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Introduction

To study the role of TDC Program in mitigating the challenges of teachers and teacher educators in knowledge society and developing New Age Classroom Competencies

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This research seeks to understand the perspectives of system officials on how the Teacher Development Coordinator program supported teachers and teacher educators to overcome the challenges before and during the pandemic, contributed in skill development and helped them to adapt to new age classroom competencies in two districts of Delhi. In order to enable the students develop 21st century skills which includes critical thinking (pg no 11, NEP, 2020), collaboration, creativity, media and technology literacy, , communication skills, social skills, ability to take initiative and leadership skills, lifelong learning skills with focus on numeracy and literacy (pg 46, NEP 2020), it is essential for the system to create enabling environment for the teachers and teacher educators so that they can equip themselves with the new age classroom competencies. COVID -19 situation has also leveraged the need where the teacher's community is perceived as a self-motivated lifelong learner to thrive in the world of unknown unknown and empower students also to be a lifelong learner. Henceforth it becomes important to understand the perspectives of system officials on the impact of the Teacher Development Coordinator Program in sustaining the momentum of online teaching learning process even during the pandemic.

Teacher Development Coordinator Program also called TDC Program an initiative of Delhi Government in continuation with the Mentor - Teacher Program which was introduced in 2017 with the aim of creating a network of intrinsically motivated teachers collaboratively working together for academic development in schools through intentional teaching, developmental feedback, collaborative thinking and innovations. Teacher Development Coordinator Program - An evaluative study published by DIET Dilshad Garden indicated that the program helped teacher develop as a professional and respondents agreed to the role played by the program in improving the academic environment in school whether in terms of 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.

This focussed group discussion based qualitative study aims to identify how the systemic collaboration, along with autonomy given to teachers and support provided by Mentors to attain mastery play pivotal role in developing new age compatible classroom competencies considering the challenges of teachers and teacher educators, in alignment with the lifelong learning components mentioned in NEP 2020. The paper will also try to explore how the teachers and teacher educators demonstrated growth mindset and resilience in learning and adapting to online classroom teaching, integrating technology, content and pedagogy thus sustaining the momentum of learning processes amidst COVID-19 challenges.

Research objectives

To understand how systemic collaboration supported teachers and teacher educators to overcome the challenges and adapt to online teaching practices during pandemic.

To understand the perspective of system officials on lifelong learning concepts in the light of NEP and the role of Teacher Development Coordinator Program in materializing this concept.

To understand how the system officials supported the teachers in developing their skills and new age classroom competencies.

Operational definitions -

TDC (DIET) Facilitators: They lead the facilitation of TDCs development session and use 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 Mentors, 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.

Teachers – For the purpose of the study teachers will be grouped into different categories

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. They are supported by the Mentors.

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 5-6 schools allotted to him/her. They receive training by the DIET facilitators 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 5-6 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 allotted schools, coordinate with the DIET facilitators, zonal DDE and district level DDE on decide time intervals.

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 TDCs 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 constructive feedback through the TDC. All the teachers can observe each other's class and discuss their observations.

TDC Program Activities mentioned in this research

ART Meetings: These are monthly meetings for ART members to come together for academic discourse, facilitated by TDC and observed by MT, TDC Facilitators and HoS.

LIC Cycle – Learning Improvement Cycle - Learning improvement cycle completes in three to fourth wherein every month TDCs and MTs have co-learning sessions to discuss strategies within the theme of LIC.

Rationale

In 2017, Teacher Development Coordinator program was an initiative introduced by the SCERT as an extension of its Mentor Teacher program. This research seeks to understand the perspectives of system officials on how the Teacher Development Coordinator program supported teachers and teacher educators to overcome the challenges before and during the pandemic, contributed in skill development and helped them to adapt to new age classroom competencies in two districts of Delhi.

COVID -19 situation unleashed a plethora of opportunities for system officials, teachers and teacher educators to develop new age competencies, explore different avenues of learning opportunities, and be an intrinsically motivated lifelong learner. The pandemic gave rise to unpredictable challenges and the teaching community evolved with innovative out of the box solutions to surmount these challenges demonstrating growth mindset and resilience. NGO partners, government officials, Mentor Teachers and Teacher Development Coordinators based on the emerging need of the education sector worked in collaboration and tried to adapt to the unpredictable situation, organized various capacity building sessions, adopted virtual mode of facilitation, and explored innovative and effective ways of online and semi online mode of teaching, and also focused on socio emotional well-being of teachers and students. 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) also mentioned that some of the most significant factors are the level of guidance and support through-out 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. This research tried to capture the qualitative insights of intrinsically motivated system officials who played a pivotal role in supporting teachers in developing new age competencies not only before the pandemic but also how they sustained their efforts in adapting to the changes and role modelled growth mindset and resilience during pandemic.

Research Methodology

In the present research, focused group discussion was used as a qualitative data collection tool to gather insights from different system officials from two different districts.

Study Area

For this research two districts of Delhi have been chosen - District North East 2, DIET Dilshad Garden and District North West A, DIET Keshavpuram.

Sample Size: 4 Mentor Teachers and 1 DIET Facilitator

Table 1: General Information of respondents

Respondents	No of schools assigned to the MT	Gender
Respondent 1 (Mentor Teacher)	5	F
Respondent 2 (Mentor Teacher)	6	F

Respondent 3 (Mentor Teacher)	5	M
Respondent 4 (DIET Facilitator)	No schools assigned. DIET Facilitator	F
Respondent 5 (Mentor Teacher)	5	F

Findings of the Focussed Group Discussions

Impact of TDC Program in establishing connect of Mentor Teachers with different stakeholder’s school and district level: Participants highly agreed that TDC program helped them to establish connect with the TDCs, teachers and HOS of more than three schools out of 5-6 schools allotted to them. DIET official who was also a part of the discussion also agreed that TDC Program gave them the opportunity to visit schools, observe monthly ART meetings, interact with the Mentor teachers during monthly district progress check meetings and interact with Mentors and TDCs during co-learning sessions. Mentor Teachers also shared that TDC program activities gave them opportunities to collaborate more with the DIET officials and DDE districts and strengthen their connect with them.

Participants' opinion on their different skill development areas of Mentor teachers: Participants shared that TDC Program capacitate as well as helped them to increase their confidence as a trainer and as an academician. Participating in various program activities also helped them to develop their leadership and facilitation skills. They highly agreed that now Mentor Teachers feel more empowered and more motivated as a teacher.

Most helpful theme of Learning Improvement Cycles: Connect was found to be the most helpful theme for both DIET official and Mentor teachers which has been introduced by the program when it was launched in the year 2017. They shared that discussion on various ways to connect with each other and with the students ultimately culminated into establishing and strengthening connect at all levels, connect between TDC and MT, HoS and teachers, TDC, MT and HOS, MT, TDC, teachers and DIET officials. Even during pandemic this theme was revisited with focus on socio-emotional well-being of students and teachers through active self-reflection and resilience. This encouraged the teachers to be more empathetic with their students, reach out to them and reflect on their reflections and encourage students to focus on their emotional well-being through active self-reflection and social well-being through student - student collaboration, student-teacher collaboration and teacher-teacher collaboration.

Other than connect, look for understanding, classroom routines and teaching learning strategies were found to be extremely helpful in enhancing classroom teaching learning processes in a very structured and professional manner. Though they were earlier familiar with the discussed teaching strategies, classroom routines and concept of formative assessment, they appreciated the autonomy given to the teachers and teacher educators to adapt and contextualize these based on their understanding and learners' need. One of the Mentor teachers enthusiastically said,

“Do Now is liked by students and there have been instances where students themselves demanded, what is the do now activity for today.”

This activity also encourages students to revise concepts and come prepared in class. Another Mentor teacher shared in lesson planning “opening, main and closing activities helped teachers to enter the class with a plan to make the class more structured, interactive and interesting.

Participants views on TDC programme components:

Recognition and Appreciation

In words of one of the participants,

“TDC Program has revolutionized the education system.”

Another participant shared, “Before this program, HoS and teachers who ever academically inclined is felt that their efforts were not being recognized but this program given them platform in the form of monthly meetings, classroom observation and co-learning sessions where they could share their best practices and their efforts were being acknowledged and appreciated. Mentors too got opportunity to cater to the academic needs in school through regular visit, network meetings, discussion with TDC and classroom observation. In the words of one of the participants, **“Previously the academic discussions were not that enriched but now teachers are very participative in academic discussion and it is a very positive change we can see through this program.”**

Self-Reflection: This program provides us the opportunity for self-reflection or self-assessment, identify the gaps and analyze areas of skill development. In this program we get the opportunity to discuss academic issues with different stakeholders.

Previously, if we had any academic and pedagogical query we had no one to discuss with but now we can easily reach out to each other or different stakeholders for any kind academic support.

MT and TDC Program gave us the opportunity to collaborate with each other, and gives us strength as well as a sense of togetherness working for a common cause.

Even at the time of pandemic, the support that the program has extended is very helpful whether it is in terms of providing technological support, or our capacity building in virtual facilitation or suggesting ways for effective online teaching practices.

Support during pandemic and opportunity for professional development: The program provides the opportunity for professional development. Previously we were disconnected with global scenario. Now this is helping us to connect emphasizing on professional development. Instead of being forced to adopting them. we are adapting the approaches based on our need and understanding. The program provides the autonomy to utilize it according to the need. In the ART meeting it is widely discussed that this meeting provides an opportunity to know what is happening globally, aware of innovations in education and contextualize the knowledge as per our local needs.

Also the program provides the opportunities to share the learnings with a wider audience through webinars, workshops organized by the DIET facilitators and Mentor teachers for each other or enrolling oneself in online courses during the pandemic.

In the words of participants, “The Co-Learning platform helps us to learn from each other. The timid person can also organically share openly his/her views without any reservation and embed the thoughts in the discussion”.

One of the participants opined, “The platform is great for professional learning. “The participant further added, “The structure of the co-learning sessions provides a scaffolding and enhance confidence which also helps in filling the gaps”.

ART Meetings: When asked about the 90mins time allocated for the monthly ART meetings are adequate, participants shared that at times they feel the time could be extended especially when teachers are engrossed in sharing, discussion and exploring.

The group shared that the agenda of the ART meeting is largely decided by TDC in consultation with MT and PM.

Major Challenges faced by the Mentor Teachers as perceived by Mentor Teachers and DIET facilitator:

1. Multiple program is operational and fixing the ART meeting time is somewhat challenging
2. Some TDCs are less motivated and they need to be reminded of for conducting the ART meetings.
3. Working on the mindset is a challenge.
4. Identifying the time for ART meeting and retain the focus of the teachers in the Meetings
5. Extending the support of the HoS for execution of the program activities like monthly ART meetings.

Major Challenges faced by TDC (DIET) Facilitator as perceived by Mentor Teachers and DIET facilitator:

1. There are multiple responsibilities which sometimes derail the planning and has impact on the co-learning sessions.
2. School visit is a challenge and in the lockdown the virtual visit helped in observation of multiple ART meetings.
3. Mostly the DIET faculties are perceived as being informed about everything by others and this sometimes deviates the focus of discussion.

Major Challenges faced by TDCs as perceived by Mentor Teachers and DIET facilitator

1. The TDCs are now considered as extended support for HoS and henceforth are involved in DATA collection and admin related work by the HoS. Some TDCs find less time to connect with the teachers.
2. Though HoS are now in more alignment with the program objectives but there is still a need for the HoS to shift to look at things more from an academic perspective than administrative. The group shared that they strongly feel the support and approach of HoS is crucial in smooth implementation of the programme.

Support needed by Mentor teachers:

Mentor teachers shared that there is the nature of support they need has changed over the period of three years since the inception of the program. Initially they needed support in improving their facilitation skill, training skills, leadership or communication skills but now the shift is towards improving their technological skills, learning innovative tools in technology, documentation skills and action research. Mentor Teachers and DIET facilitators opined the need for action research and even though action research is not published it will help a lot in improving teaching learning practices. It will also open the gateway of the research being published and thus increase the program reachability.

Teachers and teacher educators' response during pandemic and innovative practices in schools:

The group shared that there is a change in Teachers' mindset and now they are learning how to develop videos, create google forms, using google classroom, to disseminate the content to

their students in an interesting and engaging manner. There are examples where teachers conducted a whole class by using different online mode like zoom, google meet or even google classrooms. Teachers reached out to students at their (students') available time stretching themselves much beyond their working hours. Earlier teachers would be reluctant in discussing new strategies but during pandemic teachers demonstrated growth mindset and resilience to overcome the unpredictable challenges, sustained and even increased their connect with students, and keep up the momentum of teaching learning process even on virtual forums which were completely new for them.

Role of Mentor teachers and DIET facilitators during the pandemic: Mentor teachers and DIET facilitators played a crucial role during this pandemic in extending their support to TDCs, teachers, students and to each other. They explored multiple learning virtual platforms, did online courses, reached out to other DIET Facilitators, Mentors, Program Managers or experts from other NGOs. They themselves explored technology and learnt things, also supported others in the process of learning including organizing technology based orientation sessions not only at school level but also at State level connecting a wider group of educators.

Understanding of the sample group on Lifelong learning concepts and intrinsic motivation as mentioned in NEP 2020:

The sample group shared that teachers have to be lifelong learners to mitigate the generation gap and learning gap between teachers and students. More than anything else, this pandemic has helped to develop a growth in us and taught us to be a lifelong learner. For intrinsic motivation, the group shared that passion, positive approach, growth mindset, ready to learn, think big, dream big are some of the important factors.

TDC program has helped in increasing the intrinsic motivation of TDCs through the Mentor teachers but HoS support is also an important factor for teachers' motivation.

The groups how extrinsic factors influence motivation of teachers in school but could not tell the difference between extrinsic and intrinsic motivation or how one thing can influence another. But the group agreed that autonomy given in the TDC program helps to motivate teachers and helps us keep going.

Conclusion

1. The focussed group discussion indicated that systemic collaboration, initiatives and efforts of DIET officials and Mentor Teachers supported TDCs, ART members and teachers to adapt technological forums, explore online teaching practices, demonstrating growth mindset and sustaining their connect with students and with each other during the pandemic.
2. Regarding the concepts of lifelong learning, the sharing of the group indicated that pandemic has encouraged most of the teachers and educators to be lifelong learners to thrive into the world of unknown unknown.
3. TDC program through online and offline co-learning sessions gave teachers a platform to share, and learn from each other. It also gave a forum where the teachers' efforts could be recognized and appreciated which was an important factor for teacher motivation.
4. The sharing of the group indicated that the LIC themes and strategies discussed in the co-learning sessions with autonomy given to the teachers and teacher educators to adapt and contextualize them based on their need and understanding plays a significant role towards intentional teaching and developing new age classroom competencies. During pandemic, these sessions focussed on adapting these strategies to online teaching practices and encouraged peer learning and collaboration between teachers and also between teacher and students.
5. The group also shared that along with autonomy, the TDC Program activities also give them the opportunity to talk to different stakeholders locally and globally discussing the shared purpose of academic development through professional development of teachers and teacher educators.

Recommendations:

Recommendations from Focussed group discussion

1. There is need to increase the involvement of the authorities (DDEs, SCERT and HoS levels) and align them with the program objectives.
2. Capacity building sessions for TDCs.
3. TDCs can be given the opportunity to take sessions outside schools with larger group to build on their confidence.
4. We need to work towards TDCs to be school based mentors with minimum handholding.
5. Need to increase the ownership of ART members, by increasing their involvement in ART meeting and faculty meetings.
6. There should be opportunity for TDCs doing innovations to showcase their work and this could be a motivating factor for others.
7. Strengthening the culture of sharing of best practices and documentation. Newsletter or booklet could be published monthly or bimonthly with pic and best practices of TDCs from all districts.
8. TDCs and MTs to come together at one forum at State Level for any cultural activities. Efforts to sustain the motivation of TDCs.
9. Technology based sessions for visually impaired teachers which could be organized by DIET.

Recommendations from the researchers

1. For teachers to be intrinsically motivated lifelong learners and develop new age classroom competencies ,there is a need to align the stakeholders at SCERT, DOE, DIET, DDE and HOS level through regular monthly or bimonthly meetings.
2. Documentation and sharing of best practices at all levels to strengthen the culture of recognition and appreciation.

3. There is need to reiterate and discuss the concepts of lifelong learning as mentioned in NEP 2020 at State, District and school level.
4. NEP 2020 also talks about teacher motivation which is also in alignment with the TDC Program objectives. There is need to discuss how the components of intrinsic motivation autonomy, mastery and purpose embedded in TDC Program activities could be sustained and strengthened in collaboration with the system officials.

References

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4. The Professional Development of High School Chemistry Coordinators, Avi Hofstein, Miriam Carmeli and Relly Shore, Journal of Science Teacher Education, Vol. 15, No. 1 (2004), pp. 3-24 (22 pages), Published By: Springer, <https://www.jstor.org/stable/43156327>

Annexure 1

FGD Questions

Thank you for your willingness to participate in this discussion. 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 -

Table 1

Name	No of schools assigned to the MT	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.	I can express myself more clearly and confidently to others					
8.	I have developed leadership skills					
9.	I feel more motivated as a teacher					
10.	It helped me to improve my facilitation skills					

Section C

Q1. Response on the LIC themes

- A. The most helpful theme of the LIC was – (open ended)
- B. Please explain why the theme was most helpful.

Q2. Reflection on various components of the program –

Q3. The time given for ART meeting is

Q4. Agenda for the ART meeting is decided by (DIET as an observer)

Q5. Please mention any two major challenges in the TDC Program faced by

Mentor -

TDC (DIET) Facilitator -

TDC -

Q8. Were you able to resolve these challenges.? If yes, who helped you to resolve the challenge?

Q9. Please mention the challenges which could not be resolved?

Q10. What kind of support do you need as an MT?

Q11. During the pandemic what are various innovative practices you have observed in schools?

Q12. What was your role in implementing the innovative practice in schools?

Q13. What were the learning opportunities for you during this pandemic?

Q14. What do you understand by lifelong learning?

Q15. What is the relevance of lifelong learning for teachers?

Q16. What are the most important components of lifelong learning?

Q17. What are the components required for building intrinsic motivation?

Q18. How do you think TDC Program supported you in achieving this?

Q19. What do you think about how the TDC program could be strengthened?