a highly skilled person, and this is not at all an easy process. It is well-known the axis that improving teachers would improve the teaching and learning in school, which in turn would improve the quality of education at national level. But various factors might contribute to ineffectiveness of teacher professional development, like ethical, structural, cultural, economic, policy or personal issues. Many researchers, like Loucks-Horsley and Matsumoto (1999), Hawley and Valli (2001), Vannatta and Fordham (2004), Klieger and Yakobovitch (2012), Tse, Ming et al (2012) argue that some of the most significant factors are the level of guidance and support throughout the implementation stages, and the teacher's willingness to accept the changes, the degree to which teachers support those changes, and their investment above and beyond their regular duties for its success. Researches also show that educational authorities have seemed to agree that increasing standards for preservice education of teachers will not necessarily lessen the need for continued in-service preparation and professional growth (Allen, 1940). Thus the achievement of the training programs depends on many factors as-effective planning, organization, application and evaluation (Karacaoğlu, 2009). So, in this context determining the effectiveness of teacher development programs and reflecting on possible improvements is of great benefit.

In 2017, Teacher Development Coordinator program was an initiative introduced by the SCERT as an extension of its Mentor Teacher program. Since its inception, the program has been able to generate an atmosphere of excitement and activity. Through multi-level capacity building and support, the teachers, via their Academic Resource Teachers' group are expected to devise and implement new classroom strategies for better learning outcomes.

This research seeks to study the Teacher Development Coordinator program in one of the 13 districts of Delhi in order to evaluate the academic and pedagogic competence that this in-service training program has been able to provide them with.

1.5 Professional Development of Teachers, in-service trainings and review of the related studies

Professional development is the enrichment training provided to teachers over a period of time to promote their development in all aspects of content and pedagogy. Professional development for teachers should be analogous to professional development of other professionals. It is considered more than training or classes as it functions as an agent for change in their classroom practices and has become an essential condition in today's knowledge-based society to sustain the quality of teaching. According to the Educational Resources Information Centre (**ERIC**) database, professional development refers to "activities to enhance professional carrier growth. Such activities may include individual development, continuing education, and in-service education, as well as curriculum planning, peer collaboration, study groups, and peer coaching or mentoring. **Fullan (1991)** expands the definition to include "the sum total of formal and informal learning experiences throughout one's career from pre-service teacher education to retirement". Considering the meaning of professional development in the technological age, **Grant** suggests a broader definition of professional development that includes the use of technology to foster teacher's growth. "Professional development goes beyond the term 'training' with its implications of learning skills, and encompasses a definition that includes formal means of helping teachers not only to learn new skills but also develop new insights into pedagogy and their own practice, and explore new or advanced understandings of content and resources. This definition of professional development includes support for teachers as they encounter the challenges that come with putting into practice their evolving understandings about the use of technology to support inquiry-based learning Current technologies offer resources to meet these challenges and provide teachers with a cluster of supports that help them continue to grow in their professional skills, understanding, and interests.'

Becoming an effective teacher is a continuous process that stretches from pre-service experiences to the end of the professional career. It is conceptually divided into pre-service and in-service teacher training. It is not simply a time-bound activity or series of events, but a continuous process. From this perspective, the conventionally divided in-service and pre-service activities should be viewed as seamless components of the same process. In-service teacher training has grown in importance and status and has developed as a global trend for three decades. It has been viewed by many countries as the key element in strategies to raise the quality of educational provision (Hayes, 1997, p.1). Professional development programs or in-service training programs enable teachers to become highly qualified by improving, increasing and advancing their knowledge through a better understanding of effective instructional strategies. The expression 'in-service training' refers to training of teachers who are already in service. Hence, in-service training is "any activity which a teacher undertakes after he/she has begun to teach, which is concerned with his/her professional work. "For administrative convenience, in-service training is defined as: "a program of systematized activities promoted or directed by the school system, or approved by the school system, that contributes to the professional or occupational growth and competence of staff members during the time of their service to the school system." In General, in-service teacher training can be defined as "structured activities designed exclusively or primarily to improve professional performance. Also, the Dictionary of Pedagogy **Prucha, Walterova and Mares** (1995), relates the notion of in-service training mainly to potential forms and targets, defining it as Education of teachers in course of their professional career materialized in a wide range of organizational forms (guidance of new teachers in practice, training, learning material preparation of educational innovations and reforms, preparation for specialized projects, functional study, re-qualification study, specialist courses...etc).

Teacher Development is an important process for improving the qualifications of teachers, and providing them with the necessary skills for using their full potential (Seferoğlu, 2004). The benefits of training from the teachers' perspective includes increased job satisfaction, improved performance for teachers, the development general and specific goals for teachers, the improvement of the educational resources that are being utilized, the improvement of existing educational tools, and the improvement of teaching conditions (Silvester, 1997; Haris, 1989).

Teachers must undergo continuous development by taking into account the fact that rapid developments in technology are changing the goals and methods of education, as well as the roles assumed by the teachers. Such continuous training is necessary to ensure that teachers are able to keep up with these new developments. In-service training activities play an important role in providing the means for life long development to teachers. In-service trainings are organized in order to satisfy

the in-service training requirements of teachers, students, society and institutions (Watts, 1992).

The history of understanding and practice of in-service training dates back to the Egyptians. Egyptians trained the captives brought from other countries for work. This training was made directly on-the-work. There were “Summer School” and “Harvest Holiday Camps” for teacher in England and Wales Coast before the 1840s. Aiming compliance training in staff training, on-the-job training, task-based training, teaching the crafts requiring dexterity, apprenticeship training has come forward in the 20th century (Katman&Tutkun, 2015).

“People in this country have been slow to recognize that education is a profession for which intensive preparation is necessary as it is in any other profession”. This concern expressed in the University Education Commission (1948-49) Report is alive in its relevance even today. The Education Commission (1964-66) professed, “the destiny of India is now being shaped in her classrooms”. So did the National Policy on Education 1986 emphasize: “The status of the teacher reflects the socio-cultural ethos of the society; it is said that no people can rise above the level of its teachers”. Such exhortations are indeed an expression of the important role played by the teachers as transmitters, inspirers and promoters of man’s eternal quest for knowledge.

Recent developments like the National Curriculum Framework (NCF) 2005, the Right of Children to Free and Compulsory Education (RTE) Act, 2009, the National Curriculum Framework for Teacher Education (NCFTE) 2009, and other contemporaneous developments in the field of Teacher Education have renewed the vigor and resolve to rejuvenate teacher education in the country. During the XI Five Year Plan secondary education has been accorded relatively high priority in the development agenda of the country keeping in view the demographic profile and the need of a knowledge society and economy. In order to give concrete goal-oriented shape to the efforts, Government of India launched a comprehensive centrally sponsored scheme called ‘Rashtriya Madhyamik Shiksha Abhiyan (RMSA)’, in March 2009 with the objective to make good quality secondary education available, accessible and affordable to all young persons, irrespective of gender, socioeconomic condition, disability, geographical and other barriers.

Both NPE (1986) and NCFTE (2009) maintained that pre-service and in-service teacher education are inseparable for the development of teachers. The system has responded by creating structures and institutions for this purpose and providing financial support for these activities. In-service teacher education received support through central government funding for the establishment of Institutes of Advanced Studies in Education (IASEs) in chosen institutions and University Departments of Education and District Institutes of Education and Training (DIETs) in each district.

These institutions, together with SCERTs in states, provided space for conducting in-service courses for teachers.

There has also been a growth in other kinds of professional activities for teachers. All teachers are members of associations which have from time to time taken up academic activities and organized conventions and meetings to discuss professionally important developments.

Teachers' involvement in textbook preparation and indeed even in the preparation of training modules has grown over the years. Teachers themselves have opportunities to work in the Block and Cluster Resource Centers as well as to contribute to training as resource persons. They are also members of committees formulating educational policies.

NGO initiatives in several parts of the country have developed and implemented models of teacher professional development and support in ways that directly impact the classroom practices. There is thus a plethora of opportunities and avenues for the continued professional development of teachers.

The broad aims of continuing professional development programs for teachers are:

In-service Programs and Continued Professional Development at the Secondary Stage

1. In-service programs should be redesigned to provide classroom support to teachers and to orient interactive sessions based on teachers' needs and concerns.
2. A focus should be established within in-service programs on the methods of enquiry specific to the sciences and social sciences, along with an emphasis on disciplinary content.
3. The content and method of in-service training should be based on an assessment of teachers' needs initiated jointly by SCERT-IASEs.
4. IASEs chiefly responsible for the in-service training of secondary teachers should be strengthened with capacity to undertake professional development of secondary teachers and elementary and secondary teacher educators as well.

1.5.1 In-Service Teacher Education in India (Include NCF) Training & Advancement

The in-service education of secondary school teachers at the beginning of this century consisted mainly of Refresher courses Lectures, Orientation courses and Conferences. These were generally arranged during the vacation period at a centrally located place or the teacher training institution. Most of these activities were spasmodic responses to the recommendations of the various Commissions that

were appointed from time to time to study the problems of the existing educational system.

Resolution on educational policy (1904) : An early reference to the needs of in-service education and the role of the training colleges was made in **Lord Curzon's** Resolution on Education Policy.

Resolution on Education Policy (1913) : The Resolution on Education Policy of 1913 laid down the major principles for the expansion and improvement of primary education and also recommended in-service education for village teachers. This trend at that time was towards an increase in the quality rather than the quantity of the teachers at the primary level.

The Hartog Committee Report (1929) : The Hartog committee of 1929, made further recommendations about the training as well as in-service education of primary teachers. The committee observed: Even under ideal conditions, when the right type of teacher has been selected and well trained, the primary school teacher, particularly the village teacher, is much isolated and most often in need of guidance and encouragement. The report was warmly received in official circles, as it attempted to show that a policy of expansion of education in India had proved ineffective and wasteful and that a policy of consolidation alone was suited to Indian conditions. The non-official view did not accept the opinion of the Committee that quality must have priority over quantity. As a result, the report of the Committee helped little towards the progress of primary education for the next twenty years or so, and some of the valuable suggestions of the committee such as improved salaries for teachers, improvement of curricula, progress in in-service education, and tutorial work in colleges were neglected. It is during this period that teacher training institutions developed rapidly.

University Education Commission Report (1949) : The Government of India appointed a University Education Commission in 1948, under the chairmanship of Dr. S Radhakrishnan, to report primarily on university education in India. Stressing the need for in-service education, it recommended that the scheme of refresher courses may become a real success, the authorities of schools and intermediate colleges and the government education departments should make certified attendance at a university refresher course, once in every four or five years, or qualification for promotion. Some such stimulus would be necessary until attendance at such refresher courses becomes a tradition.

Secondary Education Commission Report (1952-53) : The commission emphasised that the most important factor in the contemplated educational reconstruction is the teacher's personal qualities, educational qualifications, professional training and the place that occupies in the school as well as in the community. Regarding the in-service education, the committee was of the opinion

that; However excellent the program of teacher it can only engender the knowledge, skills and attitudes which will enable the teacher task with a reasonable degree of confidence and with the minimum amount of experience. The teacher-training institution should accept its responsibility for assisting in this in-service stage of teacher-training.

International Secondary Education Project Team report (1954): An International Secondary Education Project Team was appointed in 1954 by the Government of India to study the various steps and procedures needed for implementing the major recommendations of the Secondary Education Commission. The International Team suggested special in-service training courses immediately, “for teachers of technical, vocational and other special subjects, who are already in service but for those who have not been trained, we recommend short intensive courses in the theory and practice of Education”. The Team emphasized the need for the in-service programs to be arranged in collaboration with department of education, school teacher organizations, and teacher training institutions.

Thus, it is evident that from the beginning of the twentieth century, educators have felt the importance of in-service education for improving the quality of classroom instruction as well as the professional growth of the teachers.

The Education Commission (1964-66) : The commission strongly recommended that: (i) large-scale programs of in-service education of teachers should be organized by universities and teacher organizations at all levels to enable every teacher to receive at least two or three months of in-service education in every five years of service, (ii) continuing in-service education should be based on research inputs, and (iii) training institution should work on 12 month basis and organize in-service training Programmes, such as refresher courses, seminars, workshops and summer institutes.

The Report of the National Commission on Teachers (1983-85) : It highlighted the absence of clear-cut policies and priorities for in-service education and lack of systematic identification of needs. It recommended planning ahead of time and closer scrutiny of methodologies’ adopted for In-service education of teachers. The report also recommended that strategies used for in-service education must be imaginative, bold and varied.

National policy on Education (1986) : Teacher education is a continuous process, and its pre-service and in-service components are inseparable. As the first step, the system of teacher education will be overhauled. The new programs of teacher education will emphasize continuing education and the need for teachers to meet the thrusts envisaged in this Policy.

Ramamurthy Review Committee (1990) : The committee has stated that teachers

will have multiple roles to perform. Initial and in-service training will be made mandatory for faculty members and adequate training resources will be provided. Staff development programs will be integrated at the state, and coordinated at regional and national levels.

As a sequel to the National Policy on Education (1986), orientation of school teachers gained momentum on a mass scale. Efforts have been initiated over the past few years to gradually develop network of institutions like DIETs, IASEs, and CTEs with the mandate of providing in-service education to primary and secondary school teachers respectively. However, in the case of IASEs and CTEs, only a handful of institutions have started in-service education program for secondary school teachers.

National Knowledge Commission (2008) : stresses the need to strengthen the teaching community qualitatively. The major indicator of quality of training is its relevance to the needs of teachers. The potential for radical shifts in the school practice and programs via effective in-service education programs has been acknowledged by most education committees and commissions.

In addition to the recommendations and programs of the various All-India Committees that stressed the need for in-service education, several organizations such as educational institutions, teacher organizations, educational department of the state, and private organizations have arranged, from time to time, in-service education program of one type or another. These activities have been varied in nature in the different states of India.

But most of the initiatives of 1990s have focused on 'in-service' training of teachers at the elementary stage. The impact of these trainings still remains to be understood in spite of a massive infrastructure and investment that went into creating them.

National Council of Teacher Training Report 2009 : Systemic Concerns of Teacher Education The proliferation of sub-standard private teacher education institutions and the current state of teacher education programs are both serious impediments to fulfilling the objectives of the NCF and the Right to Free and Compulsory Education. The programs have come under severe criticism for not addressing the needs of contemporary Indian schools and not preparing teachers who can impart quality education in schools. Their design/practice is based on certain assumptions which impede the progress of ideas and professional and personal growth of the teacher. They train teachers to adjust to a system in which education is seen as transmission of information. They take the school curriculum and textbooks as 'given' and train teachers to adjust to the needs of the existing school system through fastidious planning of lessons in standardized formats and fulfilling the ritual of delivering the required number of lessons (NCERT, 2005). The NCF has described the current concerns of teacher education as follows:

1. Experiences in the practice of teacher education indicate that knowledge is treated as 'given', embedded in the curriculum and accepted without question; there is no engagement with the curriculum. Curriculum, syllabi and textbooks are never critically examined by the student teacher or the regular teacher.
2. Language proficiency of the teacher needs to be enhanced, but existing programs do not recognize the centrality of language in the curriculum.
3. Teacher education programs provide little scope for student teachers to reflect on their experiences.
4. Disciplinary knowledge is viewed as independent of professional training in pedagogy.
5. Repeated 'practice' in the teaching of a specified number of isolated lessons is considered a sufficient condition for professional development.
6. It is assumed that links between learning theories and models and teaching methods are automatically formed in the understanding developed by student teachers. There is no opportunity for teachers to examine their own biases and beliefs and reflect on their own experiences as part of classroom discourse and enquiry.
7. Theory courses have no clear link with practical work and ground realities. The evaluation system followed in teacher education programs is too information-oriented, excessively quantitative and lacks comprehensiveness.
8. Apart from conceptual and pedagogical aspects, existing programs need to develop certain attitudes, dispositions, habits and interests in a teacher. The present evaluation protocol has no place for evaluating these aspects.

The above observations provide distinct pointers for addressing issues on the different aspects of teacher education curriculum reform.

1.5.2 Professionalization of Teacher Education

The NCTE, 2009 report further states Teaching is a profession and teacher education is a process of professional preparation of teachers. Preparing one for a profession is an arduous task and it involves action from multiple fronts and perspectives. A profession is characterized by a sufficiently long period of academic training, an organized body of knowledge on which the undertaking is based, an appropriate duration of formal and rigorous professional training in tandem with practical experience in the field and a code of professional ethics that binds its members into a fraternity. These dimensions acquire critical importance in view

of several factors. There is, first of all, the traditional idealism, the esteem and importance attached to the role of the school teachers and very high societal expectations from them. Teachers are concerned, in an important way, with the total development of human beings—physical, intellectual, emotional, social, moral and spiritual. While the dimensions of teaching other than the informational and cognitive may have suffered neglect in modern times due to a variety of factors, one cannot deny that they constitute an integral part of the teachers’ role and functions. The implication of this is to give due emphasis to developing reflective teachers with positive attitudes, values and perspective, along with skills for the craft of teaching. Preparing Teacher Educators Teacher education, it may be seen, is a reflective undertaking that also issues forth in pedagogical prescriptions for carrying out teaching at the ground level. Being a meta-activity, it deals in showing how things are done at school and classroom levels, explaining the ‘reason why’ of things and the basic theory and principles behind classroom practices. These call for capacities and understanding of a different kind, in addition to the skills required for actual school teaching. The NCF 2005 position paper on teacher education elaborated this point and referred to the need to focus on pedagogies appropriate for adult learners for the preparation of teachers. (The weakest aspect, perhaps, of teacher education is the absence of professional preparation of teacher educators, the details of which are discussed in Chapter 5).

1.10 Research and Innovation

There is a need to increase research documents on educational practices reflectively and analytically—whether it is of programs or of individual 16 classrooms—so that these can be included in the body of knowledge available for study to student teachers. University departments and research institutions need to undertake such research. In addition, there is a need to innovate with different models of teacher education. Institutional capacity and capability to innovate and create are prerequisites for the pursuit of excellence. These are facilitated when the inputs to the institution are of high quality. In teacher education, the reality on the ground rarely reflects this. Curriculum innovation at the institutional level gets restricted to its transaction within the institution. At the state level, there is a trend of applying standard solutions and common strategies to many a problem of teacher education. The central admission procedure, common curriculum, centralized examination and evaluation system have stifled institutional initiatives in admission, curriculum design and evaluation and very little space is left for institutional self-expression. There is a need to facilitate a space for such innovations to take place so that the policy can draw from them. In spite of these constraining conditions, there are and have been a number of initiatives that could be drawn from. A case in point is the four-year integrated Bachelor of Elementary Education (B.El.Ed.) program for the preparation of elementary school teachers offered by select affiliated colleges of the University of Delhi. NCERT’s experiments with the four-year integrated program leading to the degree of B. Sc. Ed., two-year B. Ed. program and integrated

M.Sc. Ed. are other examples. Similar innovations are also being tried out in other institutions across the country. Several initiatives for providing academic support to in-service teachers include the setting up of resource centres. Programmes and activities of such centres include organization of workshops, provision of research fellowships and study sessions.

1.5.3 Mentor Teacher Program

Teacher mentoring programs are perceived as an effective staff development approach for beginning teachers. Teacher mentoring programs, serves two important purposes: novice teachers are given a strong start at the beginning of their careers, and experienced classroom teachers serving as mentors receive recognition and incentives (Little and Nelson, 1990). Researchers believe that mentoring can be a valuable process in educational reform for beginning teachers as well as veteran teachers (Ganser, 1996). Supporting beginning teachers at the outset contributes to retention of new teachers in the school system. Formalizing the mentor role for experienced teachers creates another niche in the career ladder for teachers and contributes to the professionalism of education.

According to Stan Koki an educational specialist, Pacific Resources for Education and Learning (PREL), the significance of mentoring for beginning teachers is gaining wider recognition throughout the Pacific region. Planning the development of a mentoring program was initiated in Kosrae, Federated States of Micronesia. In 1993, the Office of Personnel Services in the Hawai'i State Department of Education disseminated "Guidelines for Mentor Teacher Programs." The intent of these guidelines, developed in collaboration with the Hawai'i State Teachers Association, was "to develop additional mentor teacher projects at schools and to support existing mentor projects" (November 1, 1993). As attention continues to be focused on teachers as a key factor in educational reform, and on their need for ongoing improvement and support, mentoring becomes a viable option in educational policy. Without this focus on professional improvement for teachers, some researchers believe that educational reform efforts will eventually fail (Dilworth and Imig, 1995).

Mentoring Process is not always clearly understood in education. Researchers are becoming increasingly cognizant of its complexity. Head, Reitman and Thies-Sprinthall (1992) write that the "heart and soul" of mentoring grows out of belief "in the value and worth of people and an attitude toward education that focuses upon passing the torch to the next generation of teachers." The mentoring process extends far beyond supporting the induction of new teachers into the school system through professional guidance and encouragement. Shadio (1996) believes that the heart of mentorship comes from "a commitment to education, a hope for its future, and a respect for those who enter into its community." According to

Head, Reiman and Thies-Sprinthall (1992), major aspects that contribute to the complexity of mentoring include the multiple needs of beginning teachers as well as their mentors, their developmental issues or concerns, their repertoire of teaching skills, the school culture that may impact positively or negatively on the mentoring process, and numerous other variables. Research indicates that mentoring is a more demanding process than classroom teaching, and that even experienced teachers cannot always objectively assess the quality of teaching performance of beginning teachers (Bey and Holmes, 1992).

Definition of Mentoring Numerous interpretations of the mentoring process are contained in the literature on mentoring. It is commonly agreed that the process includes the various developmental phases of the mentoring relationship, the dynamics of the mentoring relationship itself, and the application of cognitive developmental theory to the mentoring process (Bey and Holmes, 1992). In education, mentoring is a complex and multi-dimensional process of guiding, teaching, influencing and supporting a beginning or new teacher. It is generally accepted that a mentor teacher leads, guides and advises another teacher more junior in experience in a work situation characterized by mutual trust and belief. Typically, mentoring programs pair novice teachers with more experienced teachers who can ably explain school policies, regulations and procedures; share methods, materials and other resources; help solve problems in teaching and learning; provide personal and professional support; and guide the growth of the new teacher through reflection, collaboration, and shared inquiry (Feiman-Nemser and Parker, 1992).

Qualities of Mentor Teachers an experienced teacher who facilitates the development and education of a new teacher, the mentor is regarded as a career professional. According to Hawaii's guidelines for Mentor Teacher Programs, the mentor must possess ideals and expertise of the teaching profession, which are shared with the new teacher (Office of Personnel Services, 1993). The functions of the mentor teacher vary depending on the needs of the new employee, the goals of the mentoring program, and the local and broader educational context or situation. It should be kept in mind that the mentor teacher is a helper, not a supervisor or evaluator, and "a very special person, a model of professionalism" (Office of Personnel Services, 1993). Hawai'i's experience with mentoring has identified the following essential qualities of mentor teachers: 1. A range of interpersonal skills to fit a variety of professional encounters and situations. 2. Good working knowledge of a repertoire of teaching methods, alternative modalities of learning, and styles of teaching and learning that affect student achievement. 3. Ability to use coaching processes that foster increased self-direction and self-responsibility of the beginning teacher. 4. Effective communication skills that facilitate the growth of the new employee and accommodate the employee's emotional, social and cognitive needs. 5. Understanding the stages of teacher development within the context of how adults learning.

1.5.4 Shift in Pedagogical Approaches

During the last half of the Twentieth century, the pedagogical thinking and practices in schools across the world began to be largely influenced by the works of Piaget, Vygotsky, Bruner and such other thinkers who advocated the primacy of active construction of knowledge by the learner. The learner is considered as an active participant rather than a passive recipient in the learning process. The learner is expected to be participating in activities in a social context continuously questioning and reflecting the experiences coming to him/her through collaboration with the peer groups, teachers and other individuals in the family and community. Classroom is no more the only place and the teacher is not the only resource person in the quest of learning experiences.

Table : The major shifts in the pedagogy and classroom processes

From	To
• Teacher centric, stable designs	• Learner centric, flexible process
• Teacher direction and decisions	• Learner autonomy
• Passive reception in learning	• Active participation in learning
• Learning within the four walls of the classroom	• Learning in the wider social context
• Knowledge is given and fixed	• Knowledge as it evolves and is created
• Disciplinary focus	• Multidisciplinary, educational focus
• Linear exposure	• Multiple and divergent exposure
• Appraisal, short, few	• Multifarious, continuous

1.6 Title of the Study

A study on the teacher Development Coordinator Program by DIET Dilshad Garden under the title-

"Teacher Development coordinator (TDC) Program : An Evaluation study"

1.7 Research Objectives

The following objectives were achieved in this study:

- To know the impact of the TDC program on the skill development areas of the different stake holders based on the activities incorporated in the three learning cycles.
- To study the impact of the teacher development program on classroom teaching learning process.

- To analyze the differential impact, if any, of this program based on the gender and professional experience of the teachers.
- To understand the perspective of the different stakeholders regarding the TDC program.

1.8 Research Questions

The following research questions were addressed in this study:

1. Which skill areas were addressed by the three themes of the learning cycle?
2. Is there any significant difference in the level of participation, the quality of academic discussions and the attainment of skills, as provided by the program, among teachers based on the gender?
3. Which components of learning cycles were incorporated by the teachers in their teaching learning process? Did the program help to improve classroom teaching learning process in terms of connecting with the children, lesson plan and assessment?
4. How do different stakeholders perceive the TDC program?

1.9 Research Design & Methodology

Research design is a plan of action that guides the investigator about the methods of data collection, which includes a series of listed actions, a guideline to tell the researcher the course of action to be adopted in a particular problem. The proposed study would be covering exploratory aspect of the topic.

In the present study, data regarding the perception of various stakeholders regarding Teacher Development Coordinators Program was gathered from schools of different zones. Hence, Survey method under the descriptive method of research was used in the present study.

1.10 Operational Definitions

(A) Teachers—For the purpose of the study teachers will be grouped into different categories :

(i) TDC—Teacher development coordinator— In this study TDC word has been used for Teacher Development Coordinator. For each school, one teacher has been selected by the system for the role of TDC. Selection process was based on given parameters decided by the system. TDCs are imparted in service training by the MTs and DIET facilitators. TDCs directly have interaction with

the MT, HOS, ART Teachers and non-ART teachers, along with DIET officials. They support the HOS, lead focused, structured teacher collaboration and provide feedback to improve classroom teaching practice.

(ii) MT–Mentor teacher–In our study mentor teacher term has been used for those group of teachers who are also an integral part of the TDC Program. Mentor Teachers are the teachers who have been selected by the system according to the parameters set by the system for a period of two years. MTs are directly involved in the implementation of the program in each of the 5 schools allotted to him/her. They receive training by the DIET before the beginning of each learning cycle and then they conduct training with support of the DIET facilitators to the Teacher Development Coordinators. Each MT coordinates directly and intensively with the 5 TDCs (one for each of the 5 schools allotted to the TDCS). They also ensure timely implementation of the intervention processes in each of the 5 schools, coordinate with the DIET facilitators, zonal DDE and district level DDE on decide time intervals.

(iii) ART members–In this study academic resource team are called as ART. 10% teachers (approx. 10–15 teachers) from each school have been selected as Academic Resource Team based on the selection process decided by the system and they are responsible for implementing the intervention processes for each learning cycle in their classes and also influence other teachers to adopt the processes. ART members receive inputs directly from the TDC during monthly meetings. MTs are also expected to be present in at least three ART meetings and give their feedback to the TDC. Moreover, MTs in the presence of TDC observe classes of the ART members and give feedback through the TDC. All the teachers can observe each other's class and discuss their observation.

(B) LIC Cycle–Learning Improvement Cycle–

Skill Areas–Here skills indicate professional skills acquired by the different stakeholders with respect to the skills on which they have received in service training during each learning improvement cycle. These skills are–

- 1. Communication skills**–The skill to communicate with the different stakeholders at different levels by the TDCs, MTs and ART members.
- 2. Leadership skills**–The skills to influence the different stakeholders and ensure timely implementation of the processes encompassing all the components. Ability to coordinate with all the concerned persons and arrange meetings for qualitative academic discourse. Ensures discussion during the meetings or co-learning sessions is oriented towards the learning of the children.

3. **Pedagogical skills**– This indicates to those skills which have been incorporated in each learning cycle to enhance classroom teaching learning processes. These will include assessment skills of the teachers to understand the learning needs of the children and identify the classroom teaching gaps, and lesson plan to address the learning need of the children.

1.11 Research Methodology

The present study incorporated both qualitative and quantitative data collection tools. Looking at the nature of the study qualitative methods as in-depth interviews and observation have been used to capture the insights of various stakeholders. To further support the qualitative outcomes of the study quantitative methods has been used. Interview schedules, questionnaire and classroom observation tools have been used for quantitative and qualitative analysis.

1.12 Population of the Study

The study area chosen for the present study is Delhi. A brief description of the location selected for study purpose.

- (a) Delhi has seen a consistent increase in share of spending on education in total Budget expenditure from 2000-01 to 2015-16. The budget allocated to education for 2017-18 is also one of the highest in the country at present i.e. 23.5%.
- (b) Delhi government has also taken a significant numbers of initiatives in education sector as infrastructure development–building more classrooms, toilets among others, teacher in-service training, reading campaigns for students to improve learning outcomes etc.

Delhi, officially the **National Capital Territory of Delhi** or NCT, is a city and a union territory of India. It is bordered by Haryana on three sides and by Uttar Pradesh to the east. The NCT covers an area of 1,484 square kilometers (573 sq. mi). According to 2011 census, Delhi's city proper population was over 11 million, the second highest in India after Mumbai, while the whole NCT's population was about 16.8 million. As of July 2007, the National Capital Territory of Delhi comprises nine districts, 27 tehsils, 59 census towns, 300 villages, and three statutory towns, the Municipal Corporation of Delhi (MCD), the New Delhi Municipal Council (NDMC) and the Delhi Cantonment Board (DCB).

The Delhi Directorate of Education (DDE), further categorizes Delhi into 13 Administrative Districts. These are as following:

1. East 2. North East 3. North 4. North West A 5. North West B 6. West A 7. West B 8. South West A 9. South West B 10. South 11. New Delhi 12. Central 13. South East

District chosen for study

The district of Delhi have been chosen for the present study namely North-East. District North East is highest density of population, slum population in terms of demographic nature.

1.13 Sample of the Study

For sampling purpose, stratified sampling method has been used. Since North East District is divided into three zones– 4, 5 & 6, equal number of schools have been selection from each zone. Further equal number of boys and girl's schools were selected in each zone. For the selection of schools in each school, alternate random sampling method has been adopted. TDCs and HOS were also selected from the selected sample schools. There are 21 Mentor teachers in north east district and all of them had been considered for the study purpose but on the day of the data collection, 15 Mentor teachers could participate and other 5 Mentor teachers could not include due to miscellaneous reasons. Mentor teachers were called in the DIET and questionnaire was administered to them on the selected day of data collection.

ART members were selected based on the following three subjects taught by them–Math, English and Hindi.

Classes considered for observation purpose were preferably–class 7 to class 9. Classrooms of those ART members were selected for observation purpose who participated in the study.

Sample Size–

No of schools selected for the study purpose–18 schools. Although 20 schools were selected for the study purpose, data collection could be done from 18 schools.

Number of boy's school–10

Number of girl's school - 8

Total number of Mentor Teachers in the district at the time of study–21

Number of Mentor Teachers who participated in the study–15

Number of TDCs who participated–18

Number of ART members selected from each school–3

Total number of ART members included in the study–54

Number of classrooms observed per school–3

Total number of classrooms observed–54

Table 1.13.1**Number of samples of various stakeholders selected from the district**

S. No	Stakeholders	Total Population selected for the study	Actual number of respondents who participated in the study
1	Mentor teachers	21	15
2	HOS	20	14
3	ART members	60	54
4	Teacher Development Coordinators (TDC)	20	18

1.14 Data collection

For the study purpose data collection tools were developed, validated and piloted before using them for the study. A team of researchers were formed who went to the sample schools, administered the questionnaire and interview schedule to the respondents and observed classrooms with the consent of DOE, HoS and teachers.

1.15 Tools for Data collection

(A) Interview Schedule: An interview schedule is a list containing a set of structured or semi structured questions that have been prepared, to serve as a guide for interviewers, researchers and investigators in collecting information or data about a specific topic or issue. This is a set of prepared questions designed to be asked exactly as worded. **Interview schedules** have a standardized format which means the same questions are asked to each interviewee in the same order. **For this study purpose, semi structured interview schedule was used to know the understanding and perspective of the Head of the Schools about the Teacher Development Coordinator Program.** Interview schedule was used to collect primary data directly from the respondents. This was used to get qualitative input from Head of the School who play pivotal role in the implementation of the TDC Program. This interview schedule consisted of both open-ended and close-ended questions in order of general to specific questions to achieve the objectives of the study. Various standardized tools were referred while preparing the tool. The tool was validated by Delhi university professors and piloting was done before using it for the study. It took approx. 1hr for the interview to get responses from the respondents using this tool. Interviewees were oriented by the researcher before using the tool for the study purpose.

(B) Questionnaire: A **questionnaire** is a research instrument consisting

of a series of questions (or other types of prompts) for the purpose of gathering information from respondents. Questionnaires can be classified as both, quantitative and qualitative method depending on the nature of questions. Specifically, answers obtained through closed-ended questions with multiple choice answer options are analyzed using quantitative methods and they may involve pie-charts, bar-charts and percentages. Answers obtained to open-ended questionnaire questions are analyzed using qualitative methods and they involve discussions and critical analyses without use of numbers and calculations. For this study, Questionnaire was used to collect data from ART members, Mentor teachers (MT) and Teacher Development Coordinators (TDCs). Paper and pencil mode of administering the questionnaire was used. Questionnaire was preferred because it gave adequate time to the respondents to read the questions and answer them accordingly. Since the number of respondents were more it was found to be less time consuming and more convenient. This comprised of both open ended and close ended questions in order of general to specific questions. Multiple choice questions, dichotomous questions, and ordinal scale questions were also incorporated in the questionnaire to achieve the objective of the study. Various standardized tools were referred while preparing the tool. The tool was validated by Delhi university professors and piloting was done before using it for the study.

(C) Classroom Observation Tool—This was used during classroom observation. This majorly comprised of close ended questions along with questions based on gathering general information. This comprised of scaling questions for gathering qualitative data of the classrooms observed. Various standardized tools were referred while preparing the tool. The tool was validated by Delhi university professors and piloting was done before using it for the study.

1.15 Statistics used in the study

- a. **Median** - In this study, median value of the responses has been calculated. The **median** is a simple measure of central tendency. To find the **median**, observations have been arranged in order from smallest to largest value. If there was an odd number of observations, the **median** is the middle value. If there was an even number of observations, the **median** is the average of the two middle values.
- b. **Inter Quartile Range (IQR)** - Along with median, interquartile range was also calculated in order to appropriately understand the data set's tendency to cluster around the mean. The higher the IQR, the more spread out the data points; in contrast, the smaller the IQR, the more bunched up the data points are around the mean.
- c. **The interquartile range** is a measure of where the “middle fifty” is in a data set. Where a range is a measure of where the beginning and end

are in a set, **an interquartile range is a measure of where the bulk of the values lie.** It's preferred over many other measures of spread (i.e. the average or median) when reporting things like school performance etc.

- d. Formula of Interquartile range** - The interquartile range formula is the first quartile subtracted from the third quartile: $IQR = Q_3 - Q_1$

Measurement Scales used in this study—Measurement can be characterized by four level which are comprised of classification, order, distance and zero by origin. The combination of the measurement levels, nominal, ordinal, interval and ratio produces four measurement scales. The nominal scale is the simplest level where classification only could be applied but no order, distance or zero level could be applied. For this study purpose following measurement scales have been used and questions have been framed accordingly.

- (a). **Nominal Scale of Measurement**— Nominal scales is the simplest kind of level where numbers and letters assigned to objects serve as labels for identification and classification. According to Cooper and Schindler (2014), nominal data involves the collection of information on a variable that can be grouped into two or more categories that are mutually exclusive and collectively exhaustive. Nominal data are classified as respondents' gender, religion, nationality, marital status and other related factors. In this study nominal data has been used to know the gender of the respondents. Dichotomous nominal scale based questions has been used in this study.
- (b). **Ordinal scale of measurement**—An ordinal scale arranges and classifies objects according to their degree in an ordered relationship. The use of an ordinal scale implies a statement of greater than or less than without stating a fixed distance of how much greater or less. Ordinal scales are measures of non-numeric concepts like satisfaction, agreement, happiness etc. Here for the study purpose ordinal scale based questions had been formulated to understand the perspective of different stakeholders, their agreement and disagreement on the various components of the program and also to understand the extend of usefulness of different program aspects.

1.16 Data Analysis and Interpretation

1.16.1 Responses of the Mentor teachers—Key Findings and inferences

Total number of Mentor teachers engaged in North East District—21

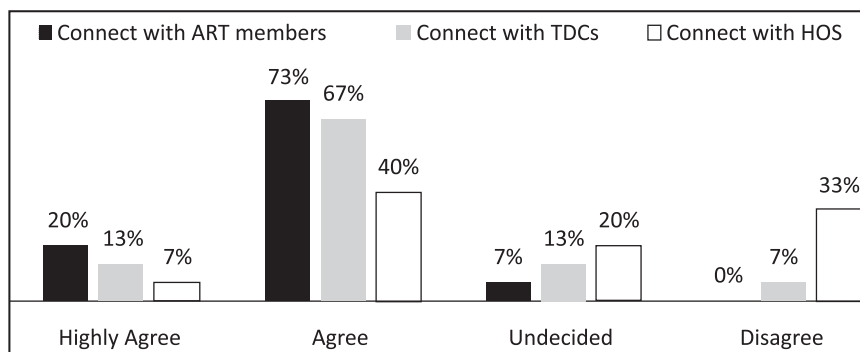
Mentor teachers who participated in the study—15

Number of Female Mentors who participated in the study - 4

Number of male mentors who participated in the study - 11

(A) Mentor teacher's response on Theme Connect

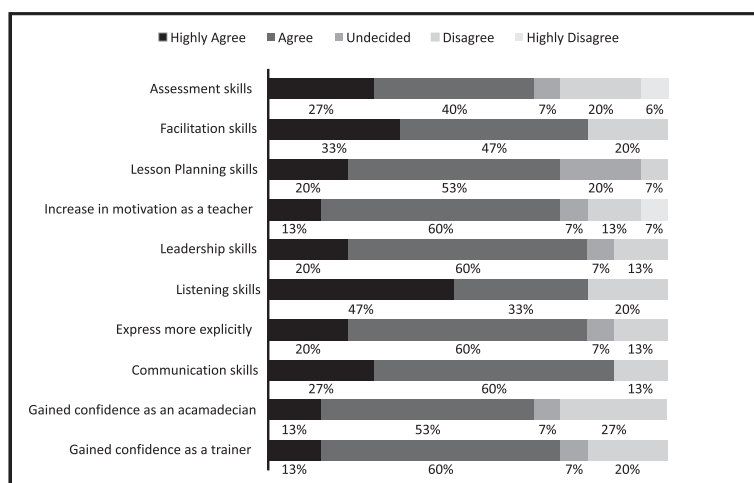
Graph 1.16.1 : Responses of MTs on having connect with different stakeholders in more than 3 mentee schools



This is inferred from the data that majority of the MTs have agreed on the fact that the connect theme has been successful in its form with all three stakeholders I-e TDCs and ART members. (Median = 2). But in case of establishing connect with HOS, the data reveals that majority of the respondents have disagreed (Median=4, IQR=2). So there is no consensus in the responses of the MTs and it is divided into approx. half number of the MTs agreeing and rest of either disagreed or remained undecided. Least has shown disagreement on the same which is depicted from the graph itself, but still has scope to build connect with HOS.

(B) Mentor Teachers' opinion on their different skill development areas

Graph 1.16.2 : Responses of MTs on the improvement in skill development areas and increase in confidence



The finding reveals that majority of the respondents agreed that felt improvement in the skill areas mentioned in the graph (Median–2). Still there is scope to give them more developmental opportunities as the responses have not highly agreed to the improvement in development areas. Most of the MTs have started **adopting Lesson Planning skill**, and also recommending it to the school to practice it without any halt. This has helped MTs **to inhibit motivation among teachers, expressing their thoughts and ideas more explicitly, bringing high the communication skills** and more at the large scale.

Majority of MTs (93%) have felt that HOS support is a priority action to be planned and executed thereafter. This can be acquired largely from smooth intention of DIET, 60% MTs mentioned they need more support from DIET as they have felt the DIET facilitators visiting the school plays significant role in motivating the MTs and also in laying emphasis on the program components) and DDE most aptly.

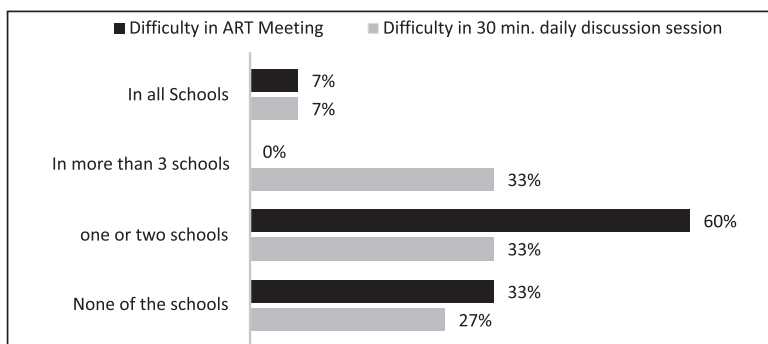
Table 1.16.1 : Skill Development areas where Mentor Teachers (MTs) need more support

Developmental Areas of MTs	Communication skill	Facilitation Skill	Training Skill	Interpersonal skill	Total no. of MTs who participated
No. of MTs responses	8 (53%)	4 (27%)	5(33%)	2(13%)	15

Note : This was a multiple choice question. So one response has been selected by more than one MT. Sample size–15 MTs

There has been various capacity building trainings for MTs to develop skills in different areas. Majority of MTs have endorsed the fact that communication skill has to be seen more vividly, following with skill to produce training in an effective manner that contains impact through impressive facilitation. The graph also depicts that there is huge scope to focus on building interpersonal skills that will help prove MTs to be skill bound and efficient in their practices respectively.

Graph 1.16.3 : Responses of MTs on the number of mentee schools where they face challenge in ensuring regular ART Meetings and 30 minutes daily discussion session



The graph suggests that MTs are visualizing most of their mentee schools undivided to organize ART meetings. There is an average of two from six schools who are under threat of potentially regularizing their ART meetings in an effective manner. There is also need to strengthen 30-minute session around almost all schools, failing which can lead to impact negatively on the smooth academic learning culture in the schools.

Also when given a choice majority of the MTs shared that they would prefer the role of an MT to the role of being a teacher. (Median–3). This also could be correlated with the data where 60% MT shave shared they face challenges in one to two schools in conducting ART meetings and this also coincides with 53% MTs sharing that they need more support in improving their communication skills. So it could be deduced that all these three factors are interwoven. Skill development of the MTs will gradually influence the TDCs and other stakeholders in school. These findings lay emphasis on the need to focus on the development areas of the MTs to ensure effective execution of their roles and responsibilities as a Mentor.

1.16.2 Responses of the TDCs and Key Findings of the study

Table 1.16.2 : Responses of the TDCs and Key Findings of the study

Respondents			
Designation (PGT/TGT)	Female	Male	Total
PGT	5	1	6
TGT	4	11	15
Grand Total	9	12	21

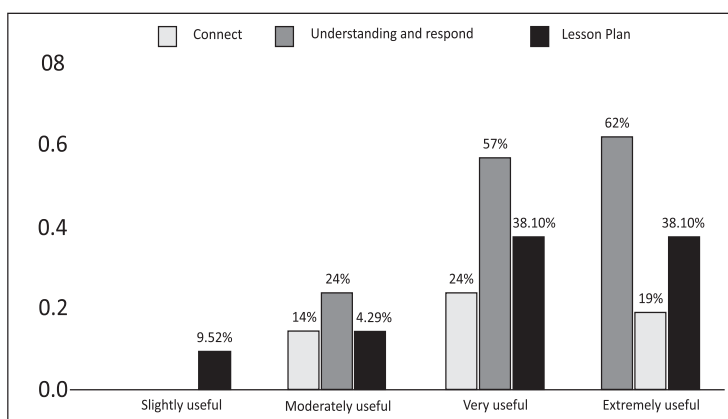
The study indicates that 43% TDCs (9) are females and 57% (12) are males. Since TDCs were supposed to be chosen on the discretion of HoS, female teachers were preferred as TDCs in Girls school and Male teachers were preferred as TDCs in Boys school. The study was conducted in 9 girls school and 12 boys school. Although equal no. of boys and girls schools were sampled but due to some unavoidable circumstances, less number of girls schools could be covered. The combined total of PGTs and TGTs, shows that the PGTs involvement is relatively less in the program. It implies that the various themes of LICs are not being practiced in higher classes.

Table 1.16.3 : TDC Profile

67% of TDCs have more than 10 years of experience
71% of TDCs have been working as TDCs for more than 12 Months

The study shows that teachers with certain years of experience have been appointed as TDCs. The study reflects that the TDC program is providing teachers a platform to explore new dimensions and develop their skills as a teacher. Since the inception of the TDC program in 2017, 71% TDCs continuing with the TDC profile for more than 12 months indicates that the program has been successful in retaining the TDCs and these teachers also got ample time to gain adequate understanding of the program. For the sustainability and positive impact of any program, retention of the existing team plays a very vital role. The design of the program should now focus more on retaining the remaining 29% of the TDCs and adopt strategies to sustain their interest and motivation as a TDC.

Graph 1.16.4 : Responses of TDCs on the Usefulness of different LIC themes



Most of the TDCs reflected that LIC theme ‘Connect’ was extremely useful. On the theme ‘lesson planning’ 38.10% opined that it was extremely useful and 38.10 % feel that it was very useful, none of the TDCs believe that it was slightly useful.

‘Understanding and Respond’ was found very useful by 57%. For some, it was new and for some, it wasn’t anything novel, hence the dwindling percentage.

62 % TDCs are getting the support of MTs
38% TDCs get support from ART members
67% enjoy TDCs role

The study shows that 62% TDCs get support from MTs and more or less 67% TDCs are enjoying their role. It means MT support can be a factor for TDC to function and discharge his/her duties smoothly. 33% of TDCs are not enjoying their role because about 38% do not get support from ART members. That means these TDCs are not being taken seriously in these schools. From the results of the study

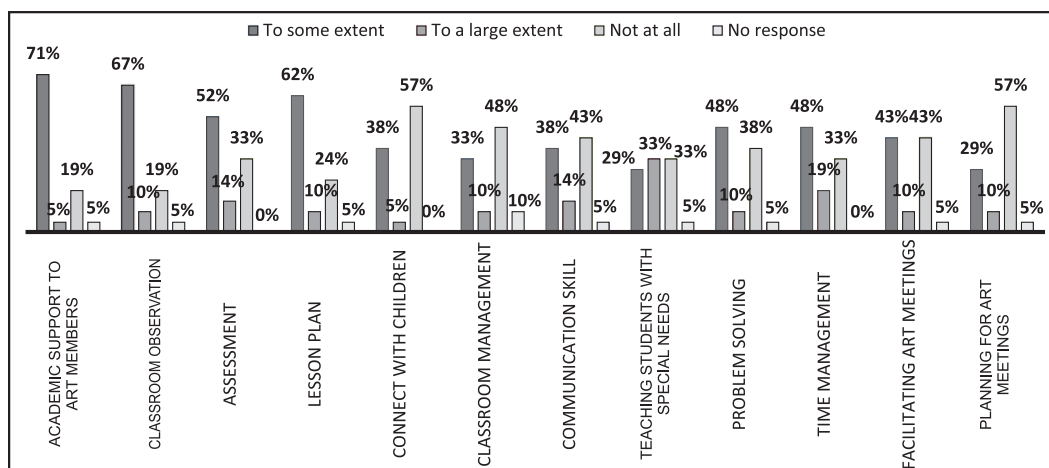
it could be inferred that either the TDC needs to strengthen his connect with the ART members, or there is need to enhance and sustain the motivation of the ART members through well thought processes.

42.9% TDCs face challenge in 30 minutes session

43% TDCs face challenge in ART meeting

- Almost the same percentage of TDCs face a challenge in 30 minutes' session and in ART meeting; the context of these schools should be looked into and time is a genuine constraint for these people then. This percentage is also close to 38% TDCs who don't get support from ART members, so that may be also the cause of this challenge.

Graph 1.16.5 : Developmental Areas where TDCs Need Support



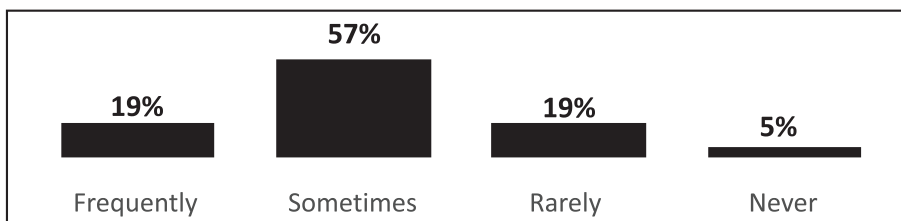
The study shows that the TDCs (71%) need help to academically support ART members. As can be seen from the second bar that 67% of TDCs says that they need help to develop their peers as well.

Regarding learning outcomes of the students, 29% TDCs feel strongly that learning outcomes have considerably improved because of TDC program. 57% agree that it is a small contributing factor to the overall improvement and 5% still undecided.

The study reflects that most of the TDCs agree that it has indirectly affected learning outcomes, by helping the teachers grow professionally.

(C) Response of TDCs on Peer learning i.e. teachers observing each other's classes

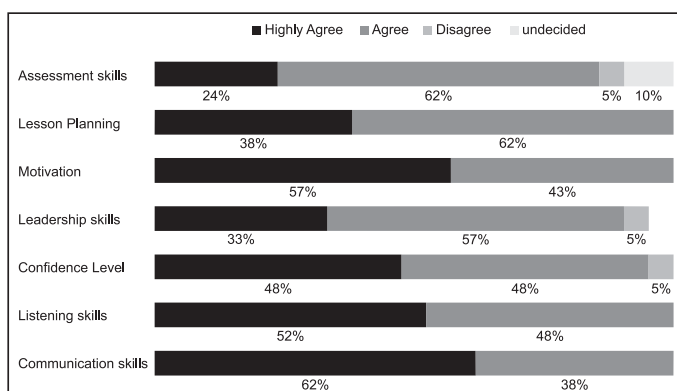
Graph 1.16.6 : Percentage of TDCs responses on frequency of teachers' observing each others class



- The frequency of TDCs observing classes sometimes is 57%. This indicates that 43 % of the time TDC is not observing classes, this percentage is exactly the same percentage who find challenge in 30 mints session (42.5%) and ART meetings (43%). This implies that TDC could not get the opportunity to connect with ART members at a deeper level apart from ART meetings. Thus there is need to ensure peer culture is established in schools which in turn strengthen the connect between teachers of the school thus impacting the school environment as a whole.
- The study reveals that the respondents agree that TDC program has increased their motivation as well as enhanced their confidence as a teacher. (Median - 2, IQR=0)
- 5% TDCs feel that they do need any training or capacity building for confidence, this can also be linked to the fact that TDCs need to learn to influence teachers without being in a position of authority. TDCs needs to be a prominent figure in the eyes of both HoS and ART members and this role shouldn't be transactional to just conduct ART meetings.

(D) Skill Development of the TDCs

Graph 1.16.7 : Responses of TDCs on the improvement in different skill development area, confidence level and motivation



- The study attempted to see whether the TDC program could contribute in the capacity development of the Teachers in the role of TDC. The data reveals that majority of the TDCs agreed that there is improvement in their following skill areas—Lesson planning, assessment skill, Leadership skill, listening skill and communication. The median value 2 also indicates that majority of the participants did not highly agree to the idea of skill development. This also implies that there is need to design sessions focusing on the development of the TDCs. This might also help the TDCs to establish connection with the HOS and ART members and might help to revolve their challenge in conducting 30 min daily discussion session and ART meeting as 43% TDCs face difficulty in 30 min sessions and 47% of them have difficulty in organizing ART meetings. Skill development will also influence the quality of the ART meetings. More effective the ART meetings, more convenient it will be for the TDC to conduct them.

1.16.3 Findings from Classroom Observation

(A) Classroom Overview

Sample Size

The study was conducted in 18 schools. Three classes of 3 different ART members were observed in each school. Thus total number of classes observed during the study were 54. For this study classes of only ART teachers were observed (ART teachers are those who are the members of the academic resource team. They consist of 10% of the total teachers in schools.)

Rationale behind selecting classes of ART members: ART members attend monthly ART meetings facilitated by TDC and attended or co facilitated by Mentor Teacher. So ART members are oriented on the strategies discussed in Learning Improvement Cycle are directly by the TDC which they later on share with other teachers who are not an active member of this academic resource group. So the study aims to see the implementation of the strategies in the classes of the ART members.

(B) Lesson Plan: The study shows that teacher had well-structured written lesson plan in 20% of the classes observed whereas in 26% of the cases where teachers had planned the class but did not have lesson plan written in a well-structured manner. They had either written some bullet points or how the time of class will be broadly divided into different activities.

(C) Recapitulation: In 13% cases teachers began the class with an interesting and engaging opening activity and recapitulated the concepts taught in the previous class during the opening activity. In 65% classes observed, teacher did recapitulation

through verbal questioning or through lecture method.

(D) Students engagement –In 65% cases teacher was able to arouse curiosity in the children about the topic taught and in 67% cases teachers ensured children learnt the concepts by asking them verbal questions or giving them questions to write.

In 56% cases it was found that more than 50% children in the class were engaged and also enthusiastically participated actively in classroom activities.

Similarly, in 59% classes observed, more than 50% children were found to freely interact with the teachers, participating in role plays, presentation or doing experiments in 35% classes children asked questions and in 70% cases children showed eagerness to answer any question asked by the teacher. This data again lays emphasis on the trend that very few children ask questions in class and majority of them follow instructions and answer questions put up by the teacher. Although classes are getting interactive and engaging but efforts are still needed to encourage children to develop higher order skills, think critically, ask questions and then develop conceptual understanding.

In 30% classrooms, more than 50% children were found to be silent, and listening to teachers for most of the time.

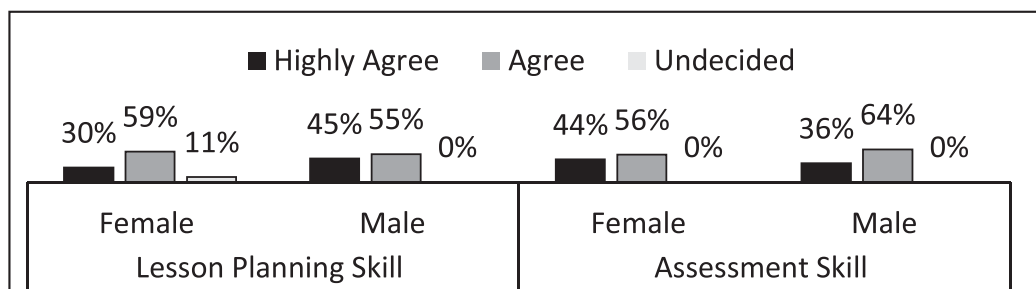
In 56% classes, teachers divided the class in such a way so as to give children the opportunity to engage in different activities e.g. reading the book, understanding the concept, doing small experiments related to the concept taught followed by discussing questions in group or pair and then writing down answers, definitions or drawing diagrams, maps etc. depending upon the specific subject and topic. This data indicates that teachers need more support in planning lessons incorporating multiple activities in the given time and engage children in a more creative way.

This classroom observation data reflects that there is a shift from teacher centric classroom to student centric classes. Participation of children are showing gradual increase. This was also substantiated by the sharing of the teachers whose classes were observed.

Out of 54 ART members whose classes were observed, majority of them shared that the strategies discussed in the meetings gave them the idea to devise ways to connect with the children. One of the ART member shared that think pair and share activity was very useful and could be easily implemented in class. Some other ART members emphasized on establishing connect with the children by introducing different activities in class like role play, quizzes, name tags, birthday trees etc. They got these ideas from LIC theme connect, lesson plan and understand and respond.

1.16.4 Opinion of ART members on the impact of TDC Program on the development of their academic skill

Graph 1.16.8 : Percentage of ART Members responses on improvement in academic skill- Lesson Planning and Assesment



Most respondents indicated agreement with the idea that TDC program helped them to improve their lesson planning and assessment skills. (Median=2, IQR = 1) Earlier they knew lesson plan format but it was too tedious to write plans for each and every class. But the concise lesson plan format suggested in LIC theme Lesson Plan, helped them to write their lesson plan in brief, helped them to manage their time and also take the class in a structured manner still leaving ample room for modifying the class as per situational need. Moreover, they also got an idea to assess the children on daily basis through different activities like exit ticket, quizzes, group discussion, etc.

1.16.4 Responses of ART Members and Key Findings of the Study

(A) General profile ART members

Number of ART members who participated in the study: 54

Percentage of Female ART members–58%

Percentage of Male ART Members–42%

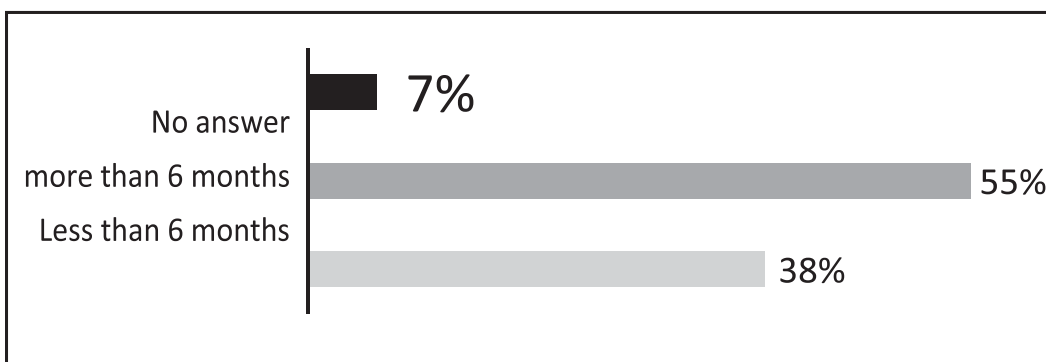
The data in the graph indicates that majority of the ART members are involved in the program for more than 6 months till the time of the study conducted.

Designation–91% of the ART members are TGTs and 8% are PGTs

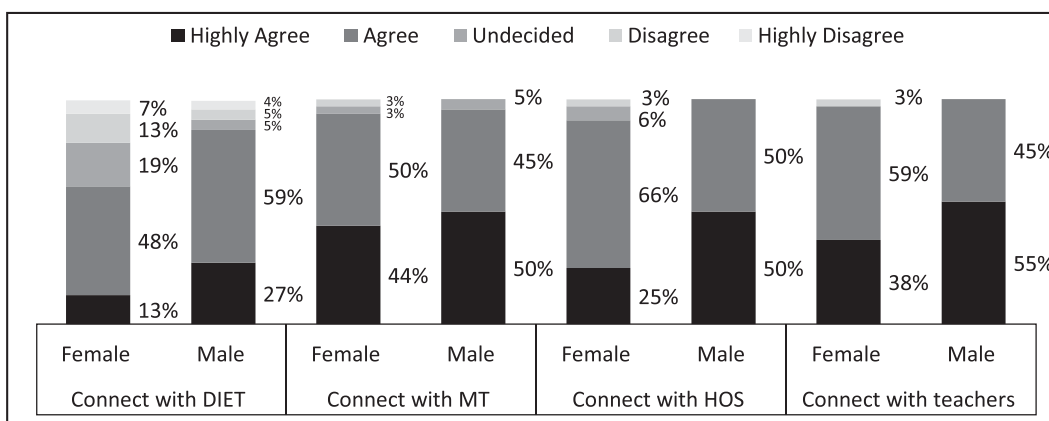
Key findings from the responses of ART members on the TDC program.

1.16.4.1 Building connect with different stakeholders

Graph 1.16.9 : Duration of experience as an ART Member



Graph 1.16.10 : Percentage of ART members' Responses on establishing connection with different stakeholders

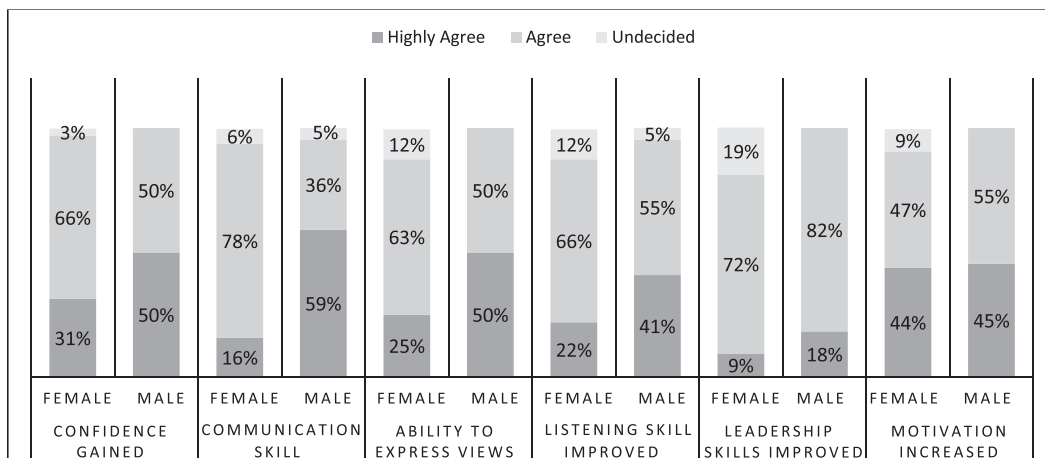


The study shows that 50% Males and 66% Females ART members felt that the program has helped them to connect more with the HOS, and 59% females and 45% male ART members shared that they established better connection with other teachers. (Median-2, IQR-1)

Most of the respondents agreed that the program helped them to establish connect with the DIET officials as well. (Median-2, IQR-1).

1.16.4.2 Skill Development of ART members

Graph 1.16.11 : Percentage of ART Members' Responses on skill Development areas, Confidence Level & Motivation

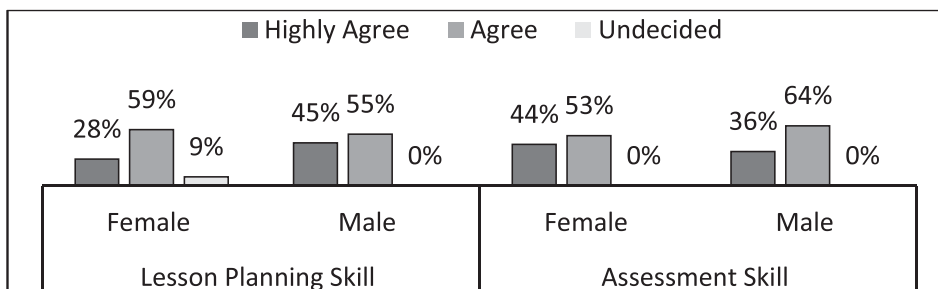


The data indicates that majority of the ART members irrespective of gender have agreed that they have felt significant improvement in communication skill (Median=2, IQR=1) and leadership skill. (Median=2, IQR=0).

72% and 78% female ART members also agreed that there is increase in their leadership skill and communication skill has improved to some extent. (Median=2, IQR=1).

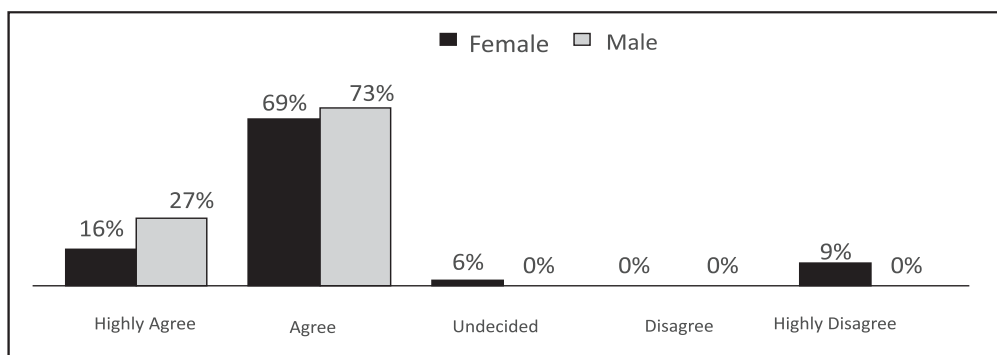
Majority of the ART members irrespective of gender has agreed that their confidence level and motivation level as an academicians has increased. The sharing of the strategies, classroom observation, planning lessons, assessment skills and listening to others during meetings have resulted in improving their various skills. More than 50% ART members have agreed that the TDC program has helped them to improve their lesson planning and assessment skill. (Median=2, IQR=1).

Graph 1.16.12 : Percentage of ART Members responses on improvement in academic skill- Lesson Planning and Assessment



1.16.4.3 Peer Learning Culture

Graph 1.16.13 : Responses of ART Members on Classroom Observation by Peer Teachers

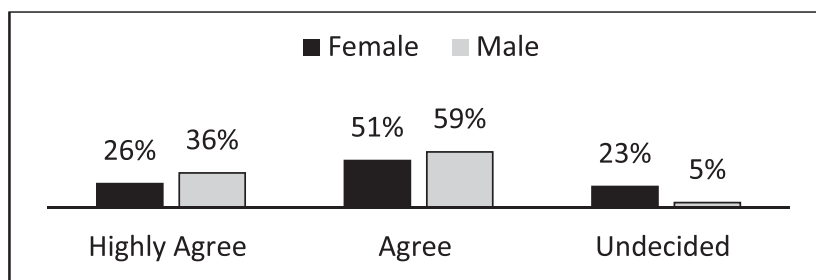


The data indicates that peer learning culture has been initiated in most of the schools where the study was conducted. Although approx. 69% Male and 73% Female ART members shared that they have initiated classroom observation process but the frequency is very less. They can give time for this only once in a while. Only 27% females and 16% Males have highly agreed to the process as in some cases they have set time table for classroom observation and in other cases they frequently observe each other's class. Majority of the responses agreed that to that their classes have been observed. Responses are not polarized and there is consensus in the responses as shown by the IQR value which is zero and Median is 2.

Where teachers don't get time for frequent classroom observation, they participate in academic discourse during ART meetings and faculty meetings. This is also substantiated by the findings where 69% females and 59% Males have

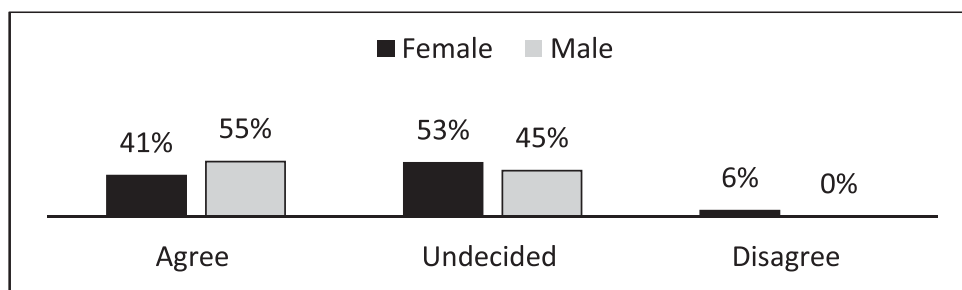
agreed to this. Only 41% male and 23% female have strongly expressed that these meetings serve as an excellent platform for academic discourse, whereas other feel that although academic discourse is there but there is need to strengthen this process.

Graph 1.16.14 Responses of ART members on extending support to at least one teacher in school



Here correlation between frequency of class room observation could be established. Since in both the cases majority of the ART members have expressed that although these processes have been initiated and are effective to a small extent, there is need to devise strategies to make these more effective for all the teachers in all the schools. It could be further seen that 23% ART members are not sure whether they have been able to support other non-ART teachers. The study reveals that both male and female ART members agreed that they could extend support to at least one teacher in school. ((Median=2, IQR=1). Given the fact that 55% ART members are associated with the program for more than 6 months and still 23% of them are not confident of providing support to the non-ART teachers, further lays emphasis on the need to strengthen daily staff meeting, faculty meeting and network meeting to ensure the strategies percolate at all levels in school.

Graph 1.16.15 : Responses of the ART members on their recognition and appreciation in school

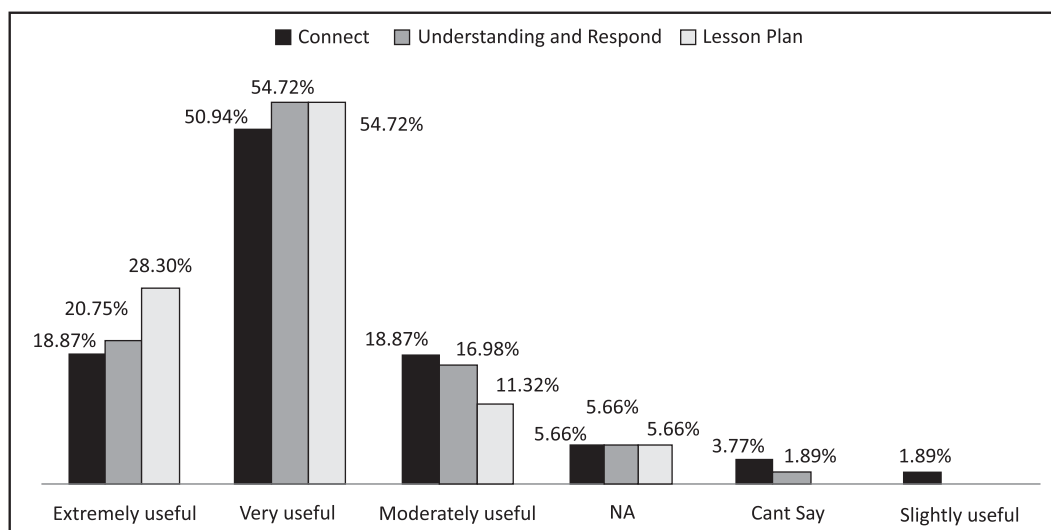


Since only 55% male and 41% female ART members have shared that their efforts are being recognized and appreciated in school during these meetings and

rest of them shared that they are not sure of this recognition and appreciation culture also lays emphasis that all the above mentioned components are co related and cannot be seen in isolation. It could be deduced that more classroom observation might lead to more sharing and learning, and this will subsequently lead to more recognition of the teachers and might result in more effective ART meetings where teachers are self-motivated, themselves take initiative, sit and brain storm on the classroom processes.

1.16.5 Reflection of ART members on different LIC themes–LIC–1:Theme connect, LIC–2:Theme Understand and Respond and LIC–3:Theme Lesson Plan

Graph 1.16.16 : Responses of ART members on the usefulness of LIC themes



The data indicates that all the three LIC themes namely Connect, Understand and Respond and Lesson Plan were found to be very useful by the respondents. (Median–4, IQR–1). The IQR value 1 indicates that there is no polarization in the responses and majority of them agreed that the themes were very useful for them.

1.16.6 Responses of the HOS

No of HOS who participated in the study – 14

Number of Male HOS – 8 (57%)

Number of Female HOS – 6

(A) Response of HOS on the academic contribution of TDC

Out of 14, 12 HOS (85%) shared that presence of TDC in school had been much helpful in various ways. TDC helps the teachers in lesson planning, observes the class and shares insights with HOS, facilitates Academic Network meetings every month, also helps teachers in deciding agenda for 30 mins daily discussion session. Majority of the HOS shared that TDCs help in creating teacher network. They share what they learn from different trainings throughout the year and encourage teachers to try different teaching strategies in class. The HOS also appreciated and recognized the support provided by the TDCs in effective implementation of Mission Buniyad and Chunnauti and Happiness program.

In response to the Question, “What is the academic contribution of the TDC Program in their school?”, one of the HOS shared that it helped in improving results of upper primary and secondary children, he further added that TDC program also helped them in implementing Mission buniyad in an effective way, and now TDC is helping the teachers to devise strategies for improving board results.”

91% of the HOS shared that TDC Program has helped to improve the academic environment of the school. One of the HOS opined that TDC acts as a bridge between the HOS and teachers, another HOS responded that TDC supports the HOS in all academic work and ensures smooth functioning of the school in the absence of HoS. Some of the HOS shared that TDCs in their school motivate the teachers in writing lesson plan and also help them in improving their plans. In the absence of HOS TDCs play significant role in smooth functioning of the school.

In some cases, HOS opined that TDCs give suggestions to teachers and help them in improving the teaching learning process in class and also help in improving the learning outcome of the children.

TDCs spend time in classroom observation and then give feedback to the teachers. This has helped in promoting peer learning culture in school. TDCs also share what they observed in class with the HOS and motivate the HOS also to observe class whenever there is time.

Some HOS also shared that the concept of TDC program is praiseworthy but more efforts are needed to achieve the desirable objectives.

When asked about the usefulness of teachers engaged in 30 mins daily discussion session, out of 14, 12 (85%) HOS shared that they have found these

daily discussion sessions very relevant and useful. The study revealed that 71% HOS shared that 30 mins session is regularly held in their school, 14% of them shared that due to time constraint 30 min session could not be held daily and 7% of them shared that 30 min daily discussion session has not been held yet. Although all the HOS agreed that daily discussion amongst teachers is important for improving academic environment in school as it gives them the platform to share their challenges, best practices and also gives them the opportunity to learn from other teachers, still 7% HOS sharing that the process has not been initiated and 14% of them sharing that it happens sometimes, indicates that more efforts are needed to establish the culture of regular academic sharing amongst teachers. It also implies that there is need of proper planning by the TDCs and ART members to strengthen the process of having daily discussion session in school.

When asked about the relevance of Academic Resource Team meetings, HOS shared that teachers from different subjects come together and discuss the teaching strategies they can implement in class. These meetings have also helped in increasing coordination and collaboration between different teachers.

When asked about their suggestions for the improvement of the TDC program, HOS suggested that Mentor Teachers should visit schools more frequently so that school can get optimum support from them. Overall TDC program is helping them to develop academic environment of their school and department should continue this program in future also. Some of the HOS also shared that TDC program has helped to strengthen connect between teachers and also between teachers and students, and this has led to increase in awareness amongst teachers and now teachers show more keenness to improvise their teaching strategies for the betterment of the children.

1.17 Conclusion, Key Findings of the study and Summary

This research paper highlights the impact of The Teacher Development Coordinator (TDC) program, an initiative introduced by the Delhi SCERT in 2017, as an extension of the flagship Mentor Teacher Program. The primary focus of the program lies in developing the mindsets and behaviours of Mentor Teachers, Teacher Development Coordinators and DIET representatives with the aim to effectively improve teaching and learning, increase teacher motivation, develop attitudes for peer learning and enhance teacher capacity. The ultimate goal of the program is to safeguard a co-learning environment where every member of the education system gets the opportunity to experience a journey of professional growth.

The core component of the program is the teacher network - a group of teachers who meet regularly to discuss strategies through which they can substantially improve their classroom practice and children's learning. These teacher network meetings and classroom practices together form a learning improvement cycle (LIC). LICs are an improvement process designed specifically to support actual change in classroom practice as well as to consistently develop teacher professional mindsets and behaviours. By providing teachers with the opportunity to check progress, create something together and work towards a shared goal, each LIC includes all of the ingredients required to build motivation and support behaviour change. So far, four LICs have been completed in Delhi senior secondary schools.

Various stakeholders from the education system are involved in the program to ensure that it functions smoothly at all levels. The SCERT Core team, TDC Facilitators, Mentor Teachers and TDCs all collaboratively contribute towards the program's success.

Throughout the journey from LIC 1 (which started in July 2017) to LIC 4 (began in Month Year), visible changes have been observed which are based upon strengthening relationships at all levels of the system (e.g. between teachers and students, and between TDCs with other teachers, HoS and MTs).

The study attempted to gain insights from the HOS and understand their perspective towards the program and contribution of TDC in the academic development of the school. 91% of the HOS shared that TDC Program has helped to improve the academic environment of the school. One of the HOS opined that TDC acts as a bridge between the HOS and teachers, another HOS responded that TDC supports the HOS in all academic work and ensures smooth functioning of the school in the absence of HoS.

HOS also shared that TDCs spend time in classroom observation and then give feedback to the teachers. This has helped in promoting peer learning culture in school. TDCs also share what they observed in class with the HOS and motivate the HOS also to observe class whenever there is time.

The study also attempted to see whether the TDC program could contribute in the capacity development of the Teachers in the role of TDC. The data reveals that majority of the TDCs agreed that there is improvement in their following skill areas – Lesson planning, assessment skill, Leadership skill, listening skill and

communication skill. Only 5% of the respondents shared that the program did not help them in developing their leadership skill.

62% TDCs shared that the program has helped them strengthen their connect with the HOS, Mentor teachers, fellow teachers and students.

The study indicates that majority of the stakeholders agreed that the program has helped them to develop as a professional.

The study also helped to understand the skill development need of the stakeholders and areas where the TDCs, MTs and ART members need more support from different government level functionaries which will further help them to improve the classroom teaching processes and academic environment in school. This finding will further help the department to design training for the different stakeholders.

The study shows that majority of the stakeholders are optimistic towards various components of the program. Majority of the stakeholders agreed to the role played by the program in improving the academic environment in school whether in terms establishing connect at all levels or motivating the teachers to write lessons plan or encouraging the teachers to devise and modify their teaching strategies based on the learning needs of the individual child.

The study also highlighted the need to ensure more support from the HOS and strengthen the processes, embed the program as the integral part of the system, and establish processes to ensure regular and effective monthly network meetings are organized in the schools, strengthen the culture of peer learning through classroom observation and have daily discussion session with all the faculty members in school.

1.18 Recommendations

The study indicates that majority of the stake holders agreed that the program has helped them to develop as a professional.

The study also helped to understand the skill developmental need of the stake holders and areas where the TDCs, MTs and ART members need more support from different government level functionaries which will further help them to improve the classroom teaching processes and academic environment in school. This finding will further help the department to design training for the different stake holders.

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1.19 Limitations

1. Changing of TDC and MT during study period- Since there is no fixed pre-defined term of the role and any remuneration so there is always a high probability of TDC and MT of voluntarily relieving themselves of these roles.
2. Transfer and promotions of teachers- With the transfer of teachers in new schools their role may change as there might be a TDC already in the new school. The promotion of teachers will lead to change in their roles and schools.

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Abbreviations

ART	:	Academic Resource Team
DAM	:	District Alignment Meeting
DDE	:	Deputy Director of Education
DIET	:	District Institute of Education and Training
DPCM	:	District Progress Check Meetings
HOS	:	Head of School
LIC	:	Learning Improvement Cycle
MT	:	Mentor Teacher
MTP	:	Mentor Teacher Program
PM	:	Program Manager
SCERT	:	State Council of Educational Research and Training
STIR	:	School and Teachers Innovating for Results
TDC	:	Teacher Development Coordinator

Questionnaire for HOS

TDC Program

District–North East

Thank you for your willingness to participate in this survey. We are interested in understanding the views of HOS on the Teacher Development Program. You should know that no other teacher will see any of your answers. No one will report on your individual answers. While we hope you answer all questions, you do not have to answer any questions you do not wish to answer and may stop at any time.

Section A : General information

1. Name of the HOS _____
2. Gender _____
3. Name of the school _____
4. School ID _____
5. Working in the school since _____

Section B :

Q.1 In your opinion, what is the rationale behind TDC program?

Q.2 In your opinion, what is the academic contribution of TDC program in your school?

Q.3 Do you get any academic support from TDC? If yes, what kind of academic support do you get from the TDC?

Q.4 How frequently is the 30 minutes' session held in your school?

1. Always 2. Sometimes 3. Rarely 4. Never

Q.5 Do you think the 30 minutes daily discussion session for teachers helps them academically? If yes, how?

Q.6 What are the challenges faced in conducting the 30 minutes' discussion session?

Q.7 How many ART meetings have been attended by you?

- | | | |
|-----------------------|----------------------|---------|
| 1. One ART Meetings | 2. Two ART Meetings | |
| 3. Three ART Meetings | 4. Four ART Meetings | 5. None |

Q.8 In your opinion how useful are these monthly ART meetings in providing academic support to the teachers?

Q.9 How frequently mentor teacher visit the school?

1. Every week
2. Once in two weeks
3. Once in a month
4. Rarely
5. Any other

Q.10 In your opinion, what kind of academic support is provided by the MT?

1. MT helps the TDC in conducting ART Meetings.
2. MT gives academic support to the teachers.
3. MT motivates teachers to have discussion on academics.
4. MT helps teachers in preparing lesson plan.
5. Any other option, please specify.

Q.11 Does the TDC/MT discuss the agenda of the ART meeting with you before conducting the meeting?

- | | | |
|-----------|--------------|----------|
| 1. Always | 2. Sometimes | 3. Never |
|-----------|--------------|----------|

Q.12 What are the challenges that you face in arranging the 90 Minutes ART Meetings?

Q.13 What are the challenges that you face with respect to the TDC program?

Q.14 Anything else that you would like to share

Mentor Teacher Questionnaire

Thank you for your willingness to participate in this survey. We are interested in understanding MTs views on the Teacher Development Program. You should know that no head teacher or other teacher will see any of your answers. No one will report on your individual answers. While we hope you answer all questions, you do not have to answer any questions you do not wish to answer and may stop at any time.

Section A : General information

1. Name of the MTs _____
2. No. of schools assigned to the MT _____
3. Name of the schools allotted to her / him _____
4. No. of years of teaching experience _____
5. Gender _____

Section B :

Directions : For each item, please check/tick (✓) the appropriate response in terms of the strength of your agreement or disagreement with each statement.

S. No.	Statements	Highly Agree	Agree	Undecided	Disagree	Highly Disagree
1	TDC Program helped me to connect with most of the TDCs in more than 3 schools.					
2	TDC Program helped me to connect with the ART teachers.					
3	It helped me to connect with the HOS.					
4	It gave me the opportunity to interact with DIET/DDE.					
5	I gained more confidence as a trainer.					
6	I gained more confidence as an academician.					
7	My communication skills have improved.					

8	I can express myself more clearly and confidently to others.					
9	I have learnt to be a patient listener.					
10	I have developed leadership skills.					
11	I feel more motivated as a teacher.					
12	My lesson planning skill has improved.					
13	It helped me to improve my facilitation skills.					
14	I learnt to assess students in different ways.					
15	The session on understand and respond helped to identify the reasons if my students are not performing well and find solution.					
16	50% TDCs plan lessons.					
17	More than 50% of the ART members do lesson planning.					
18	I got adequate support from the HOS in implementing the program components in more than 3 schools.					
19	I got adequate support from more than 50% of the TDCs.					
20	ART members became more supportive gradually (more than 60% are supportive).					
21	More than 60% ART members are not supportive.					
22	Given a choice I would like to be only a teacher rather than a MT.					

Section C :

Q.1 MTs response on the LIC themes

The most helpful theme of the LIC was–

1. Session on connect
2. Session on lesson plan
3. Session on understanding and respond

Please explain why the theme was most helpful.

- Q.2 Reflection on various components of the program –**
I have difficulty in arranging 30 minutes daily session
1. In None of the schools
 2. In one or two schools
 3. In more than 3 schools
 4. In all schools
- Q.3 I have difficulty in arranging ART Meeting–**
1. None
 2. In one or two schools
 3. In more than 3 schools
 4. In all schools
- Q.4 The time given for ART meeting is**
1. Less 2. Adequate 3. More
- Q.5 Agenda for the ART meeting is decided by**
1. The TDC alone - (write the no. of schools)
 2. The TDC and the MT /PM - (write the no. of schools)
 3. ART members take initiative and mutually decide the agenda with the help of TDC–
(write the no. of schools)
- Q.6 No. of TDCs in whose class you have seen practices from LIC themes-**
1. None 2. Less than 5 3. More than 5
- Q.7 Please mention any two major challenges that you have faced as an MT.**
- Q.8 Were you able to resolve these challenges faced as an MT? If yes, who helped you to resolve the challenge?**
- Q.9 Please mention the challenges which could not be resolved?**
- Q.10 Whose support do you need more to work more effectively as an MT?**
1. More support from HOS
 2. More support from DIET facilitators
 3. More support from DDE
- Q.11 What kind of support do you need as an MT? (Multiple options could be selected)**
1. I need support in improving my communication skills
 2. I need support in improving my facilitation skills
 3. I need support in improving my training skills
 4. NA

Teacher Development Coordinator (TDC) QUESTIONNAIRE

Thank you for your willingness to participate in this survey. We are interested in understanding TDCs' views on the Teacher Development Program. You should know that no head teacher or other teacher will see any of your answers. No one will report on your individual answers. While we hope you answer all questions, you do not have to answer any questions you do not wish to answer and may stop at any time.

General information–Section A

1. Name of the TDC _____
2. Gender _____
3. Name of the school _____
4. School ID _____
5. No of years of teaching experience _____
6. Subject _____
7. Designation(PGT/TGT) _____
8. Duration of working as a TDC (please mention the no. of months) _____

Directions : For each item, please check/tick (✓) the appropriate response in terms of the strength of your agreement or disagreement with each statement

Section B :

S. No.	Statement	Responses				
		Highly Agree	Agree	Undecided	Disagree	Highly Disagree
1	TDC Program helped me to connect with most of the teachers in school.					
2	TDC Program helped me to connect with the ART teachers.					
3	It helped me to connect with the HOS.					
4	It gave me the opportunity to interact with DIET/DDE.					
5	It helped me to understand my students and connect with them.					

6	It helped to interact with the students not only on academic things but also on personal aspects.					
7	I gained more confidence as an academician.					
8	My communication skills have improved.					
9	I can express myself more clearly and confidently to others.					
10	I have learnt to be a patient listener.					
11	I have developed leadership skills.					
12	I feel more motivated as a teacher.					
13	My lesson planning skill has improved.					
14	The session on understand and respond helped to identify the reasons if my students are not performing well and find solution.					
15	I feel my students have shown better learning outcomes since I have started incorporating changes in my teaching methods based on my learning from this program.					
16	Lesson planning session has helped to improve my classroom teaching.					
17	I got adequate support from the HOS in implementing the program components.					
18	I got adequate support from the MT.					
19	I got support from my teachers i.e. ART members since beginning.					
20	ART members became more supportive gradually (more than 60% are supportive).					
21	More than 60% ART members are not supportive.					
22	I enjoy my role as a TDC.					

Section C: TDC's response on the LIC themes

Please rate the question on 5-point scale where 0 = not at all useful, 1 = slightly useful, 2= moderately useful, 4 = very useful, 5= extremely useful.

For each item, please check/tick (✓) the appropriate response

Response of the participant on different themes of Learning Improvement Cycles

S.No.	Statements	0	1	2	3	4	5
1	Session on the theme connect						
2	Session on the theme understanding and respond						
3	Session on lesson plan						

Section D: Reflection on various components of the program

Q.1 I have difficulty in arranging 30 minutes daily session –

1. Yes 2.No

Q.2 Challenges I face in ART Meeting–(More than one option can be selected) –

1. I do not face any challenge
2. I face challenge in deciding the time of the meeting
3. I face challenge in facilitating the ART Meeting.
4. I face challenge in planning the meeting
5. Anything else, please specify

Q.3 The time given for ART meeting is –

1. Less 2. Adequate 3. More

Q.4 Plan for the ART meeting is done by the –

1. The TDC alone
2. The TDC and the MT /PM
3. ART members take initiative and conduct the ART meeting with the help of TDC, PM and MT.

Q.5 No. of teachers in whose class you have seen practices from LIC themes–

1. None 2. Less than 5 3. More than 5

Q.6 Teachers observe each other's class–

1. Frequently 2. Sometimes 3. Rarely 4. Never

Q.7 Any innovation done by you in school–

1. Yes 2. No

If yes, please describe in brief _____

Section E :**Q. 1 Please mention any two major challenges that you have faced as TDC.**

Were you able to resolve these challenges faced as TDC? If yes, who helped you to resolve the challenge?

Section F :**Q. 1 For each of the areas below please indicate the degree to which you need support for professional development? (For each item, please check/tick (✓) the appropriate response)**

S. No.	Statements	Support not needed	Support needed to some extent	Support needed to large extent
1	Providing academic support to the ART members			
2	Encouraging teachers for classroom observation			
3	Student evaluation and assessment practice			
4	Lesson plan			
5	Establishing connect with children			
6	Student behavior and classroom management			
7	Communication skill			
8	Teaching students with special needs			
9	Problem solving			
10	Time management			
11	Facilitating ART meetings			
12	Planning and preparing for ART meetings			

Questionnaire for ART Members

Teacher Development Co-coordinator Programme

DISTRICT–NORTH EAST

Thank you for your willingness to participate in this survey. We are interested in understanding views of on the Teacher Development Program. You should know that no head teacher or other teacher will see any of your answers. No one will report on your individual answers. While we hope you answer all questions, you do not have to answer any questions you do not wish to answer and may stop at any time.

Section A : General information

1. Name of the ART member _____
2. Gender _____
3. Designation (TGT/PGT) _____
4. Name of the school _____
5. No. of years of teaching experience _____
6. Duration of working as an ART Member (Please mention no. of months) _____

Section B :

Directions : For each item, please check/tick (✓) the appropriate response in terms of the strength of your agreement or disagreement with each statement.

1. Highly Agree 2. Agree 3. Undecided 4. Disagree 5. Highly Disagree

S. No.	Statement	Responses				
		1	2	3	4	5
1	TDC Program helped me to connect with most of the teachers in school.					
2	It helped me to connect with the MT.					
3	It helped me to connect with the HOS more effectively.					
4	It gave me the opportunity to interact with DIET/DDE.					

5	It helped me to understand my students' academic needs .					
6	It helped me to interact with the students not only on academic things but also on personal aspects.					
7	I gained more confidence as an academician.					
8	My communication skills have improved.					
9	I can express myself more clearly and confidently to others.					
10	I have learnt to be a patient listener.					
11	I have developed leadership skills.					
12	I feel more motivated as a teacher.					
13	My lesson planning skill has improved.					
14	I learnt to assess students in different ways.					
15	The TDC program helped me to understand whether my teaching strategy was effective or needs some changes.					
16	Lesson planning helped me to ensure participation of majority of the children in class.					
17	My class has been observed by peer teachers.					
18	I got the opportunity to observe the classes of my peer teachers.					
19	I got adequate support from the MT.					
20	Being an ART member I got the opportunity to share academic inputs with other teachers.					
21	TDC program gave me the platform to have frequent academic discourse in school.					
22	My efforts in class got acknowledged and appreciated.					
23	Feedback given by the observer helped me to improve classroom teaching practices.					
24	The program gave me the opportunity to learn from other teachers.					
25	The program gave me the opportunity to help other teachers.					
26	I got the opportunity to support at least one teacher in the process as an ART member.					
27	ART meetings gave me the opportunity to share my classroom ideas.					

28	30 minutes discussion gave me the opportunity to discuss classroom processes regularly.					
----	---	--	--	--	--	--

Section C : ART Members' response on the LIC themes

Please rate the question on 5point scale where 0 = Can't say, 1 = not at all useful, 2 = slightly useful, 3 = moderately useful, 4 = very useful, 5= extremely useful.

For each item, please check/tick (✓) the appropriate response

Q1. Response of the participant on different themes of Learning Improvement Cycles

S. No.	Statements	0	1	2	3	4	5
1	Session on the theme connect.						
2	Session on the theme understanding and respond.						
3	Session on lesson plan.						

Q2. Please give qualitative reflection for your rating on any one theme.

Section D : Reflection on various components of the program –

1. In what frequency do you have 30 minutes' discussion session on academic inputs in your school?
 - a. Almost daily
 - b. Frequently
 - c. Sometimes
 - d. Never
2. I have difficulty in attending 30 minutes daily session
 1. No at all 2. To some extent 3. To a large extent
3. Please share your opinion on the 30 minutes' discussion session- (For each item, please check/tick (✓) the appropriate response)

S. No.	Statements	NA	To a great extent	To some extent	Not at all
1	The session is relevant and useful for me.				
2	The session gives me the opportunity to share my classroom experiences.				

3	The session helps me to discuss classroom challenges with other teachers.				
4	The session helps me to know innovative classroom teaching strategies of other teachers				
5	The session helps me to support other teachers in enhancing their classroom teaching learning processes.				

4. Please share your opinion on ART meetings attended by you (For each item, please check/tick (✓) the appropriate response)

S. No.	Statements	Can't say	To some extent	To a great extent
1	Academic discussions in the meeting are relevant and useful.			
2	It gives me the opportunity to share my classroom experiences.			
3	It gives me the opportunity to learn new strategies.			
4	It encourages me to observe others classes.			
5	It helps me learn from other teachers and improve my teaching process.			
6	My efforts get recognized and appreciated.			

5. Response on ART Meetings

5.1 I have difficulty in attending ART Meeting–

1. Yes 2. No

5.2 The time given for ART meeting is

1. Less 2. Adequate 3. More

5.3 Plan for the ART meeting is done by

1. The TDC alone
2. The TDC and the MT
3. ART members take initiative and mutually decide the agenda with the

help of TDC

4. Any other option, please specify

Section E :

Any academic innovation done by you in class? (Hint - any specific strategy that you implemented in class which helped to engage majority of the children in classroom activities, any practice that helped to improve the learning of children etc.)

Section F :

Challenges that you have faced as an ART member.

Section G :

For each of the areas below please indicate the degree to which you need support for professional development? **(For each item, please check/tick (✓) the appropriate response)**

S. No.	Statements	Support not needed	Support needed to some extent	Support needed to large extent
1	Knowledge and understanding of my subject			
2	Student evaluation and assessment practice			
3	Lesson plan			
4	Establishing connect with children			
5	Student behavior and classroom management			
6	Communication skill			
7	Teaching children with special needs			

Classroom Mapping / Observation Tool

Section A : General Information

1. Date of observation _____
2. Name of the school _____
3. Name of the teacher _____
4. How many years of teaching experience do you have? _____
5. Subject _____
6. Class _____
7. Name of MT _____
8. Name of the Respondent (ART/TDC) _____

Section B :

1. Highly Agree 2. Agree 3. Undecided/Neutral 4. Disagree 5. Highly Disagree

S. No.	Statements	1	2	3	4	5	NA
B.1	Classroom overview						
1	Teacher had lesson plan.						
2	Teacher recapitulated what was taught in the previous class.						
3	Teacher was able to arouse curiosity and interest in students about the concept taught.						
4	Teacher followed lecture method for most of the time and children listened.						
5	Teacher used only black board and book for all the time.						
6	Children were asked to copy from black board for most of the time.						
7	Teacher used appropriate teaching learning material e.g. any audio visual aids (chart paper, map, daily life materials, diagrams etc.) in the class.						
8	Class had multiple components—it was divided into various parts to focus on different skill areas- e.g. reading writing and listening skill.						
9	Resources needed for the class were available and there was no last minute chaos.						

10	Teacher ended the class with some teaser for the next class.						
11	Home assignment was given to the students.						
12	Efficient time management e.g. teacher had time to assess children / had time to focus on those who show learning deficits						
13	Teacher ensured learning of concepts by verbally asking questions or by asking them to write answers of the questions.						
14	Teacher ensured learning of concepts through different modes other than verbal or written mode e.g. presentation by children, group discussion writing or verbally answering questions, drawing, role play, project work etc.						
B 2	Student–teacher Interaction	1	2	3	4	5	NA
1	Teacher had a smiling face and had eye contact with most of the students.						
2	Teacher spoke to the children in a respectful manner.						
3	Teacher had created a friendly and warm environment for children where the children displayed no fear for teacher.						
4	Teacher encouraged and tried to engage those students in the class who were not taking initiative to answer the question or were not participating in the classroom activities.						
5	Teacher encouraged students to ask questions.						
6	Only few students in the class got the chance to answer.						
7	Teacher roamed around in the class to see the work of all the students.						
8	Children got the opportunity to work in pairs or in groups.						
9	Teachers related the topic with simple daily life examples.						
B 3	Students engagement in class	1	2	3	4	5	NA
1	More than 50% Students were engaged in classroom activities.						
2	More than 50% Students were participating in class.						
3	More than 50% Students were interactive during the class.						
4	Students displayed enthusiasm in answering questions asked by the teacher.						
5	Students displayed enthusiasm in asking questions about the topic.						
6	Children were silent and only listening to the teacher for most of the time.						
7	Children were engaged in different activities like reading, speaking, listening, writing, discussing or experimenting, doing role play.						

Section C :

Questions based on different themes (to be asked to the teacher whose class was observed)

Lesson Plan

Q.1 Do you think the process of preparing lesson plan helps you in taking the class?

1. Yes 2. No 3. NA 4. Can't say

If yes, how? _____

Q. 2 Do you think that lesson plan helps you to incorporate various teaching strategies efficiently and effectively and you were able to cater to different learning needs of the children?

1. Yes 2. No

If yes, please explain with examples / illustration _____

Q. 3 What are the major differences you found between a class where you had the lesson plan and a class where you did not have a lesson plan?

Q. 4 What are the major advantages of planning a lesson? Mention any three.

Q. 5 What kind of problems did you face in lesson planning?

Section D :

Q. 1 Did the theme connect help you in establishing rapport with your students and teachers?

1. Yes 2. No 3. NA 4. Can't say

Q. 2 What are the strategies do you adopt to connect with the children?

Section E :

Q. 1 Did the theme "Understand and respond" help you in developing better understanding towards others and responding to the situation appropriately at personal and professional level?

1. Yes 2. No 3. Can't say 4. NA

If yes, how? _____

Q. 2 In what other ways this TDC program helped you to evolve as a person and as a professional?

Contributors

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LIC Theme
Design with State
level officials

Co Learning
Session on the
LIC theme with
TDC Facilitators

Co Learning
Session on the
LIC theme with
Mentor Teachers

Co Learning
Session on the
LIC theme with
TDCs

ART meetings in
schools
conducted by the
TDC in the
presence of
MT/PM



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