REPORT ON DISTRICT WIDE EXPERIENTIAL ONLINE TRAINING FOR GOVERNMENT PRIMARY SCHOOLS TEACHERS OF MADHUGIRI DISTRICT

SUBJECT: ENGLISH, MATHEMATICS, AND SCIENCE

DATE: 09-08-2021 TO 13-09-2021

TRAINING CONTENT DEVELOPED AND IMPLEMENTED

BY

DISTRICT INSTITUTE OF EDUCATION AND TRAINING, MADHUGIRI AND CARING WITH COLOUR-A MANASI KIRLOSAKAR INITIATIVE

ACKNOWLEDGEMENT

The '**Madhugiri Online Teacher Training Report**' provides complete information about the process of planning and implementation of the online teacher training program conducted for Government Primary School Teachers of Madhugiri district.

We want to thank the entire team of DIET Tumkur & Madhugiri, for the tremendous belief and support provided to Caring with Colour, which made this program successful. Amidst the COVID situation, this program helped us reach out to the teachers from different blocks of Madhugiri district in providing training in English, Mathematics and Science subjects.

We would also like to sincerely thank **Shri. Nanjaiah C,** Deputy Director of Public Instruction, Tumkur, **Shri. Manjunath K,** Deputy Director of Public Instructions (Development) & Principal DIET, Tumkur, **Shri. Krishnamurthy,** Deputy Director of Public Instruction, Madhugiri and **Shri. Y N Ramakrishnaiah,** Deputy Director of Public Instructions (Development) & Principal DIET Madhugiri for extending their support for the successful implementation of the program

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We value the active participation and response of all the teachers in all the stages of the training program without whom this program would not have been so successful.

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1. Executive Summary

Background:

In collaboration with The District Institute of Education and Training (DIET) – Tumkur & Madhugiri, Caring with Colour – A Manasi Kirloskar Initiative (CWC) designed and implemented an innovative teacher training model which could be successfully run during COVID-19 times. Goal of the collaborative partnership was to rigorously train and up skill the primary school teachers in the Madhugiri district towards the realization of the goals of the new National Education Policy (NEP) 2020 in India.

The design of the teacher training program needed to:

- Enable and enhance the Teacher academic leadership by providing them with the perspectives, skills, and knowledge required for turning their classrooms into experiential learning spaces thereby making learning into a meaningful and joyful process as suggested by NEP 2020.
- Promote teacher autonomy by providing them the tools and skills required to create their own activity based and arts integrated experiential lesson plans that are contextual to their own classrooms.
- Provide a safe platform through which all the primary school teachers in the district can engage with the training programs remotely, there by adhering to the norms and Operating Procedures of the government during the COVID-19 pandemic.
- Achieve the above in a cost-effective, scalable, and replicable way that leverages user-friendly technology platforms.

CWC engaged with DIET and the stakeholders at all levels in the education department of Madhugiri district to design an innovative technology driven online teacher training program. The training program:

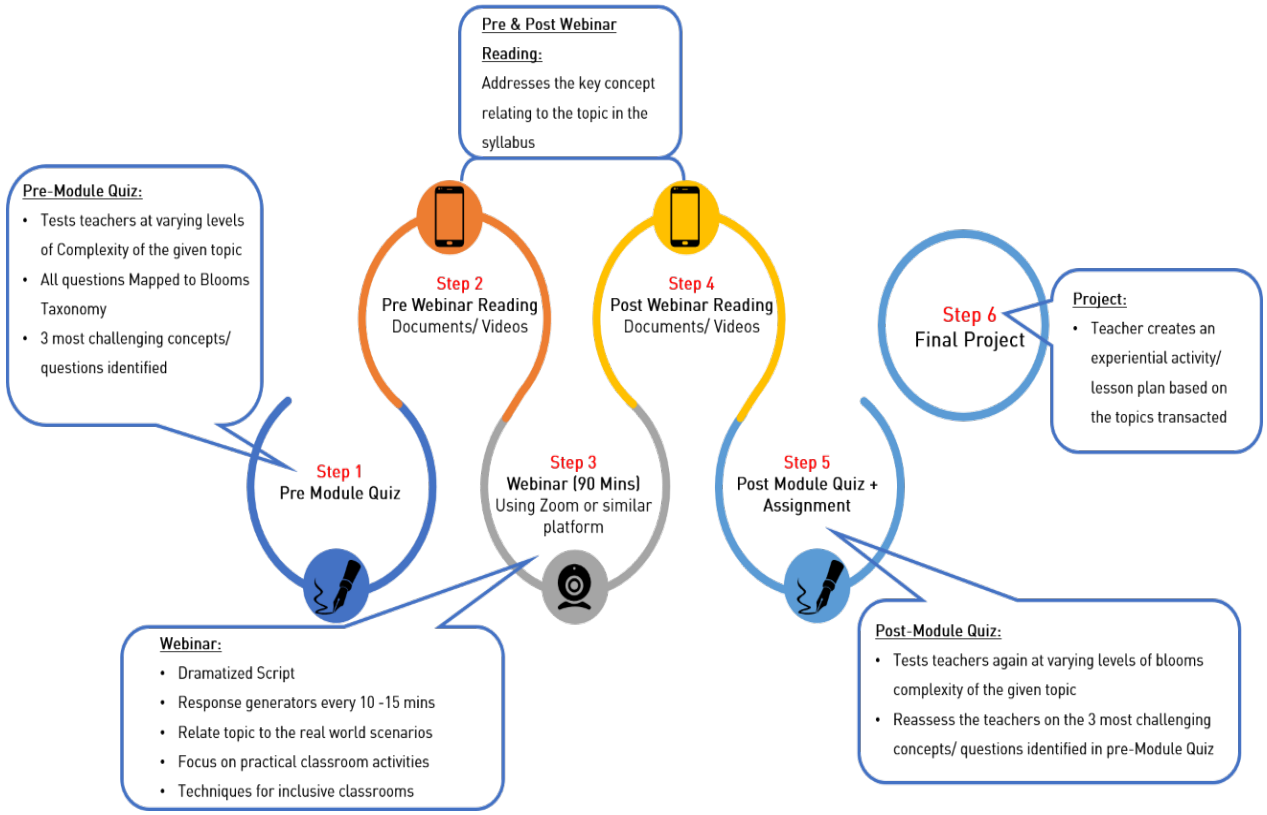
- Conducted a detailed data collection and mapping exercise through which CWC and the DIET could determine the specific subject(s) that each teacher in all the primary schools of the district is either teaching or is interested in teaching.
- Identified the specific hard spots that teachers face in the three critical subjects of English, Mathematics, and Science and designed training modules that can be transacted through live online sessions.
- Identified and trained the Resource persons / trainers in DIET who can be trained to deliver the live online training sessions in collaboration with CWC teacher trainers.
- Created a framework of user-friendly and no cost / low-cost technology platforms (like Zoom, WhatsApp, YouTube live streaming, Google forms, Google Meet etc) which can be accessed by any teacher from the safety of their homes / classrooms. The platforms were integrated such that they could all work on the same data layer at the backend. Cost to use the platforms for teachers was zero and cost to DIET / CWC was a small fraction as compared to what would have been spent in the traditional in-person training model.

The modules were designed to ensure that the training program would provide experiential learning for teachers in an online mode. The design of these "Experiential Teacher Training modules" needed to ensure that the training program is:

- Targeted towards the specific concepts that teachers generally find hard to understand and teach.

- Interesting and engaging to the teachers.
- Provide the teachers and the DIET with an understanding of the outcomes and improvements achieved.
- Create peer-to-peer learning opportunities and continue to provide a discussion and learning platform to the teachers post the training.

To achieve the above, CWC designed an Online Experiential Teacher Training Model with a 6-step process that includes pre and post training assessments, pre and post training reading materials, assignments and projects through which teachers can collaborate and learn further.



1.2 Implementation of the Online Experiential Teacher Training Program:

The modules which were successfully implemented in Tumakuru educational district were improvised based on the feedback received from the different stake holders of the department and the same experiential training design was implemented for all the primary school teachers in Madhugiri district in collaboration with the DIET Madhugiri.

Madhugiri Online Teacher Training Program 2021	
• **Training Mode**	Online
• **Grade Levels**	4, 5, 6, 7
• **Number of Teachers Participated in the Training**	2095
• **Number of Training Modules Transacted**	15
• **Number of DIET Teacher Trainers participated in the Training**	18
• **Number of Learning Hours provided**	37710
• **Number of students to be benefited (Grade 4 to 7)**	61934

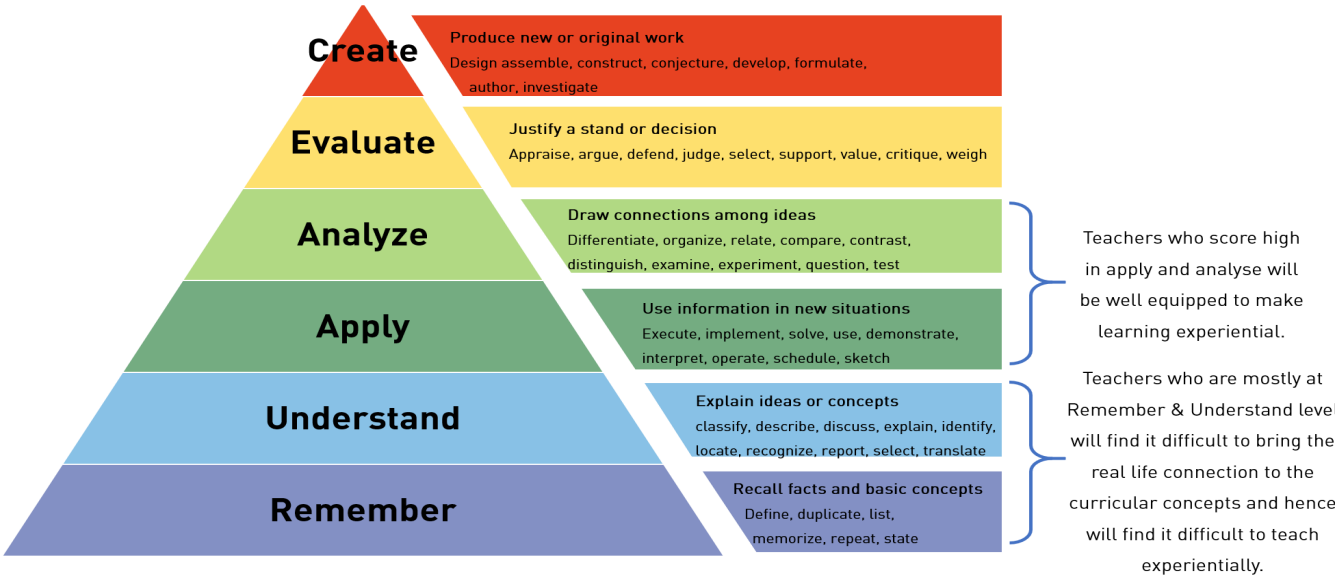
In total 2095 teachers were trained in the identified hard spots in the three key subjects of English, Mathematics, and Science through a total of 15 Experiential Teacher Training Modules.

1.3 Metrics for measuring Outcomes of the Training Program:

The efficiency, relevance, and improvement in teachers through the training program was measured through a rigorously designed set of metrics based on data collected through assessments and the log entries available from the technology platforms that were used.

i. **Measure of Improvement in Teachers:** Two different types of metrics were used to measure improvement in the knowledge and skill of the teachers through the pre and post webinar assessments. The assessments themselves were structured as per Bloom's Taxonomy to measure the improvement in competency in both the lower as well as higher order skills relating to the concepts covered.
   a. **Metric 1:** The first type of assessment compared the pre vs post webinar performance of each teacher through a total of 10 questions designed at 4 different levels of Blooms (Remember, Understand, Apply and Analyse).
   b. **Metric 2:** For the second type of assessment, the three questions that most teachers answered incorrectly in the Pre-webinar assessment (which indicate a hard spot for teachers) are compared to the performance of teachers for similar questions in the post-webinar assessment.

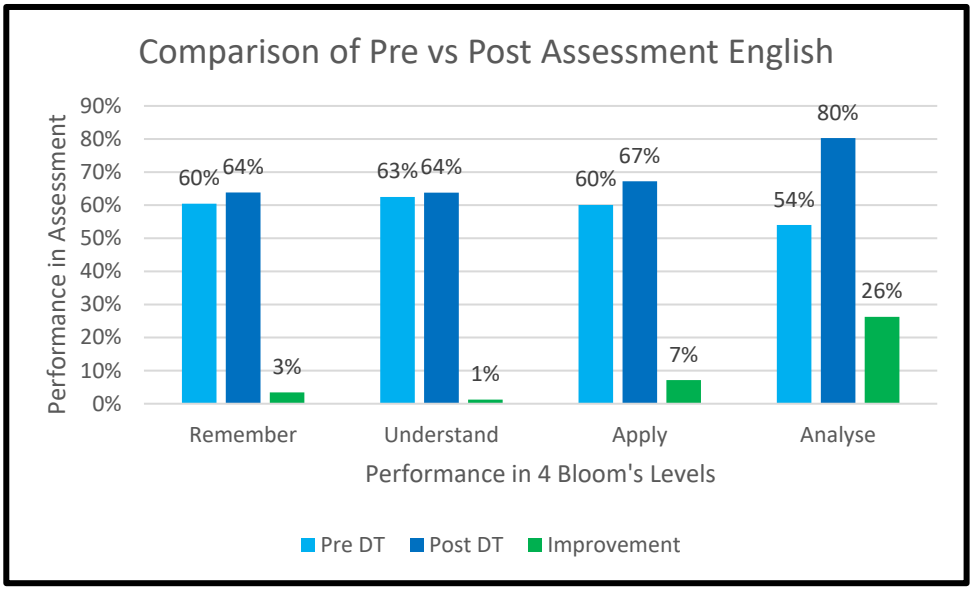
ii. **Metric 3 (Measure of Efficiency):** Efficiency of the program (coverage of teachers and depth of participation) is measured through the participation rate, engagement rate with the data logs available from the technology platforms.



iii. **Metric 4 (Measure of Relevance):** Relevance of the topics along with the applicability of the activities and ideas were measured through feedback polls given to participants at the end of each webinar.

1.4 Outcomes of the Experiential Teacher Training Model:

Measure of Improvement in Teachers:

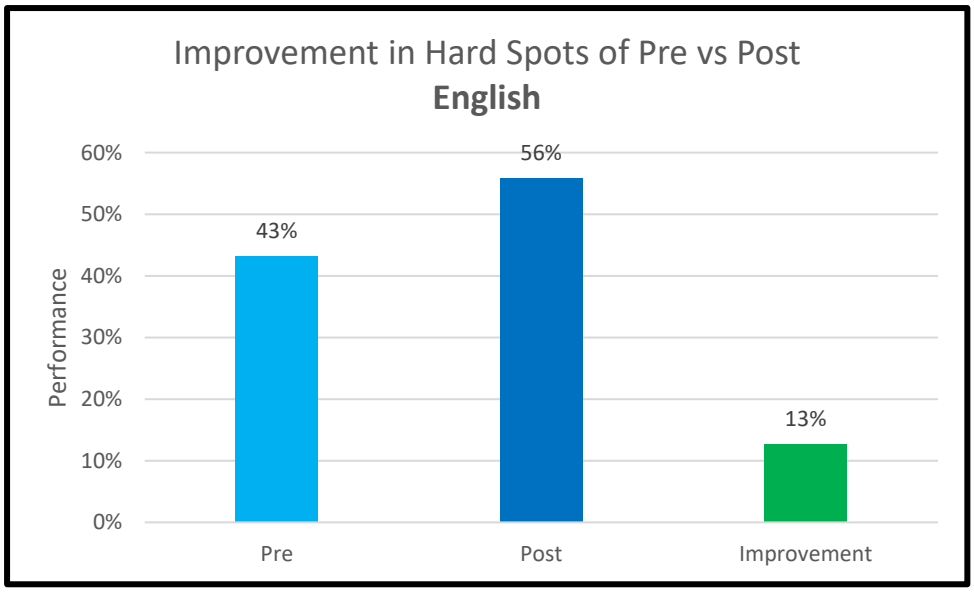


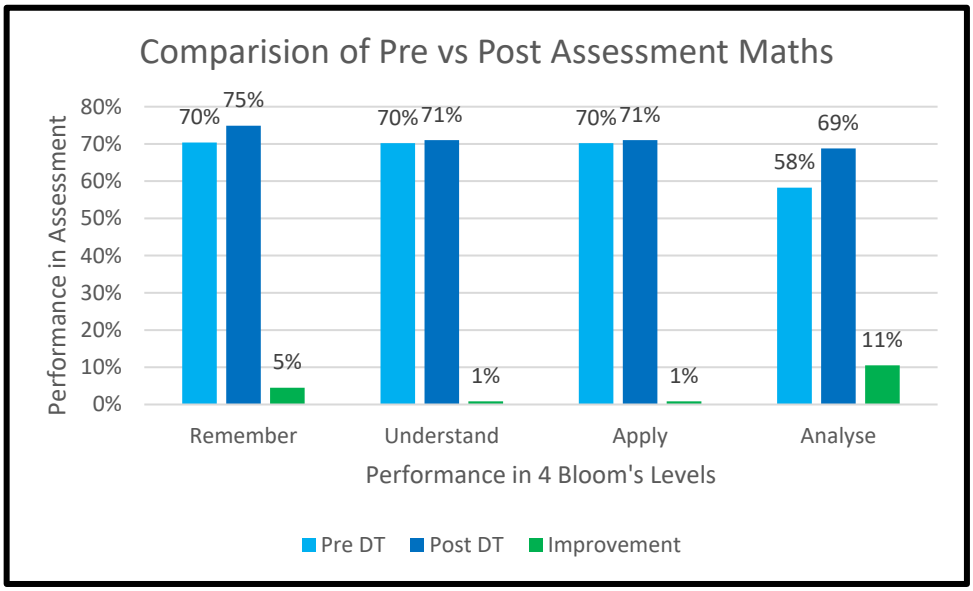
Metric 1:

Average Improvement in 4 levels of Blooms - English

Metric 2:

Average Improvement in 3 most challenging concepts - English



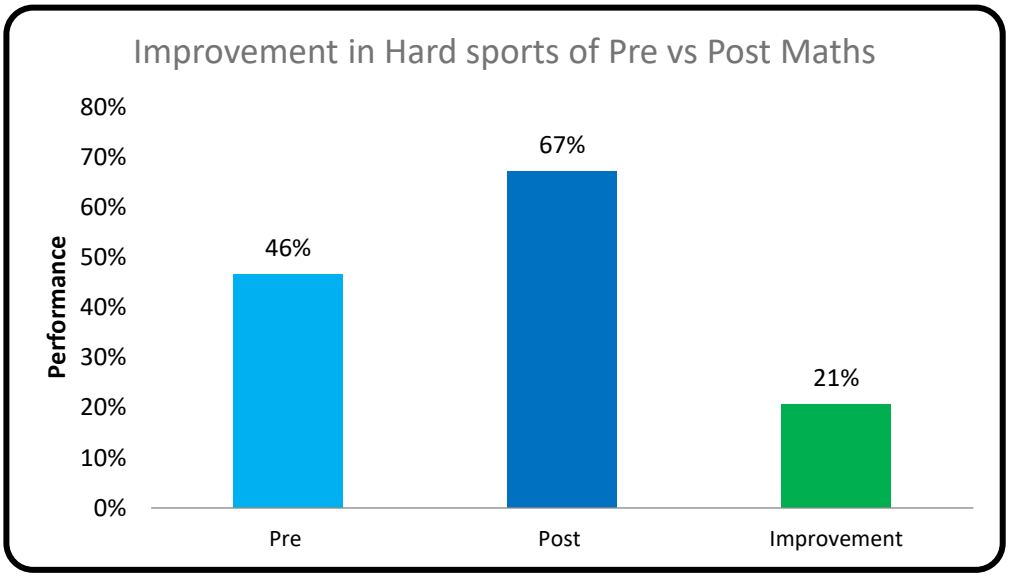


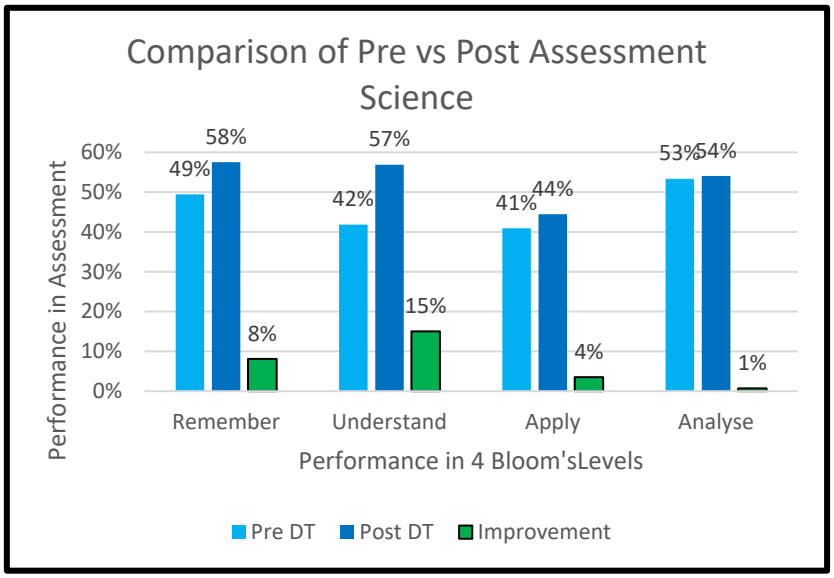
Metric 1:

Average Improvement in 4 levels of Blooms - Maths

Metric 2:

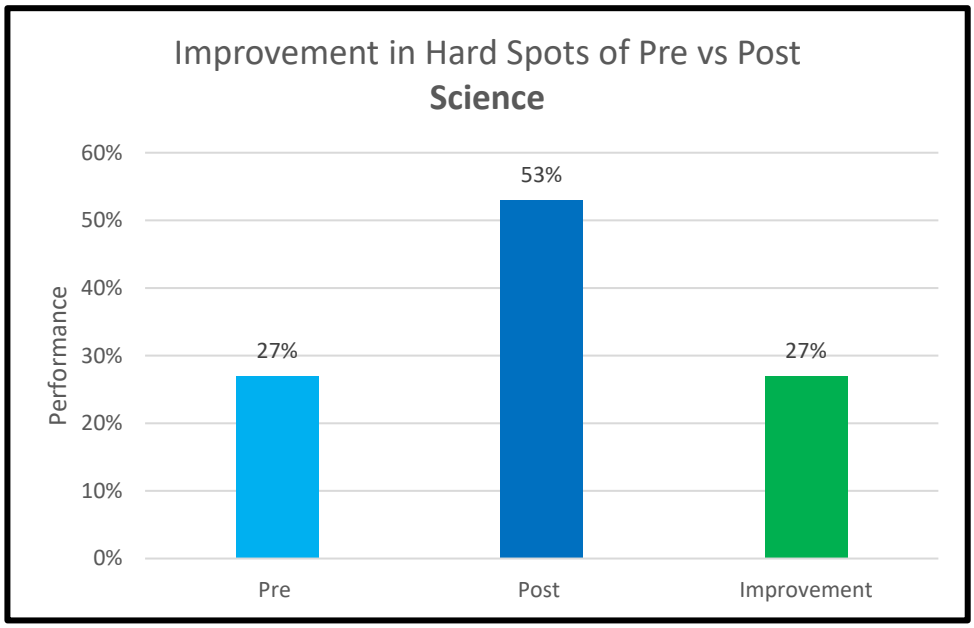
Average Improvement in 3 most challenging concepts - Maths





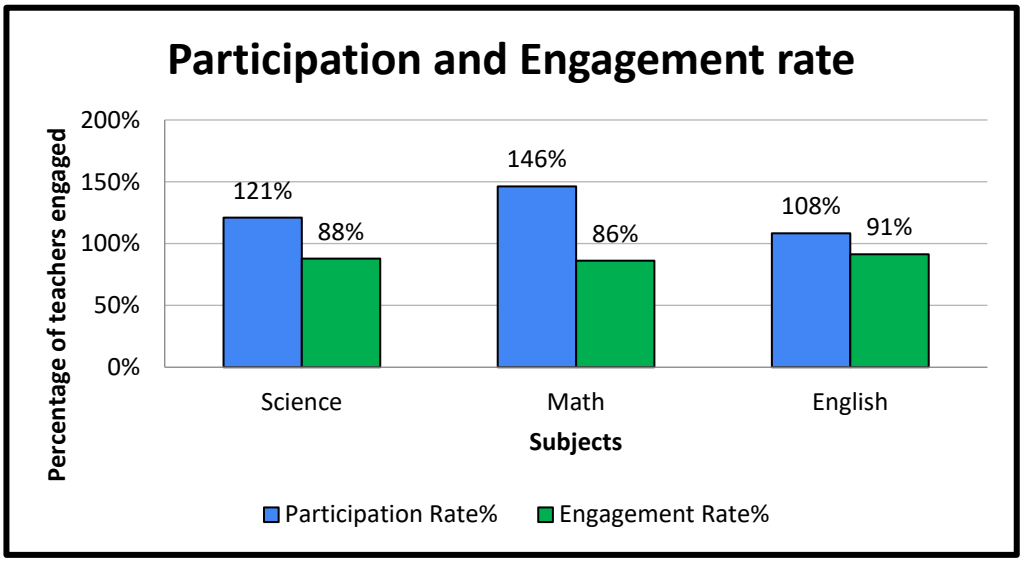
Metric 1:

Average Improvement in 4 levels of Blooms - Science



Metric 2:

Average Improvement in 3 most challenging concepts - Science

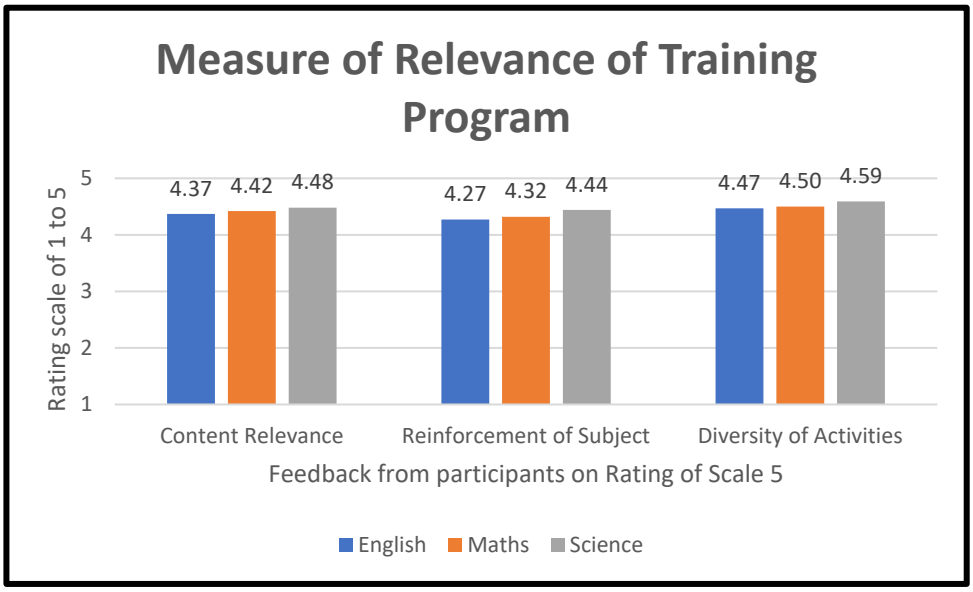


Metric 3:

Measure of Efficiency of the Training Program

Metric 4:

Measure of Relevance of the Training Program



Key Observations on the Metrics & Outcomes:

- This training program has demonstrated a framework through which large scale training programs can be conducted for the teachers in the public school system in a way that:
  - trainings are specifically targeted to addressing the hard spots / challenges faced by teachers in their classrooms.
  - continuously measure the improvements made by teachers in their knowledge and skills which can further lead to improvements in the teaching learning process in their classrooms.
  - incorporate the end user feedback as an essential part of the training programs such that constant improvements can be made in the training framework.
- Post webinar assessments by design had higher difficulty level. A positive improvement in the post webinar assessment can be concluded as an improvement in the knowledge and skills of the teachers. A negative improvement rate suggests that teachers may not have progressed enough in clarifying their trouble spots and improve their subject matter expertise.
- English yielded a marginal improvement in the performance in all the blooms levels as well as in the 3 most challenging concepts tested. The English modules focused on the hard spots faced by teachers in the grammatical concepts within the syllabus. Understanding the structure of the language through grammar requires continuous exposure to the language speaking environment and spaces where the learner can interact with others in the language being learnt. While the training program may have clarified some of the conceptual bottle necks in English grammar, more spaces and opportunities for English learning must be provided to the teachers to ensure a sustainable improvement in English skill.
- In Mathematics, teachers have shown improvement in their understanding of the 3 most challenging concepts. Teachers have also rated the training modules highly during the feedback (4.413 on a rating scale of 5). However, the percentage improvement in the remember level of blooms is slightly negative pointing to no significant improvement in their knowledge. This points to the fact that the teachers need to be scaffolded and reinforced with basic mathematical concepts more frequently through these kinds of trainings.

- Science yielded a good improvement in each level of blooms. The 3 most challenging concepts also yielded a healthy 26.68% improvement in performance. This can be attributed to the fact that Science at primary school level is concrete and amenable to teaching and learning in an experiential way. Most of the concepts have an evident connection to the day-to-day life and teachers could easily appreciate and understand the concepts that were presented in an experiential way during the webinar.

1.5 Relevance of the Online Experiential Training Model for the future of Training Programs:

The teacher training model developed initially with the collaboration of DIET-Tumakuru & later DIET Madhugiri holds a lot of promise for the post NEP-2020 and post COVID-19 world. There are several key challenges in the traditional teacher training model used by the education department that can effectively be solved using this new training model.

a. **Loss of Quality at the last mile due to Cascading of Trainers:**

   The traditional training methods use a cascading model of trainers wherein the training material and expertise is handed from the state resource persons (state level trainers) to the district level master resource persons down to the block or cluster level resource persons who in turn conduct the training for the teachers. This cascading may result in loss of quality of the training program at the last mile. The new model tested in this program has shown the ability to centralize the trainers at the district or state level and have the most competent person conduct the training program using technology and reach every single teacher directly.

b. **Mapping teachers to their specific training needs:**

   The training program developed a process through which teachers who teach receive training in any particular subject are the ones who actually teach that subject in their schools. The training program also ensured that the modules developed for the training program specifically address the hard spots / challenging concepts for the teachers to transact in their classrooms. This ensured a high degree of acceptance of the training modules by the teachers and specific feedback for further improvement of the modules.

c. **Customize the model to improve the monthly Cluster Academic Meetings:**

   This training program can also be conducted in a Blended learning design with higher primary school teachers which can be looked at as a potential solution to significantly improving the quality of the monthly Cluster Sharing / Academic meetings that happen at cluster level. Transmission of learning modules can be centralized at the district / state level by State level resource persons with local facilitation done by subject experts / resource persons in each cluster level. This design has been tested in the Tumakuru and has been successfully implemented.

d. **Availability of Training Artefacts post training:**

All the training material that teachers use can be readily made available to the teachers on platforms like Diksha, YouTube etc there by providing continuity & reinforcement of learning to the teachers.

e. **Time and Cost Efficiency:**

Leveraging technology to effectively reach out to large number of teachers will result in significant time and cost saving to the education department. It has been estimated that the training programs conducted in Madhugiri districts have saved Rs. 15 Lakhs and above. Each of these programs would have taken more than 2 years to reach all teachers when conducted through traditional training models. The new model could successfully reach all teachers in a district in under 4 months including the preparation and implementation time.

2. Introduction

Teacher professional development is an important component of improving educational quality in schools. Every year teachers in government schools undergo a prescribed number of days of training in all the subjects to enhance their subject knowledge and teaching skills with the eventual goal of improved student learning outcomes in their classrooms. However, despite the various training programs conducted by the education department for the government schoolteachers over the years, there hasn't been a perceptible change in the teaching methodologies utilized in the classrooms [1] or any significant improvement in learning outcomes at the student levels as seen from the ASER [2] and NAS [3] reports.

It can be argued that there are several fundamental design and last mile implementation aspects that are resulting in lack of improvements like mismatch between the actual training needs of the teachers vs the training programs conducted, using a cascaded model of trainers, having a training framework that can provide teachers with an opportunity to reflect on the learnings and improvements made, lack of on-going engagement with teachers post trainings that can help teachers translate their learning into classroom practice etc.

With the new National Education Policy 2020 emphasising the need to turn classrooms into experiential learning spaces [4], it is imperative that we take a fresh look at the teacher training frameworks to plug the gaps and deliver on the promise of improved learning outcomes for students. Caring with Colour – A Manasi Kirloskar Initiative (CWC) has been working towards the goal of making experiential learning a reality in every classroom in India through various experiential teacher training programs and experiential teaching content that enables teachers to turn every lesson in the prescribed textbook into a joyful experiential learning activity for students. With COVID-19 pandemic bringing the entire education system to a grinding halt, CWC worked with various stakeholders within the education department to support the student and teacher communities to ensure continuity of learning during the pandemic [5].

The efficiency, relevance, and improvement in teachers through the training program was measured through a rigorously designed set of metrics based on data collected through assessments and the log entries available from the technology platforms that were used.

Given the safety considerations enforced during the COVID pandemic (travel constraints due to lockdowns, social distancing etc), the regular method of face-to-face training for the teachers was deemed to be difficult and unsafe. Hence there was a need to evolve a new model for training the teachers.

The goal of the collaborating partnership of DIET & CWC was to evolve a teacher training framework that can:

a. Enable and enhance the Teacher academic leadership by providing them with the perspectives, skills and knowledge required for turning their classrooms into experiential learning spaces thereby making learning into a meaningful and joyful process as suggested by NEP 2020.
b. Promote teacher autonomy by providing them the tools and skills required to create their own activity based and arts integrated experimental lesson plans that are contextual to their own classrooms.

c. Provide a safe platform through which all the primary school teachers in the district can engage with the training programs remotely, there by adhering to the norms and Operating Procedures of the government during the COVID-19 Pandemic.
d. Achieve the above in a cost-effective, scalable, and replicable way that leverages user-friendly technology platforms.

This report lays out the innovative teacher training framework. It is to be noted that the entire training program, while developed during the COVID-19 pandemic, was consciously designed in a way that the underlying framework would be applicable even once when the schooling system returns to normalcy. One of the uniqueness of the training program lies in the extent to which the power of technology was leveraged not only to reach every single teacher in the Madhugiri district but also to clearly identify the improvements made by the teachers as a result of the program.

The report provides a detailed description of the design of the training program, the process that was used to engage with the stakeholders and conduct it and the outcomes that were achieved. The report also provides key insights into the relevance of such innovations for the future of the teacher training frameworks in India.

CWC came up with content that is experiential in nature, is activity-based and engaging for the teachers. The Online Teacher Training modules were co-developed along with the Resource Persons (RPs) of the Education Department in Madhugiri and the same were co-delivered by the RPs and CWC facilitators along with the help of DIET Nodal officers. At the block level, support from BEO, BRC, and at the cluster level, CRPs, were taken for the successful implementation of the program.

Out of 2020 number of teachers registered for the training program, 2434 teachers participated in the online training program in English, Mathematics, and Science subjects across 4 educational blocks namely, Sira, Madhugiri, Pavagada, and Koratagere of Madhugiri district.
The teachers actively participated in the training and the implementation team (CWC & DIET) received excellent feedback not only from the participants but also from senior lecturers and Nodal officers of the DIET.

3. Aims & Objectives of The Training Program

The primary goal of the initiative was to develop a teacher training framework that could help teachers realize the goal of the adopting experiential learning methods as envisaged in the National Education Policy 2020. The framework should provide the DIET with the ability to run the program during the times of COVID-19 pandemic and in similar situations.

The key objective of the training modules centred around "enabling and enhancing the teacher academic leadership" and "promote teacher autonomy" in the classroom by providing them the tools and skills required to create their own activity based and arts integrated experiential lesson plans that are contextual to their own classrooms. It has been widely recognized in literature that leadership in any domain requires the right levels of enablement of an individual's knowledge, skills, attitudes, and perspectives. Translating this to the context of the academic leadership of teachers it is extremely important for a teacher to have the right depth of knowledge, pedagogical skill, a self-reflective attitude towards the student's and one's own learning and the right perspectives on the "why of education" to realize the goals of NEP 2020.

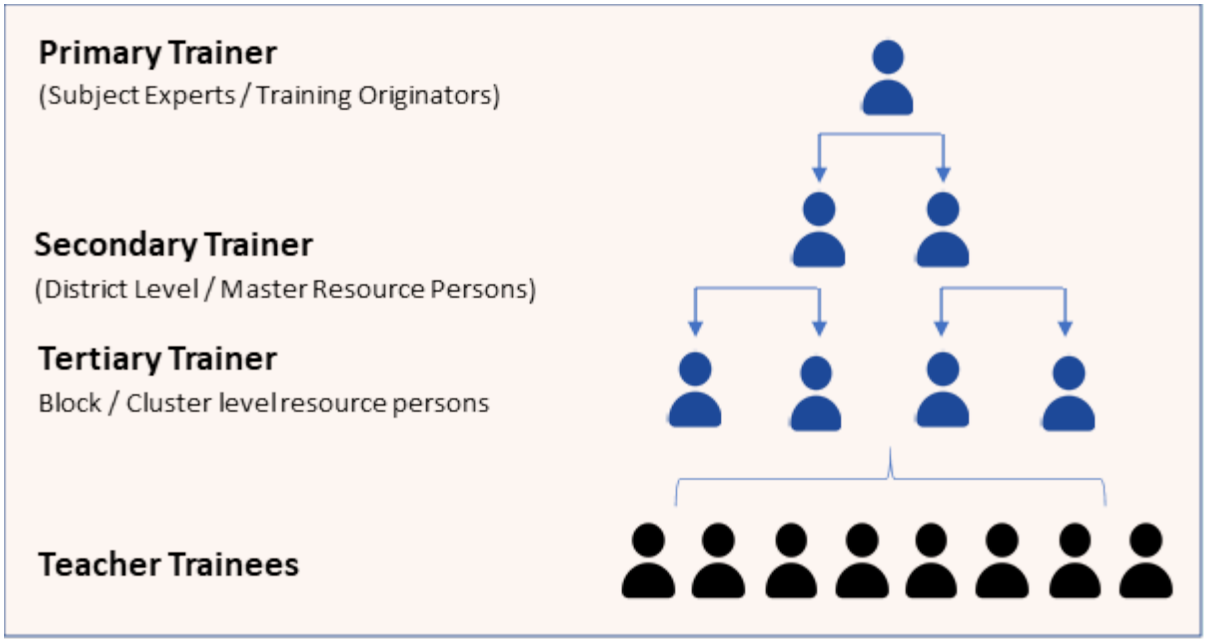
The main aim of this training program was to enable teachers to develop the competencies to create a better classroom learning environment and to develop a scalable and replicable teacher training framework that can work during COVID times. The framework should be such that it can address various shortcomings in the traditional model.

Towards this end, each training module was designed to:

- Enable teachers to deepen their understanding of concepts covered in the textbook. Focus was given to helping teachers realize the "real-world" connect for the concept at hand.
- Enhance pedagogical skills required to develop teaching strategies through which they can transact the concepts experientially in their classrooms. This involved giving teachers an idea of how to contextualize learning as well as making classrooms inclusive for students with disabilities.
- Explore various summative and formative assessment methods for ensuring the attainment of learning competencies in students.
- Build awareness on various non-textbook resources available in various online platforms like DIKSHA, Teachopia etc which can be leveraged in their classrooms.

4. Design of The Teacher Training Program

The traditional framework of the Government in-service teacher training program involves centralized module design (typically at the central / state / district level) with decentralized implementation at the block / cluster level through a cascading model of trainers. This model, also generally known as "Cascaded Model of Teacher Training", is the most widely used framework for large scale teacher training programs in India [6][7][8].



In this framework, training generally happens in physical venues like cluster / block resource centers, DIETs etc in small batches of 30 to 40 participants in each session. While this offline, in-person training model can be effective with deep experiential learning opportunities for teachers, if coordinated and conducted properly, however various operational challenges result in several shortcomings for this method of training.

In this initiative, CWC has developed a "Direct-to-Teacher" framework of training in which the various aspects of the teacher training program as proposed in the National Curriculum Framework for Teacher Education (NCFTE) 2009 have been implemented. In this "Direct-to-Teacher" framework several design changes have been done that specifically help mitigate the shortcomings of the traditional training methods.

The key design improvements developed by the "Direct-to-Teacher" framework can broadly be categorized under the following design elements:

i. **Needs:** Training targeted towards the needs
ii. **Content Design:** Content Design that facilitates effective learning during & after the training session
iii. **Execution:** Delivery mode that ensures quality at the last mile and an ability to conduct training during the COVID-19 Pandemic
iv. **Evaluation:** Provide insights into short-term and long-term impact of trainings

4.1 Design Consideration 1: Training that targets the actual needs of the teachers.

Knowing the audience and their requirement are the key steps before any intervention. As a first step in designing and conducting the Training Program, data about the teacher participants and trainings needs of the teachers are required.

- The teachers data includes their personal details, school details, subject and the grades they teach, and number of years of experience and their interest in learning different subjects to enhance their subject matter expertise. These data help in designing training modules that address the needs of the participants.
- Their training needs in terms of the concepts which are difficult to transact in their classrooms are to be gathered.
- The Resource Persons of the department with good subject matter expertise need to be identified and can be involved in the process of developing suitable modules for the teachers as well as to co-facilitate the sessions.

The traditional training model has several shortcomings that can be addressed in the Online Direct to Teacher Training Model which was implemented very successfully in Madhugiri.

Shortcomings in Traditional Training Model	Implications for new design
i. There is no enough systematic analysis of training needs of teachers which can be used for designing of training content.	i. Needs Analysis a. A detailed analysis of training needs of the teachers must be conducted. b. Training needs must be discovered at a granular level which includes the subjects that each teacher needs the training in, the topics / themes in the spiral curriculum that the teacher finds as hard spots as well as the critical concepts / sub-concepts that the teacher generally finds challenging to understand or teach
ii. Training content and modules are generally not based on the identified training needs.	ii. The training modules need to be developed to meet the identified training needs of the teachers
iii. Module development is centralized but lacks enough scope to customize it for local training needs at the district / block level	iii. Provide flexibility and space for the subject experts and resource persons at the district / block level to customize the modules for their contextual needs.

All training content and approaches should be based on the classroom needs of the teachers, may it be content enrichment, need for skills and strategies in classroom organization and management, understanding student's learning strategies, error analysis, and learners' assessment.

"Direct-to-Teacher" Framework Solution to the issues:

The National Curriculum Framework for Teacher Education (NCF-TE) 2009 also identifies the above three areas as critical factors to be kept in mind while designing the teacher training programs. NCFTE states that–

"The objective should be to develop professional development programmes that are rooted in classroom realities and directly address teachers' needs."

NCFTE also states that:

"The principle of choice of programmes to attend, based on teacher's own assessment of what he/she needs or is advised, based on some valid assessment of professional requirement, would provide a sound basis for in-service programmes, especially those that are of a long duration and which seek to impact practice."

In line with these principles, The Direct-to-Teacher training framework developed in this initiative tries to address the above aspects by determining the actual training needs of the teachers through:

i. **Discovering the training needs of the teachers at three different levels:**

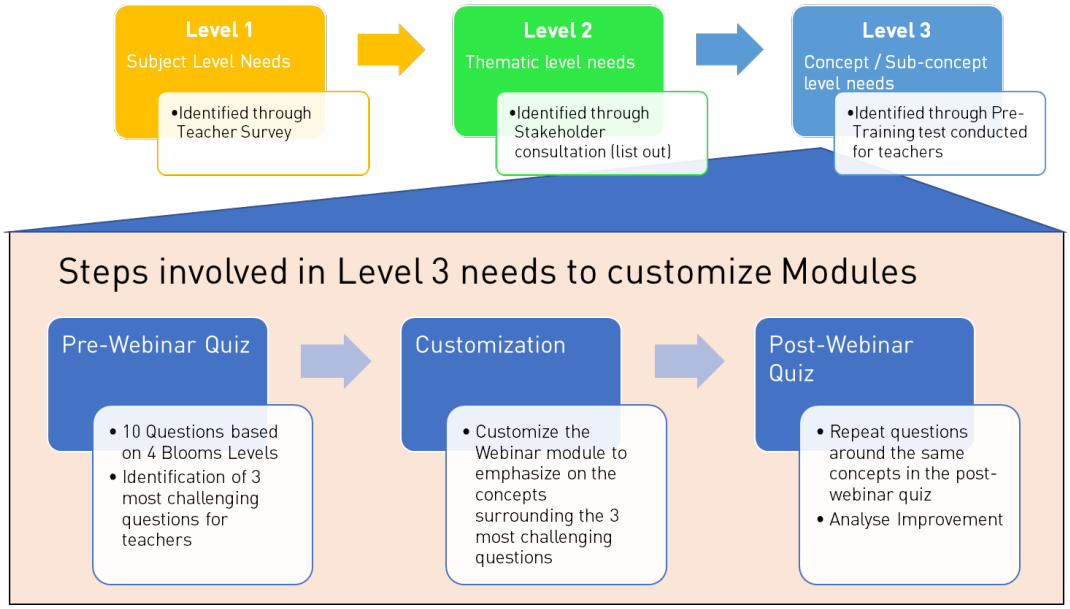
a. **Level 1:** Subjects in which each teacher would like to be trained is to be identified through a district wide survey of teachers using easy to use technology platforms like google forms.

b. **Level 2:** Topics / themes of the spiral curriculum that teachers generally find as hard spots / challenging in each subject to be identified through a thorough stakeholder consultation with DIET resource persons, nodal officers, and other subject matter experts of the department.

c. **Level 3:** Specific concepts / sub-concepts that teachers find challenging in a particular theme to be identified through a pre-training assessment. This assessment can be made easy to participate using tools like google forms. Concepts / sub-concepts that are identified as the challenging topics for teachers can be covered in greater detail in each webinar, thereby ensuring that the training program focuses more on the challenges faced by teachers.

The above data points can be collected in many ways. However, collection of such data through traditional methods like paper-based surveys is time consuming, tedious, and prone to errors. Hence, an online tool which facilitates easy data collection and subsequent analysis is necessary. The Direct-to-Teacher framework utilized google forms as the data collection medium due to its user-friendly design and the ease of integration of data into analysis tools

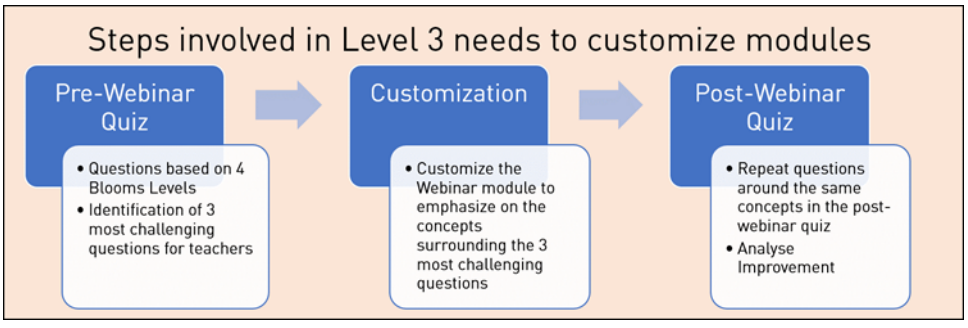
like excel, google sheets etc. Additionally, the Teacher training surveys, opinion, and feedback surveys and most importantly for uploading the assignments and projects executed by the teachers, google forms were utilised.



ii. Developing Modules based on identified needs:

The 3 levels of needs identified in the Direct-to-Teacher framework help us determine how to conduct the training programs that are specifically targeted towards the needs of the teachers. As such, Level 1 data allows the trainers to schedule teachers only for those subjects that the teachers are either presently teaching or have expressed interest in teaching. Level 2 data allows trainers to pick only those curricular themes / concepts which the teachers find as hard spots. Level 3 helps the trainers identify the specific sub-concepts which the teachers may have gaps in their subject-matter understanding and helps them pay more attention to those sub-concepts during the delivery of the webinar.

Using these 3-Levels of needs, the teacher training programs conducted under the Direct-to-Teacher framework have helped the DIETs specifically target the training programs towards the needs of the teachers.



iii. Customization of modules for contextual needs:

While some degree of generalization can be made with regards to the challenges faced by teachers from one district to another, the effectiveness of the training programs can be enhanced if the training content is customized to the local/ contextual requirements in each district. This framework provides scope for co-development and co-facilitation of the training modules by various levels of stakeholders of the education department (DIET Nodal

officers, DIET Lecturers, Resource Persons etc). The stakeholders from the education department give their inputs during the development as well as review of the training content to create and modify content which suits the diverse classroom teaching needs as well as builds on the present competence of the teachers of that district. This provides the space and flexibility for customization of the modules to meet the contextual training needs of the teachers. The training modules for any given theme that are developed by one DIET are discussed with the resource persons of the other DIET before transacting the modules with the teachers in that districts.

4.2 Design Consideration 2: Content Design that facilitates effective learning during & after the training session

Having an effective content design for a teacher training program is of key importance.

Andragogical principles dictate that the content design for the teacher training sessions must provide plenty of opportunities for teachers to reflect on their experiences and bring them to the learning process. The content transacted in the sessions must be interactive and must be directly related to the day-to-day challenges faced by teachers in their classrooms.

NCFTE 2009 states that,

"The content of programmes must be such that teachers can relate to it from their own experience and also find opportunities to reflect on these experiences." And that *"Interactivity must not be compromised on any account."*

In line with the principles described in NCFTE-2009, the Direct-to-Teacher training framework incorporates several design elements that make the process of learning experiential and engaging to the teachers. A comprehensive course structure is used that helps the teachers reflect on the various concepts/ sub-concepts transacted in the webinar and understand how their knowledge and perspectives have changed as a result.

4.2.1 Components of the Training Program

The training program consists of 3 distinct phases:

i. Pre-Training Phase
ii. Training Phase
iii. Post-Training Phase

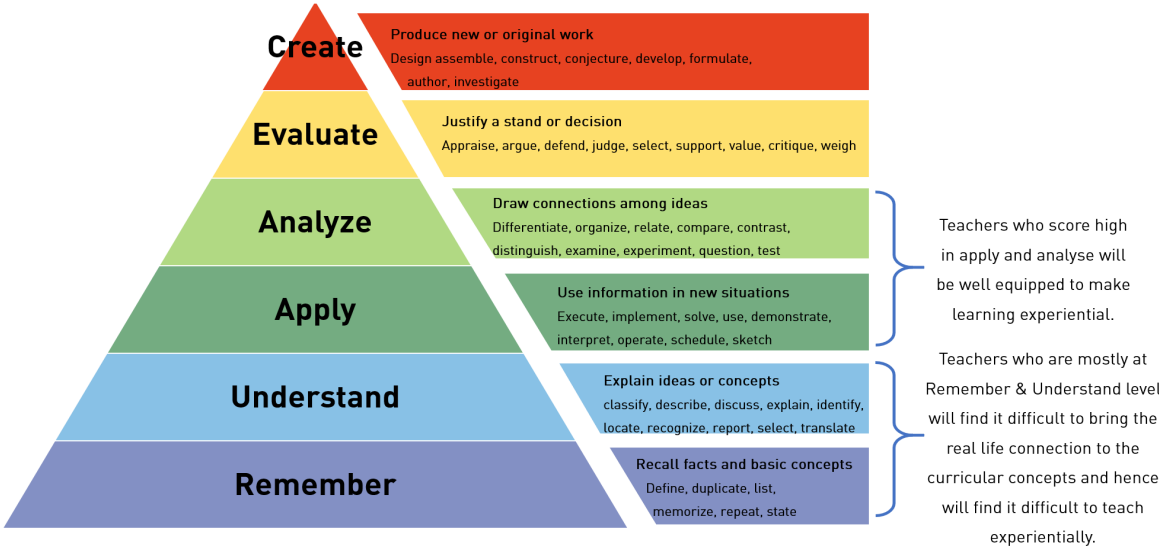
i. Pre-training Phase:

This phase of the training program is designed to:

a. Allow the participant teacher to reflect on their knowledge and perspectives about the topic they are being trained on through a Pre-Training assessment.
b. Read and relate the topic of training so that they are oriented for the training session.

c. Help the trainers determine the gaps in the subject-understanding of teachers so that the training session can be modulated according to the needs of the participants.

Pre-training assessment: The Pre-training assessment is designed as an easy to participate quiz for teachers in which they are asked to answer 10 Multiple Choice Questions (MCQs) relating to the topic of training. The MCQs are of varying degrees of complexity and are mapped to the first 4 levels of Blooms Taxonomy [9] (Remember, Understand, Apply and Analyse). This design of the assessment helps the trainers ascertain the depth of knowledge that participants have in the topic.



Teachers with a robust understanding of the topic at an apply and analyse levels will easily be able to see the interrelationship of the topic at hand with the phenomena around them in their daily life and hence are better placed to adopt experiential teaching techniques in their classrooms as envisaged by NCF-2005 and NEP-2020. As such the goal of the training program can be thought of as helping teachers to deepen their subject understanding to an analyse level, where they will easily be able to draw connections among varying ideas and concepts in the curriculum. Google forms were chosen as the tool to conduct the assessments. This has the benefit of user-friendly interface for teachers to use as well as a robust set of analysis tools that trainers can use at the backend through which they can understand the performance of teachers at a granular level.

Pre-training resources: The pre-training resources are designed to orient the teachers towards the topics that will be transacted during the training sessions. This constitutes various types of materials like documents, videos etc which introduce and provide an overview of the concepts to the participants.

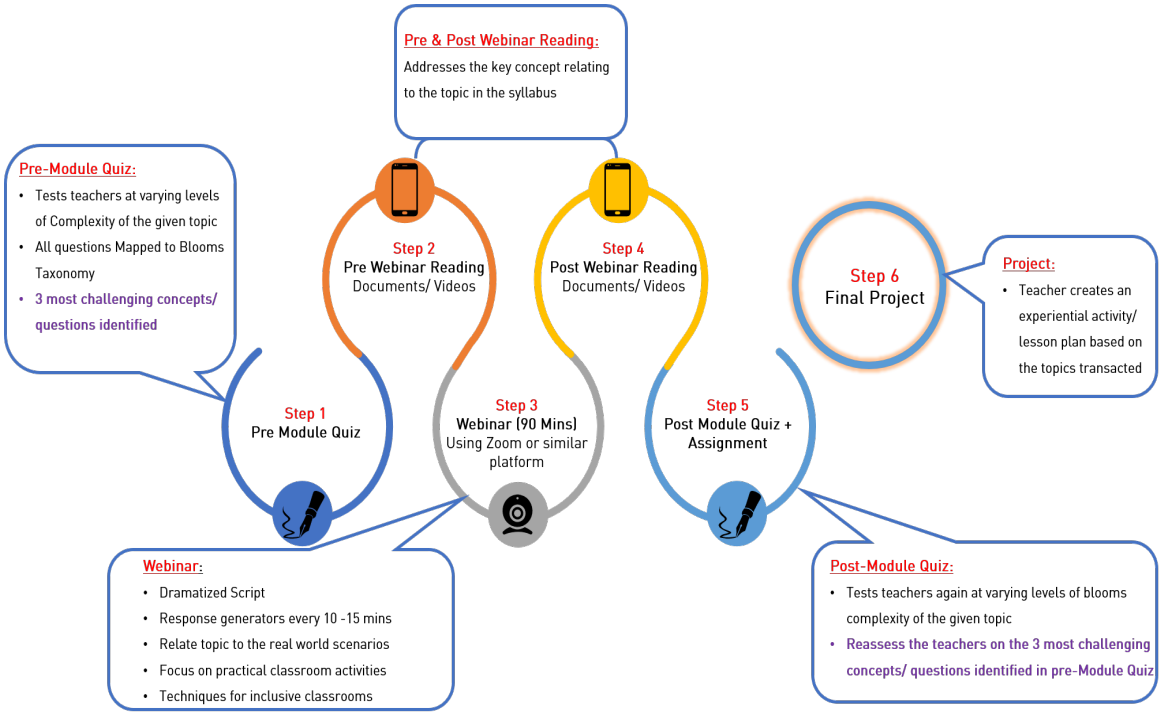
ii. Training Phase

The training sessions are designed to be live online webinars that provide a highly engaging and interactive learning experience to the participants. These sessions are conducted using online platform like Zoom, that provide significant interactivity features for the participants. The sessions are limited to 90 minutes to ensure

optimal levels of attention and engagement as well as reduce the screen fatigue for participants [10]. In addition, each 90-minute training modules are transacted once in every 2 days (for a maximum of 2 hours) allowing teachers enough flexibility to perform their day-to-day routine while attending the training programs.

Module Design is based on a well thought out set of the adult learning principles. Each training module is designed to allow the participants to joyfully engage themselves throughout the 90-minute session. Various content design elements like dramatized scripts that teachers can readily relate to, videos, simulations, poll questions, chat box questions, concept maps, ideas & activities for classroom transaction, ideas for assessments in the classroom are embedded into each webinar. Participants are also provided with a list of teaching resources mapped to the curriculum that they can access in their classrooms and overcome the limitation of using only textbooks to teach. Online resources from DIKSHA, NCERT, DSERT etc are provided to the teachers.

Response generators (like poll questions and chat box questions) are utilized in 10 to 15-minute intervals to ensure participant attention is retained [11]. In addition, some of the webinars also included live Q&A and interaction sessions with the respective subject nodal officers of the education department of the district in which participants could directly provide their feedback / opinion on the suitability and effectiveness of this method of the training program.



Webinar flow is made experiential in nature with examples that directly connect the topic to the day-to-day life outside the classrooms. The content allows the participants to get an understanding of how to make their classrooms lively by quoting examples which are more contextual and connected to student's living environment.

The design of the module allows the participants to provide the feedback towards the end of the session which helps trainers in further improving the modules. Feedback questions were designed to seek participant opinion on content suitability, effectiveness of the session in reinforcing subject knowledge and diversity of activities discussed in the session.

The training program is designed to include large number of participants (up to 1000 participants in each session) at a time. The flexibility of the Direct-to-Teacher framework provides the scope for adding additional content as required to contextualise the module while scaling up without compromising the quality.

iii. Post-training Phase

The post training phase is designed to help the participants reflect upon their learnings from the training sessions and deepen their understanding of the topics discussed in the webinar. The components of this phase also help the trainers in understanding the effectiveness and impact of the training program on the progression of the teachers. The post training phase has broadly the following components:

a. **Post-training resources:** Post training materials are designed to help the teachers engage with the concepts relating to the training topic in a more rigorous way. These can be reading materials, videos, links to related articles/documents which re-enforce the understanding of the participants on the concepts that were covered in the training. These materials allow the teachers to dive deep into the subject matter discussed in the training.

b. **Post-training assessment:** The design of the post training assessments is like that of the pre-training assessment in which teachers take an assessment of 10 MCQs which are mapped to the 4 levels of Blooms Taxonomy (remember, understand, apply and analyse levels). These assessments not only help the teacher reflect on the concepts discussed during the webinar but also help deepen his/her understanding through the apply and analyse order questions. This assessment, in combination with the Pre-Training assessment, is designed to help the trainers as well as the education department administration and leadership assess the outcomes of the training program.

c. **Post-training Assignments and Project:** The assignments and projects are designed to help the teacher in applying the knowledge gained towards creating experiential teaching collaterals for their classrooms. In addition, this provides an opportunity to discuss the ideas with their peers which helps in expanding their knowledge and skills on the topic. The assignments generally include simple and easy-to–execute tasks like; creating teaching-learning materials (TLM), performing experiments, creating experiential lesson plans, creating, and solving puzzles & problems based on concepts, etc.

d. **Webinar Videos:** The intensive use of technological tools in this design allows the trainers to easily provide recordings of the webinar sessions which allows the participants to have an on demand and easy reference to the training content. The recordings can be easily made available on the open-source platforms like YouTube / DIKSHA etc. This will help in reinforcement of learning of the concepts discussed in the webinar.

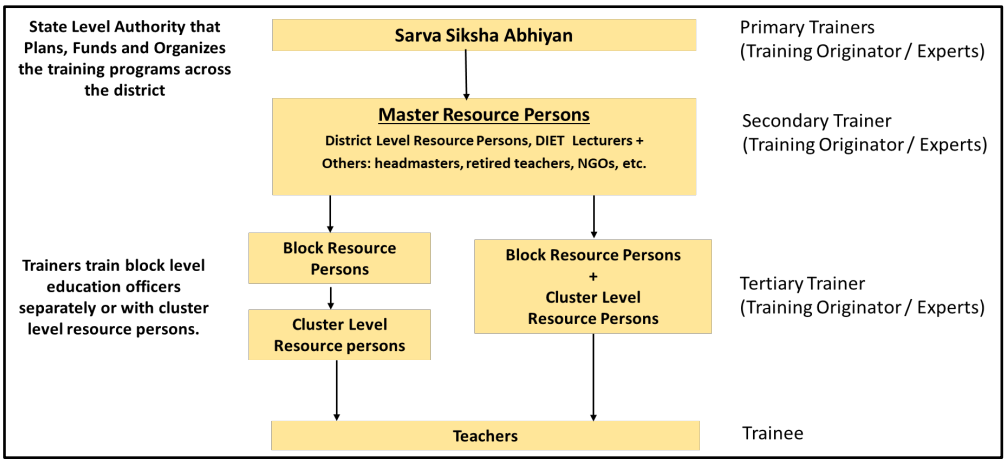
The content design principles used in Direct-to-Teacher training framework has the potential to significantly enhance the effectiveness and outcome of the training programs. This framework has the potential to mitigate some of the operational level shortcomings of the traditional training program in which the trainers may not have the granular level of data on the precise training needs of the teachers and may not have the ability to integrate the diverse types of engaging and experiential activities into their sessions for their lack of infrastructural provisions at their block / cluster level training centres [12].

4.3 Design Consideration 3: Delivery mode that ensures quality at the last mile.

The Teacher training programs conducted by the education department by their very nature are large scale, given the magnitude of the government schooling system. Just as it is important to ensure that the training modules are designed effectively, it is also of critical importance to ensure that the delivery of the training at the last mile (i.e to the teachers) is done at the highest possible quality. The teacher trainers must be thoroughly knowledgeable in the subject area and must adopt best practices and processes while conducting the sessions.

4.3.1 "Direct-to-Teacher" Framework for Training Delivery

Traditionally the education departments have been using a "Cascaded Model of Trainers" to conduct the large-scale teacher training programs. Under this model, the Primary Trainers (Training program originators, Master Resource Persons etc) train the secondary level trainers (District level resource persons, DIET Lecturers etc) who in turn train the Tertiary level trainers (Resource persons at the Block / Cluster level). The actual training of teachers is done by the Tertiary level trainers.



Research studies have shown that, Cascaded Model of trainers leads to significant dilution in the quality of the training program [12]. It has also been seen that the lack of quality control in the Cascaded model has led to

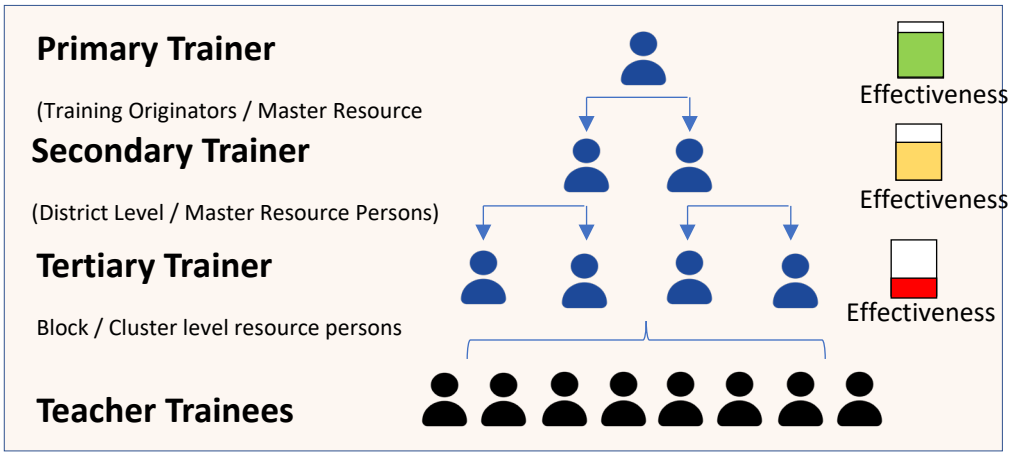
significant divergence in the intended outcomes of a training program at the origination point (State / Central Level) vs the actual delivered outcomes at the Block / Cluster level.

The above 3-tier Cascading model of Trainers which train MRPs, DRPs and cluster and block level resource persons has been prone to have resulted in a lot of dilution in the quality transacted at the teacher's level.

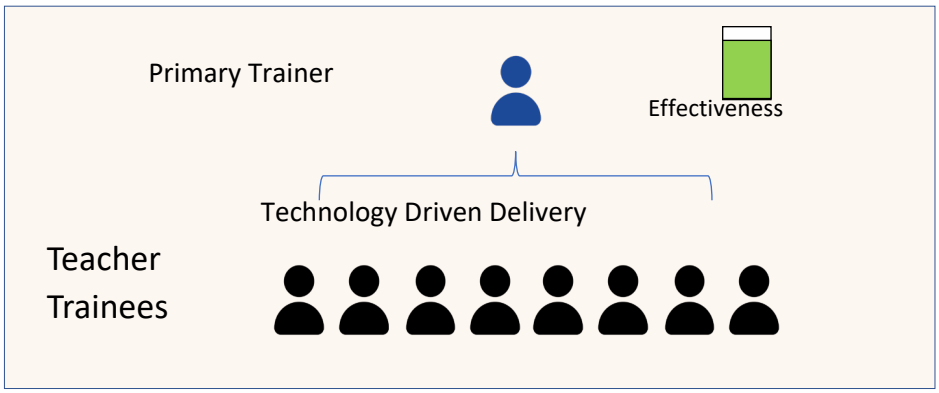
NCFTE says,

"The quality of pedagogical inputs in teacher education programmes and the manner in which they are transacted to realize their intended objectives depend largely on the professional competence of teacher educators."

"Although cascading model has come to be accepted as the way of disseminating information in most in-service training programmes, it appears to have failed to significantly improve the performance of educators."



To mitigate the quality concerns usually faced in the Cascaded model of trainers, this initiative came up with a "Direct-to-Teacher" framework of training in which the training program can be delivered at a large scale to all the teachers in a district using technology. In this model trainings can be conducted as live online programs with various types of interactive features as described in the earlier section. The training programs conducted using this model have shown that the quality of delivery at the last mile can be maintained when the Primary trainers / Master trainers are able to deliver the training program directly to the teachers.



4.3.2 Leveraging Technology in Delivery of training

Technology can play a major role in facilitating and transforming the quality of teacher training programs. In this initiative several technology platforms have been brought together to form a cohesive technology-based delivery system that can function without the need to train the teachers separately on technology usage. To achieve this, the Direct-to-Teacher model focused on using freely and widely available apps for teachers.

Designing the program delivery purely based on technology platforms has allowed for Resource persons of CWC and DIET collaborate with each other closely. Using Zoom as the primary webinar platform has allowed the model to make the sessions interactive while being able to reach an audience as large as 1000 participants per session.

Purpose	App Used
• **Communication with teachers**	WhatsApp
• **Conducting Assessments, Feedback, Data collection Surveys**	Google Forms, Google Sheets &Excel
• **Webinar Platform**	Zoom, YouTube Live Streaming (limited use)
• **Content Creation & Sharing between CWC & DIET RPs**	MS Office apps, Google Drive, Google Docs, sheets, WhatsApp etc
• **Meetings with RPs**	Google Meets, Zoom
• **Assignments and projects submission from teachers**	Audio-visual editing Android apps, pdfs,
• **Content Publishing for Post-Training access by Teachers**	YouTube

4.3.3 Cost and Time Efficiencies in Reaching Last Mile

The time taken for any largescale training program to be completed using traditional methods depends on the number of teachers who need to be trained as well as the geographical spread of the district (number of clusters and blocks in the district).

It has been estimated with the help of DIET, Tumkur, that the training program similar to the one in this initiative would have taken 6-15 months to reach all teachers in a district if done through traditional cascaded model. However, using Direct to Teacher model which leverage technology in significant ways could successfully reach all teachers in the district with in a 3 months' time frame (a total of 15 modules in 3 subjects covering 3902 teachers)

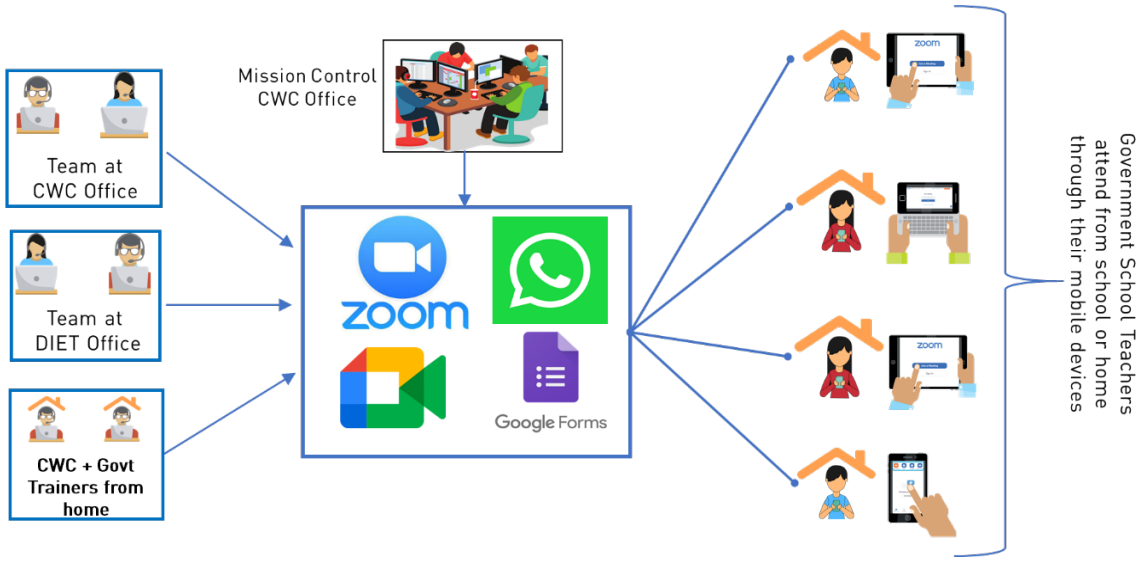
The studies have shown that the budgetary constraints have impacted in-service teacher training programs negatively, in some cases resulting in reduction in the number of training programs conducted by the district[12]. It has been estimated with the help from DIET, Tumkur, that the Direct –to –Teacher model

would result in an 80% to 90% cost saving compared to the traditional cascading model of training. The cost reduction is generated primarily from the reduction in cost of travel and dearness allowance paid to the participants, food, and refreshments for the participants, stationary and other material costs.

The Direct –to-Teacher training also has the advantage of reduction in the cycle--time of the training. This model provides for repetitive trainings for reinforcement of learning in short cycles. For example, the training can be repeated to same set of participants every month or even twice a month if needed.

4.3.4 Delivery of Training During COVID-19 Pandemic

The ability to conduct training programs during the COVID-19 Pandemic was one of the key design requirements of this initiative. The technology driven design of the program has ensured that the training program could be successfully conducted despite the stringent travel restrictions and social distancing norms that were in effect during the pandemic. The SOPs of the pandemic strictly required that gatherings, using the common washrooms, utensils, etc are avoided. Resource Persons who are geographically located in different places could synchronously conduct the live Direct-to-Teacher training programs through leveraging the power of online meeting platforms and teachers could attend sessions from the safety of their homes or classrooms. The participants can go through and attend other elements of the training program, like, going through the reading materials, attending quizzes, working on the assignments and projects independently through the use of online tools on their mobiles. This could ensure safety of both the participants and Resource Persons while attending the training program.



4.4 Design Consideration 4: Provide insights into short-term and long-term impact of trainings

"What is not measured is not Manageable". It is of utmost importance that the quality, participation, and impact of the training program are properly measured in order to design the subsequent set of training interventions for teachers. The training program design must include detailed metrics that provide granular data on various aspects of the program. Such data should enable rigorous post training analysis leading to the understanding of the progress made by teachers and the nature and scale of subsequent programs.

The Direct-to-Teacher training framework has a metric design that helps the education leadership in the district evaluate the following criteria.

a. **Improvement in Teachers**
   i. **Metric 1:** Performance in Assessments: Pre Vs Post-Webinar.
   ii. **Metric 2:** Performance in 3 Most Challenging Questions: Pre Vs Post Webinar.

Note: Metric 1 & 2 are measured through the Pre-Training and Post Training assessments taken by teachers through google forms

b. **Efficiency of the Program**
   i. **Metric 3** – Part 1: Breadth of Participation (Number of participants out of the total number of teachers)
   ii. **Metric 3** – Part 2: Depth of Participation (Number of participants successfully engaged)

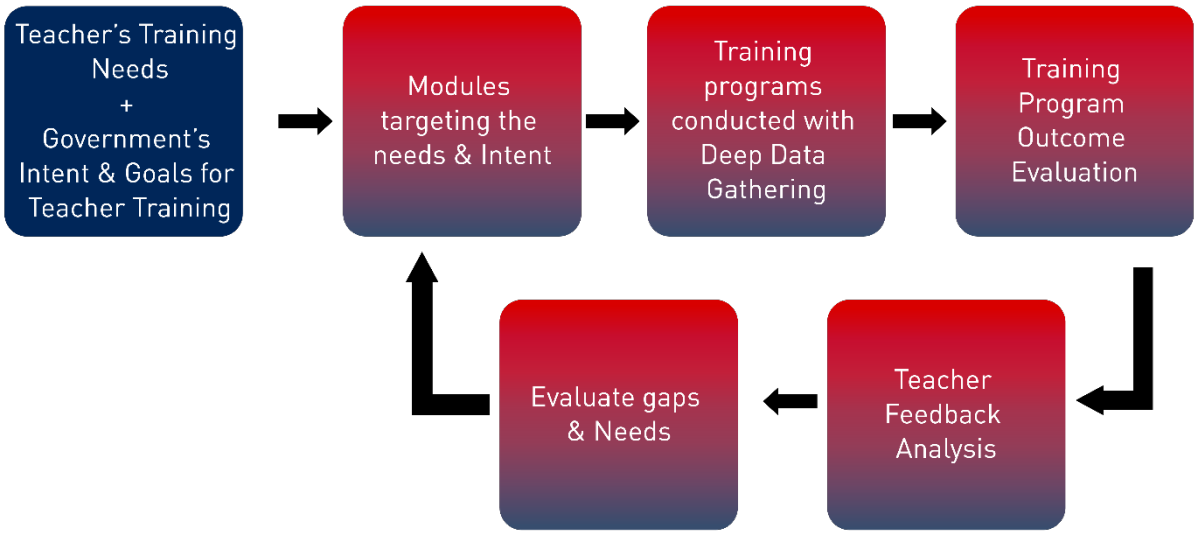
Note: Metric 3 is measured through the digital logs of the participants available on Zoom

c. **Relevance to Participant's Needs**
   i. **Metric 4** – Part 1: Suitability of Content for Teachers
   ii. **Metric 4** – Part 2: Usefulness in Reinforcement of Subject Knowledge
   iii. **Metric 4** – Part 3: Diversity of Activities proposed for the topic

Note: Metric 4 is measured through the feedback poll questions given to participants on zoom at the end of each webinar

The design of the metrics in the Direct – to –Teacher framework provide the space for PLAN DO CHECK ACT principle which is one of the effective management tools used in various industries across the world. Through the use of these metrics, trainers will be able to identify the training modules that are not impactful and the reasons for it so that appropriate remediation can be brought in for the next rounds of training.

This metric design represents significant improvement over the traditional cascading model of training wherein the amount of data that can be collected for analysis and improvements is quite limited.



5. Implementation of the Direct-to-Teacher Training Program

The Direct-to-Teacher Framework was utilized in conducting district-wide teacher training programs in Madhugiri district. These training programs have been conducted in close collaboration with the DIET.

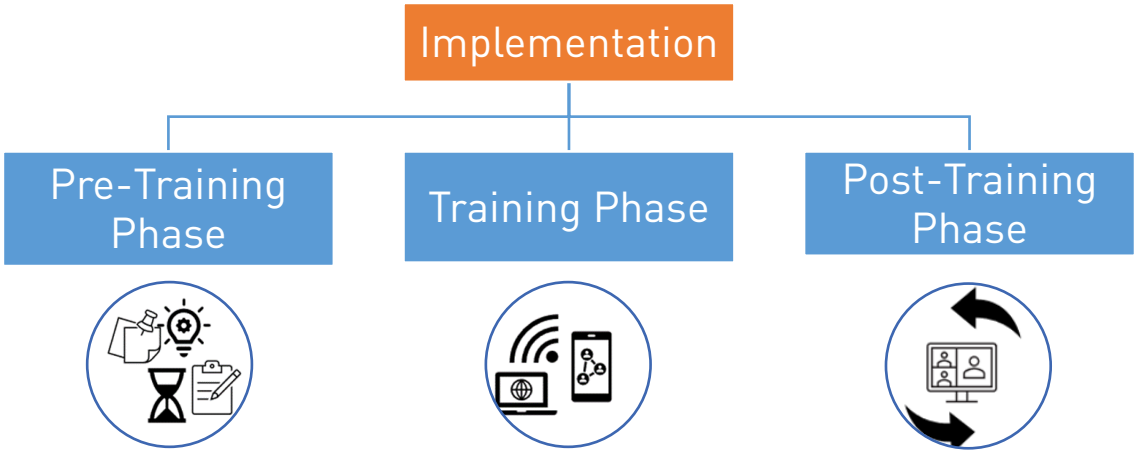
Coverage Details:

Madhugiri Online Teacher Training Program 2021	
• **Training Mode**	Online
• **Grade Levels**	4, 5, 6, 7
• **Number of Teachers Participated in the Training**	2095
• **Number of Training Modules Transacted**	15
• **Number of DIET Teacher Trainers participated in the Training**	18
• **Number of Learning Hours provided**	37710
• **Number of students benefited (Grade 4 to 7)**	61934

Description of the Program Implementation:

The process of implementation was designed to address the suggestions, opinions of the department stakeholders who were involved in the training program. The DIET anchored the training program and provided the required administrative support for smooth implementation of program. The Implementation process can be broadly classified into 3 phases, namely:

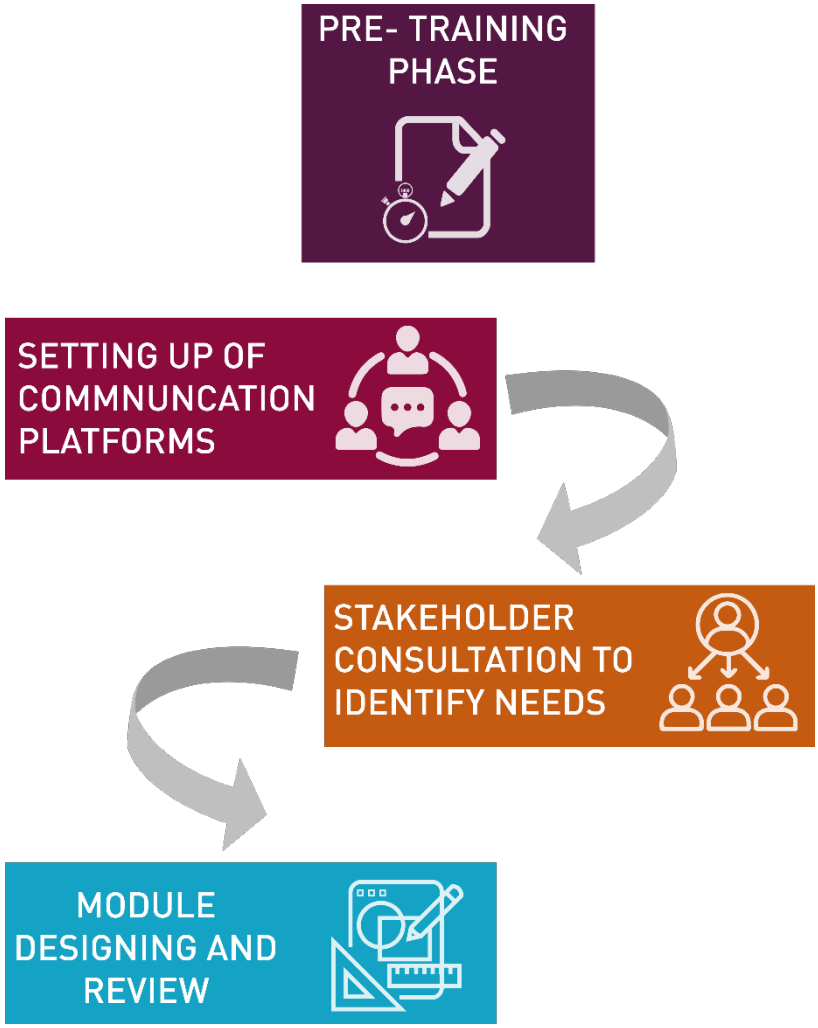
I. **Pre-Training Phase**
II. **Training Phase**
III. **Post-Training Phase**



I. Pre-Training Phase:

In this phase the initial groundwork and the preparatory work carried out before the actual training. This

SCHEMATIC REPRESENTATION OF THE STEPS INVOLVED IN PRE-TRAINING PHASE



a. **Setting up of Communication platforms:**

- Teachers' data of the Madhugiri educational district was collected from the DIET using Google forms. This data was used to group the teachers into subject specific batches.

- Resource Persons for each subject were identified from the DIET. SPOCs (Single Point of Contact) from CWC for each subject were identified to co-ordinate with the Nodal officers and subject RPs from the department.
- The Nodal officers and the CWC SPOCs scheduled training dates and prepared timelines of the training.
- Block-wise subject-specific WhatsApp groups were created. These groups were utilised to share circulars, training schedule, Pre and Post training reading materials, links to Pre and Post Quizzes and invitation links to the training session with the teachers.

b. **Stakeholder consultation to identify needs:**

- Hard spots are concepts in each subject that needed scaffolding for better subject-matter understanding and transaction of those concepts in the classroom. The Nodal officers, the RPs for all the subjects and the CWC SPOCs deliberated and came up with a list of concepts that were identified as hard spots.
- Simultaneously, the subject teams at CWC also came up with a list of concepts which are complex to understand and tricky to transact in the classroom. This list of concepts which came out of both the deliberations with the DIET and CWC's experience in the government schools, formed the base content for all the modules in 3 subjects.

c. **Module Designing and Review:**

- The design of the course was based on the guidelines prescribed by NCERT/ DSERT and NISHTHA. Specific elements such as learning outcomes, interlinking of concepts, assessments, transactional ideas/ activities on how to transact a concept in the classroom, connecting of concepts to day-to-day life were included.
- The CWC Resource persons created learning modules based on the needs of the teachers identified during the consultations with the DIET as well as after analysing the teachers' responses of the Pre-training Quizzes.
- To keep the webinar interesting and the participants engaged throughout the session, elements of storytelling were utilised like use of narrative to discuss a concept, characters to grab attention of participants, videos, and simulations to enrich the engagement and understanding of the concept.
- Designing the module for an online platform requires meticulous utilization of the features that the given platform has to offer. The Poll questions and Chats features available on the Zoom platform were utilised to increase teachers' engagement with the content in the module.
- The modules had poll questions at strategic sections to allow the teacher to inform the facilitator about their engagement with the content, understanding of the content and much more. Specific questions were created and asked in such intervals to elicit answers from teachers, through Chat's feature.
- After a round of internal review within the CWC subject team members, RPs and Nodal Officers from the DIET reviewed the modules along with the CWC RPs on google meet and gave their inputs to enhance the quality of the modules.

- The subject team members worked on the suggested changes and paved way for rehearsals for the module presentation.
- The rehearsals of the Module presentation were done between the RPs of both the DIET and CWC on Google Meet.

II. Training Phase:

The training phase comprises of multiple stages in it for the effective training. The following are the different stages involved in this phase:

a. Orientation:

- The Nodal officers and RPs were oriented on using Zoom as the technology platform for the facilitation of webinars.
- The roles of CWC members, Nodal Officers and RPs during the training program were discussed and delegated. The modules were finalised by the subject RPs, Nodal officers and the CWC subject team.

b. Rehearsals:

- 2 DIET subject-RPs and 2 CWC subject team members were assigned to facilitate each module. This team gathered regularly using Google meet and Zoom to rehearse for facilitating the webinar.

c. Sharing and Analysis of the Pre-Assessment:

- The Pre-Webinar Quiz was shared as Google forms through the respective WhatsApp groups by Nodal Officers. The questions asked in the Pre-Webinar Quiz helped us to identify the 'baseline' subject matter knowledge of the teachers in the given concepts.
- Analysing the quiz responses received by the teachers showed some least correctly answered questions, which revealed the concepts that they needed more scaffolding. These concepts were considered as immediate hard-spots and were addressed during the webinar.
- Regular follow-up was done with the participants from both Nodal Officers and CWC SPOCs to ensure that the teachers took up the quiz.

d. Sharing of Pre-reading materials:

- Preliminary discussion-notes and brainstorming material on the concepts to be covered in the webinar were shared with the participants through respective subject WhatsApp groups by Nodal Officers.

e. Facilitation:

i. The invitation links for the webinar session were shared with the participants on the same WhatsApp groups by Nodal Officers.

ii. **Inauguration** of the program was carried out where all the stake holders and participant- teachers across all the subjects attended the session and received schedule and overview of the online training program.

iii. **Content:** The main presentation of the topic with detailed topical discourse using dramatized script which has role plays with help of characters and storylines to discuss a concept along with videos and simulations. Additionally, transactional ideas or activities were also discussed which could be used to deliver the concepts experientially in a classroom were also a part of the sessions.

iv. **Interactivity**: The features of Poll Questions and Chats of Zoom were utilised to keep the session interactive as well as let the participants to convey their understanding in regular intervals.

v. **Feedback:**

The feedback of the training session was collected in 2 ways:

- **Through Poll Questions**: Teachers' feedback on Content Suitability, Re-enforcement of Subject and Diversity of Activities were collected.
- Teachers also shared their views on:
  - **b.** Whether they felt confident to take up Experiential teaching methodology to their classrooms.
  - **c.** Their awareness of various types and sources of content available apart from textbook.
  - **d.** Whether they seek further training on Experiential teaching methodology.
- **Through Live Feedback-Video chat**: Few teachers provided verbal feedback and suggestions on the quality of the sessions, expected frequency of the trainings, and improvement of the program.

vi. **Queries/doubts**: Teachers asked content specific queries and got them clarified by the facilitators (RPs) during the webinar in the Live feedback session and Chat section. After the webinar, the queries were raised in the subject specific WhatsApp groups where the RPs and the co-participants provided clarifications.

f. Sharing of Post-reading materials:

Additional and supplementary reading materials and additional ideas on transactional activities on how to teach the concepts in the classroom discussed in the webinar, were shared through the respective WhatsApp groups by Nodal officers.

SCHEMATIC REPRESENTATION OF THE STEPS INVOLVED IN TRAINING PHASE

g. **Sharing of The Post-Webinar Quiz:**

The Post-Webinar Quiz links was shared to the teacher participants through respective WhatsApp groups. This quiz helps to track the understanding levels in the participants for the concepts covered in each module in the webinar.

3 additional questions linking to the 3 most incorrectly answered questions from the Pre-Quiz were added in the Post-Quiz to evaluate the improvement in understanding on those specific concepts (Hard-Spots).

Regular follow-up was done with the participants from both Nodal Officers and CWC SPOCs to ensure that the teachers took up the Post-Webinar Quiz.

h. **Sharing of Assignments:**

Simple assignments such as creating Teaching-Learning Materials (TLMs), lesson plans on a small topic, experiments, puzzles, etc., based on the concepts covered in the webinar were shared through the respective WhatsApp groups. Participants attempted one assignment for every module.

Regular follow-up was done with the participants from both Nodal Officers and CWC SPOCs to ensure that the teachers completed their assignments.

i. **Project:**

A subject specific Project, based on the concepts covered in each subject was assigned, to be created by the participants. This was shared using the same WhatsApp groups.

Regular follow-up was done with the participants from both Nodal Officers and CWC SPOCs to ensure that they completed their Projects.

j. **Collection of Assignments and Projects:**

Google forms were created and shared with all the participants through the same WhatsApp groups, in which they uploaded images, videos and PDFs of the completed assignments and projects. These forms were shared after the 10-days period given to the participants for preparation and completion of the assignments and projects.

Regular follow-up was done with the participants from both Nodal Officers and CWC SPOCs to ensure the submission of Assignments and Projects.

III. Post-Training Phase

This is an important phase for any stake holders as it gives the picture about the implications and impact of the training program. It paves the way for the future engagements. This phase comprises of 2 sub phases, namely:

a. Output and Outcome Analysis

Analysing the outcomes is also an important process followed in the post training phase of the program. The outcomes derived from the program were analysed using the metrics which describes the impact and implications of the training program.

SCHEMATIC REPRESENTATION OF THE STEPS INVOLVED IN POST - TRAINING PHASE

Metrics used in the Training Program: For every training, there are 4 set of parameters/ metrics that can be analysed for each subject, and they are defined below:

- **Metric 1: Overall Performance - Pre Vs Post Webinar Assessment**
- **Metric 2: Improvement in Hard Spots**
- **Metric 3: Efficiency of the Program**

- Metric 4: Relevance of the program

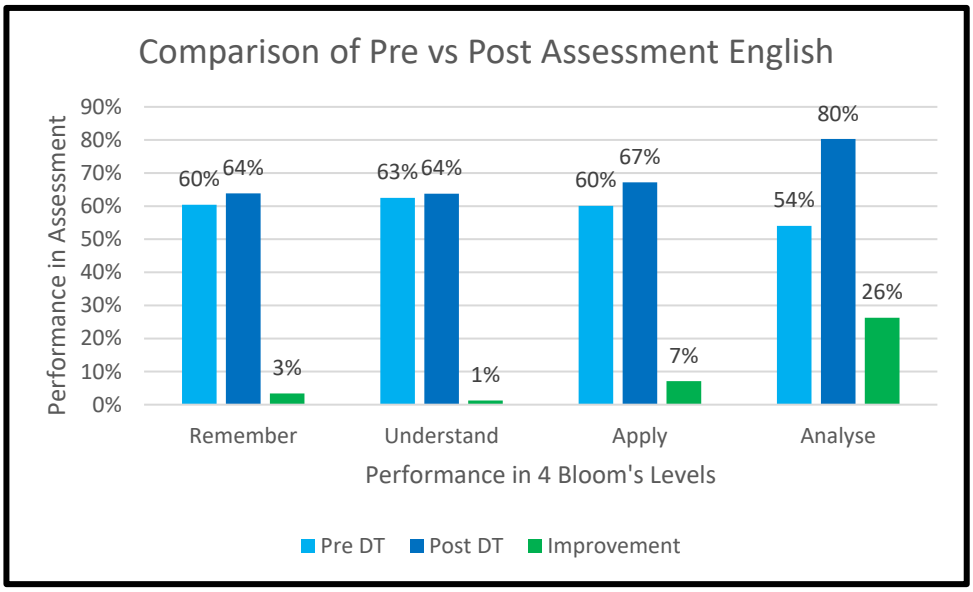
Improvement in Teachers:

To gauge the effectiveness of the training program, webinar assessments is one of the quick tools. Along with it the responses obtained from the teacher participants on the hard spots forms another basis for analysis. Hence these two aspects form individual metrics which together describes the improvement of the teachers understanding in the subject matter after the conduction of training session.

Metric 1: Overall Performance - Pre Vs Post Webinar Assessment:

- In this metric the performance of the teachers in pre-webinar Vs post-webinar assessment is compared to understand the improvements made through a total of 10 questions designed at 4 different levels of Blooms (**Remember, Understand, Apply and Analyse**).
- Bloom's taxonomy helps us to understand the depth of knowledge and skill that the teacher has acquired in the topic they are being trained for.
- The first two levels of blooms (i.e., remember and understand) represent a basic level of understanding that the learner has in the topic. As the depth of understanding improves the learner will acquire the ability to use the knowledge gained in the topic to apply to new situations presented. A further improvement in the depth of understanding leads the learner to be able to draw connections between the various ideas relating to the concept. The learner in this stage will be able to organize the information in a way that can lead to examining and experimenting with the ideas from a new perspective.
- Experiential teaching, in its essence, requires the teacher to be able to draw connections between the various concepts and ideas in the textbook, identify where the concepts can be found in the day-to-day life and bring them in a measured way into the classroom for the learner to experience them. This in essence requires the teachers to have an in-depth understanding of the concepts.
- The training program design presumes that teacher need to have sufficient expertise at both the apply and analyse levels. The overall goal of building the subject matter expertise of the teachers is to enable them to raise up to the level of "evaluate and create" where the teachers are empowered to justify / criticize what is working and not working and can independently create new content, teaching and learning methodologies and assessment tools required for their classroom situations. The assessment used in this training program did not have questions relating to *Evaluate* and *Create* levels of Bloom's.
- A total of 10 questions were used in pre and post webinar assessments given to teachers. A general guideline of 3 questions in each of remember and understand levels and 2 questions in each of apply and analyse levels was used in the assessments, although the nature of the topic required a deviation from the guideline in some cases.
- The assessments, designed as multiple-choice questions (MCQs), were sent to the teachers through google form links that were disseminated through the teacher WhatsApp groups.
- The following graphs depicts the Pre-Assessment vs Post-Assessment performance in English, Mathematics, and Science subjects. For each subject, their respective inferences have been drawn.

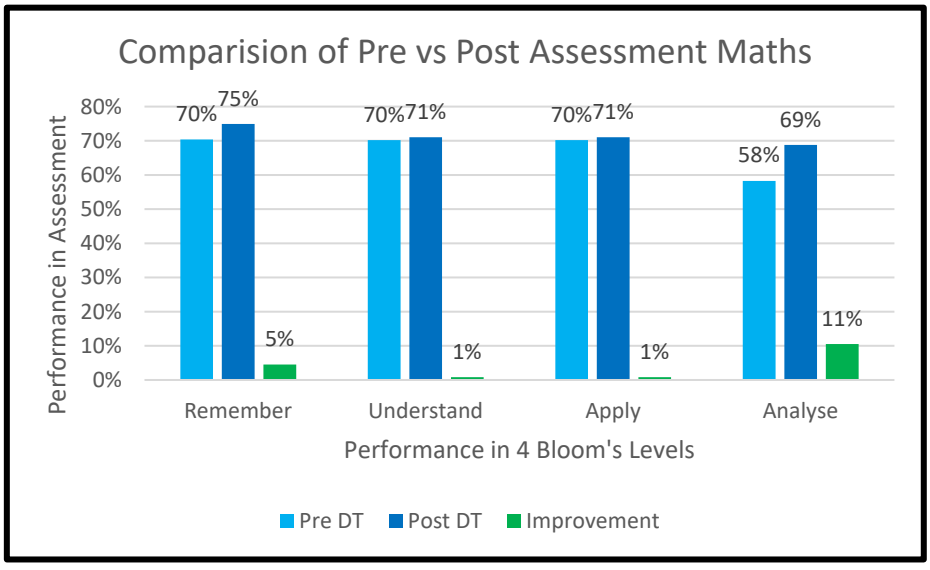
Subject: English



Inference:

- Improvements in the bloom's levels of Remember, Understand, Apply and Analyse points at the teachers displaying enhanced subject-matter expertise in the concepts covered in the subject of English.
- For Remember bloom level there is a marginal improvement which signifies that the teachers know the concept but fails to express using the words or they know the concept deriving the similarities from their mother tongue but not clear with its definition. Specifically, the improvement visible in the levels of Understand and Apply points at the increase in understanding of the concept and using it in daily life for simple sentences.
- The increase in the improvement for the Bloom level of Analyse, points at the increment in the depth of understanding the intricacies of the given concepts and using them in real-world application and connection with day-to-day life.
- This could be further attributed to a possibility that the teachers found it difficult to understand the questions asked in the Post-Quiz.

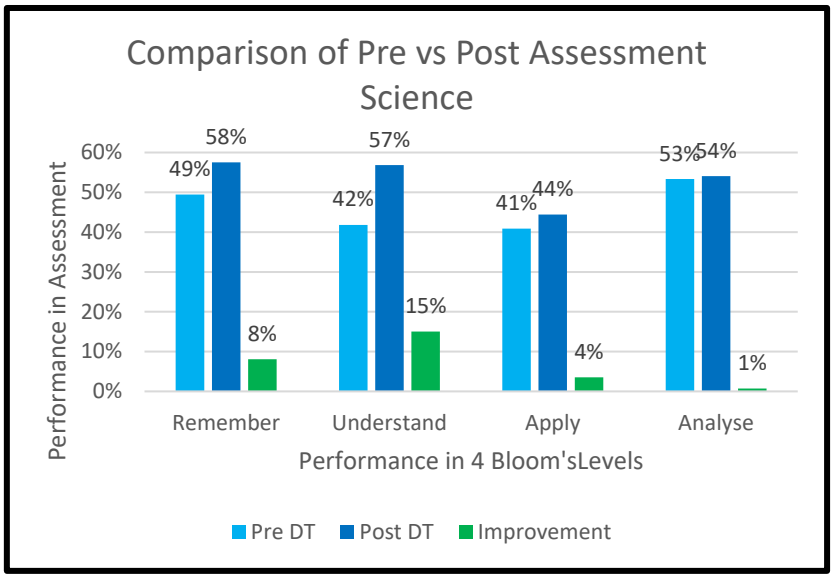
Subject: Mathematics



Inference:

1. Marginal improvements in the Bloom level of Remember is seen in Mathematics. The marginal improvement could be attributed for the lack of clarity in the basic concepts which lead to difficulty in being able to identify, interpret, and using the concepts in different situations. However, there is a significant improvement for the higher order Blooms (i.e.,Analyse) which interprets that participants could connect the concept to real life..
2. The bloom's level of Analyse shows the increase in the participants' ability to compare and examine the concepts better.

Subject: Science



Inference:

- Improvements in all the Bloom levels of Remember, Understand, Apply and Analyse is seen in which shows a healthy increase in the participants' ability to recall, describe, interpret, and examine the concepts discussed.
- This could be attributed to the very nature of the subject of Science, where the concepts discussed are connected to the day-to-day life and relatable.
- Increased interactions from participants during the webinar, clarifying their doubts on the concepts, backed by engaging reading materials with links to interactive content could have also contributed to the improvement seen.

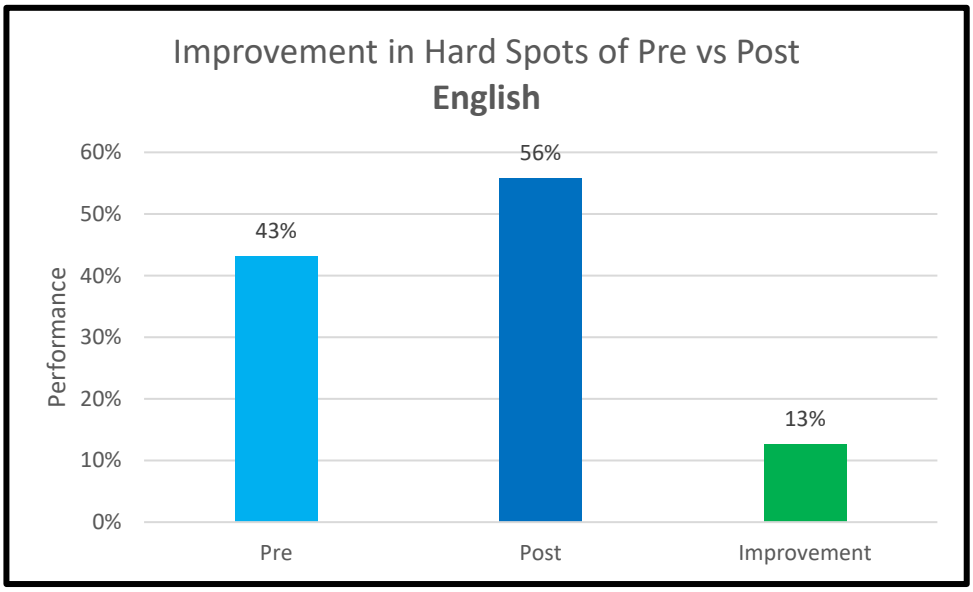
Metric 2: Improvement in Hard Spots:

- In this metric, the three questions that most teachers answered incorrectly in the Pre-webinar assessment (which indicates hard spots for teachers) are compared to the performance of teachers for similar questions in the post-webinar assessment.
- An analysis was done for each pre-webinar assessment before the webinar was conducted to identify the 3 questions with most number of incorrect answers. The key concepts that are central to these questions are

identified and are discussed during the webinar. Three additional questions centered on the same ideas are created and are administered to teachers as a part of the post-webinar assessment.

- A comparison of the performance in these three questions between pre-webinar and post-webinar will provide an idea of the improvements that can be made in the understanding of teachers when concept specific remediation is done.
- In general, it was noticed that the three questions that teachers answered incorrectly in the pre-quiz belonged to the apply and analyse levels of blooms indicating a lack of depth in those concepts. These concepts were taken as immediate hard spots for teachers and were scaffolded during the webinar.
- Dedicated questions in the Post Quiz, assessed whether this scaffolding was effective for improvement in the understanding of the concepts covered as hard spots.
- The following graphs depicts the improvement in hard spots in English, Mathematics, and Science subjects. For each subject, their respective inferences have been drawn.

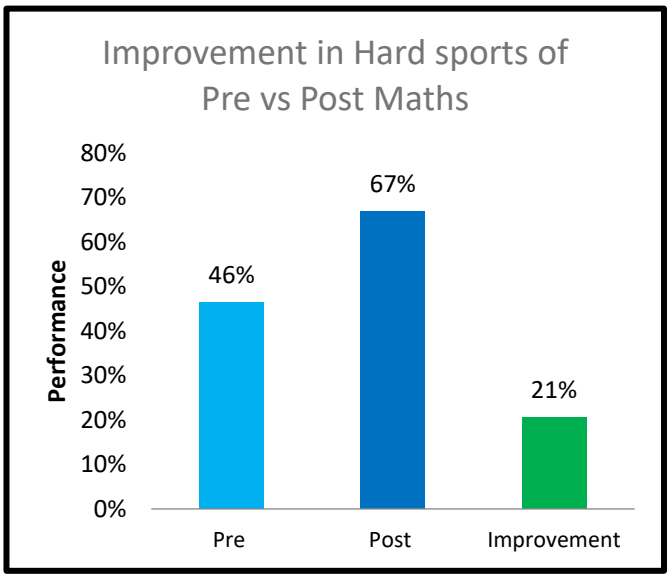
Subject: English



Inference:

- 13% improvement is seen in English. This seems to be a significant improvement considering this as the first handshake with the teachers.
- Language learning is a process, and it takes significant amount of time to master over the process. It is necessary to create English speaking environment in schools for enhanced learning.
- English yielded a marginal improvement in the performance in all the blooms levels as well as in the 3 most challenging concepts tested. The English modules focused on the hard spots faced by teachers in the grammatical concepts within the syllabus. Understanding the structure of the language through grammar requires continuous exposure to the language speaking environment and spaces where the learner can interact with others in the language being learnt. While the training program may have clarified some of the conceptual bottle necks in English grammar, more spaces and opportunities for English learning must be provided to the teachers to ensure a sustainable improvement in English skill.

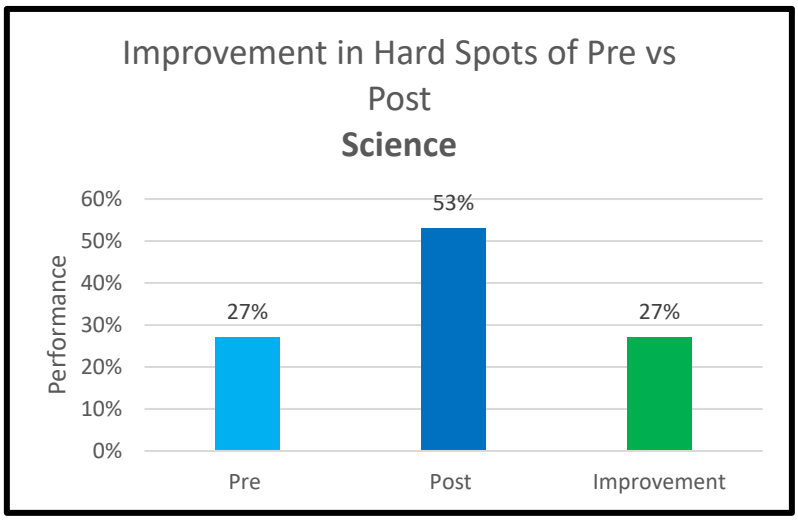
Subject: Mathematics



Inference:

- Around 21% of improvement is observed in Mathematics. The abstract nature of the Mathematics subject and difficult to connect to the real situations outside when compared to Science concepts.

Subject: Science



Inference:

- Around 27% of improvement is observed in Science and it is substantial when compared with the other subjects as it is connected directly to immediate surrounding.
- Participants could easily relate the concepts with day-to-day activities.
- Overall, this can be attributed to the steps taken to bridge their understanding in the concepts in which the teachers had performed poorly in Pre-quiz, like usage of simulations, interesting videos/images, connecting the concepts with examples from day-to-day life, simple animations to explain concepts, use of activities to involve the participants in problem solving etc.

Metric 3: Efficiency of the Program:

Efficiency of the program is evaluated based on how good and engaging the sessions were for the participants and is measured as below:

i. **Participation Rate of Teachers:**

The participation rate of teachers is defined as the number of teachers that attended the webinar session for every 100 teachers invited.

ii. **Engagement Rate of Teachers:**

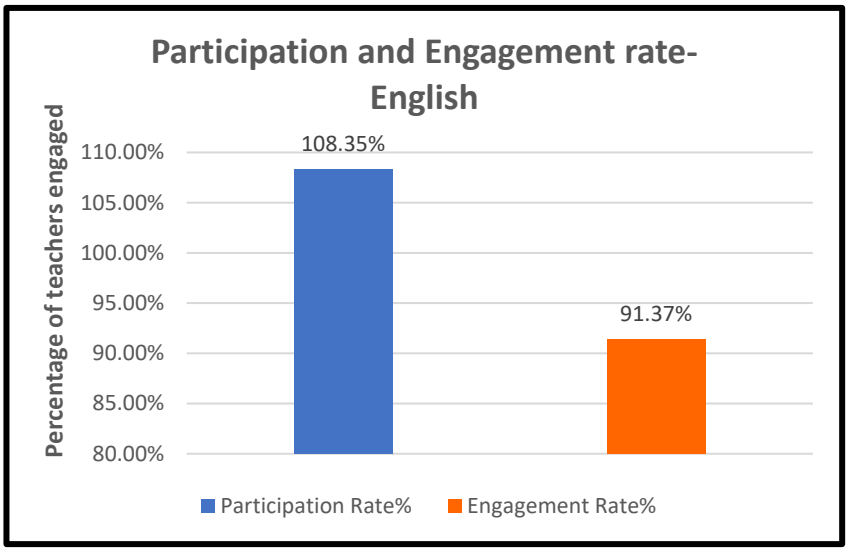
The engagement rate of teachers is defined as the number of teachers that actively participated in the webinar out of the total number of teachers that attended the session. This accounts for the number of teachers answering the poll questions which are asked during the session.

- The following data depicts the participation rate and engagement rate of teachers for English, Maths, and Science subjects.

ENGLISH:

- A total of 695 teachers were invited from all the blocks of Madhugiri for English.
- On an average 753 (108.35%) number of teachers have attended all the modules in English.
- During specific intervals, facilitators asked questions to the teachers using poll questions, and teachers responded to it.
- Around 91.37% of the teachers were engaged, by actively answering the poll questions during the sessions.

Module Name	Number of participants attended	Number of engaged audiences	% of Engaged Audience
Module1	695	829	94.09%
Module2	695	780	84.49%
Module3	695	650	95.54%



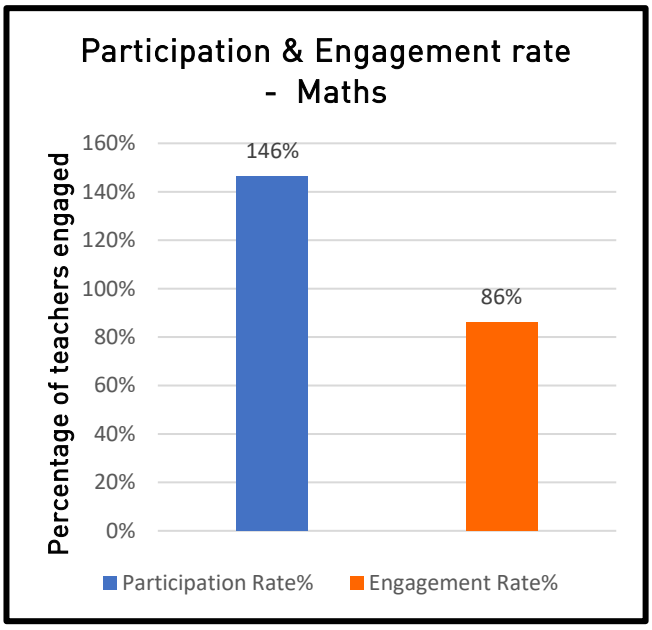
Inference:

- The percentage of participants actively engaged during the sessions shows that the content was engaging to the teachers.
- This could be attributed to the design of facilitation, where at strategic intervals teacher responses were elicited to make them reflect on the ongoing discussions on specific concepts and/or answer to brain teasers, leading into the upcoming discussion, through polls and chats.

MATHEMATICS

- The training included both LPS and HPS teachers. A total of 712 teachers were invited from all the blocks of Madhugiri district.
- On an average 1027 (146%) number of teachers have attended all the modules in Mathematics.

SECTION	MODULE NAME	Number of participants	Number of audience engaged	% of Engaged Audience
LPS	Angles	576	835	99.28%
	Symmetry	576	813	77.12%
	Mensuration	576	824	71.12%
HPS	Algebra	136	236	86.44%
	Integers	136	220	88.18%
	Rational Numbers	136	154	94.81%



Inference:

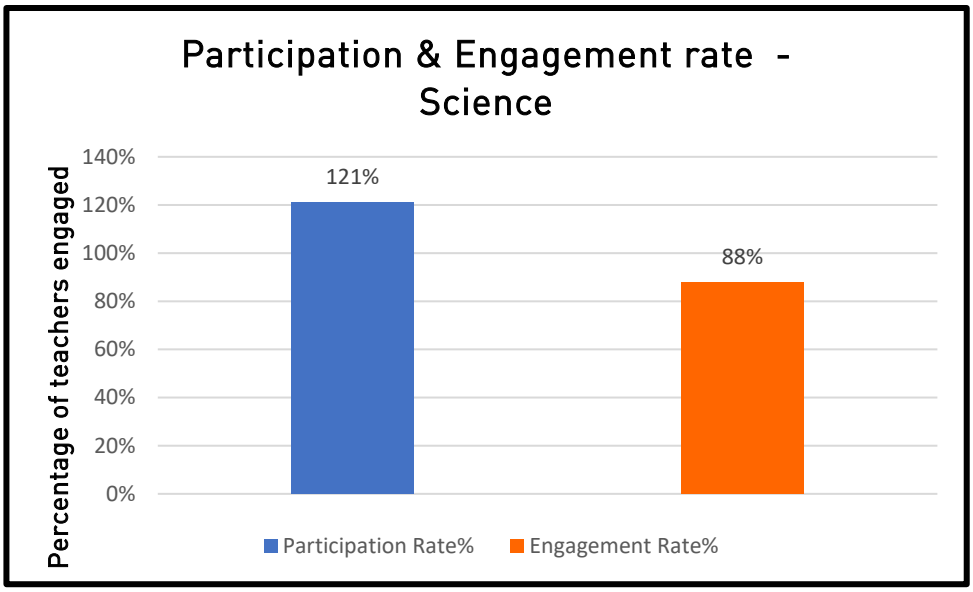
- The percentage of participants actively engaged during the sessions shows that the content was engaging to the teachers.

- This could be attributed to the design of facilitation, where at strategic intervals teacher responses were elicited to make them reflect on the ongoing discussions on specific concepts and/or answer to brain teasers, leading into the upcoming discussion, through polls and chats.

SCIENCE:

- The training included both LPS and HPS teachers. A total of 613 teachers were invited from all the blocks of Madhugiri district.
- On an average 655 (121%) number of teachers have attended all the modules in Science.

SECTION	MODULE NAME	Number of participants	Number of the audience engaged	% of Engaged Audience
LPS	Air	460	462	68.18%
	Transprotation in Plants	460	404	93.56%
	Matter	460	411	88.56%
HPS	Electricity	153	237	93.67%
	Body Movement	153	204	89.71%
	Habitat and Adaptation	153	245	93.47%



Inference:

- During specific intervals, facilitators asked questions to the teachers using poll questions, and teachers responded to it.
- Around 88% of the teachers were engaged, by actively answering the poll questions during the sessions.

- Some of the interested teachers apart from the invitees attended the HPS training session. Hence the participation rate exceeded above 100.

Metric 4: Relevance of the program:

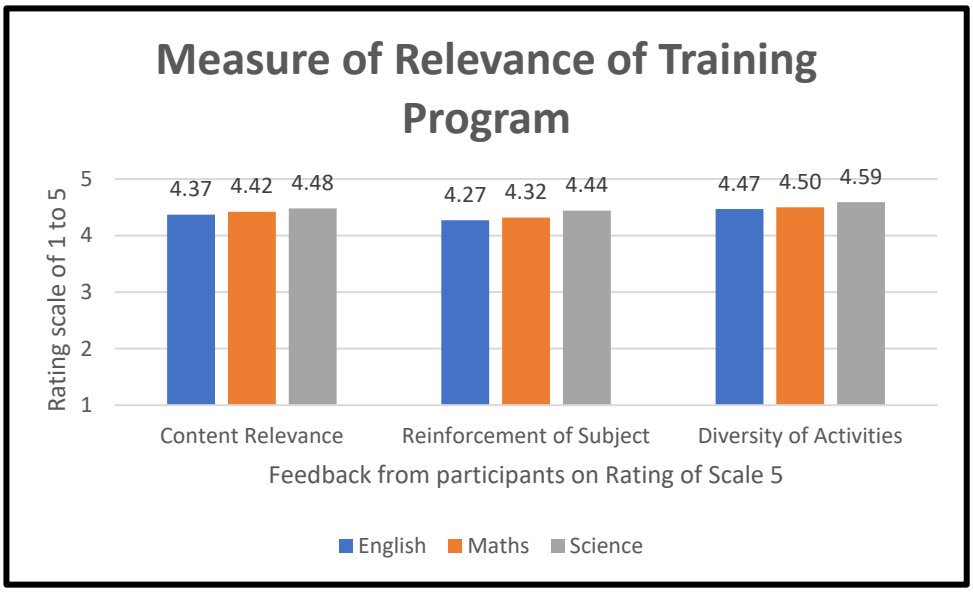
i. **Rating on Training Sessions:**

Rating for the training session is defined as the feedback received from the teachers for the particular webinar. The criteria on which the teachers gave their feedback were:

- Content Suitability,
- Re-enforcement of Subject and
- Diversity of Activities.

Teachers also reflected on-

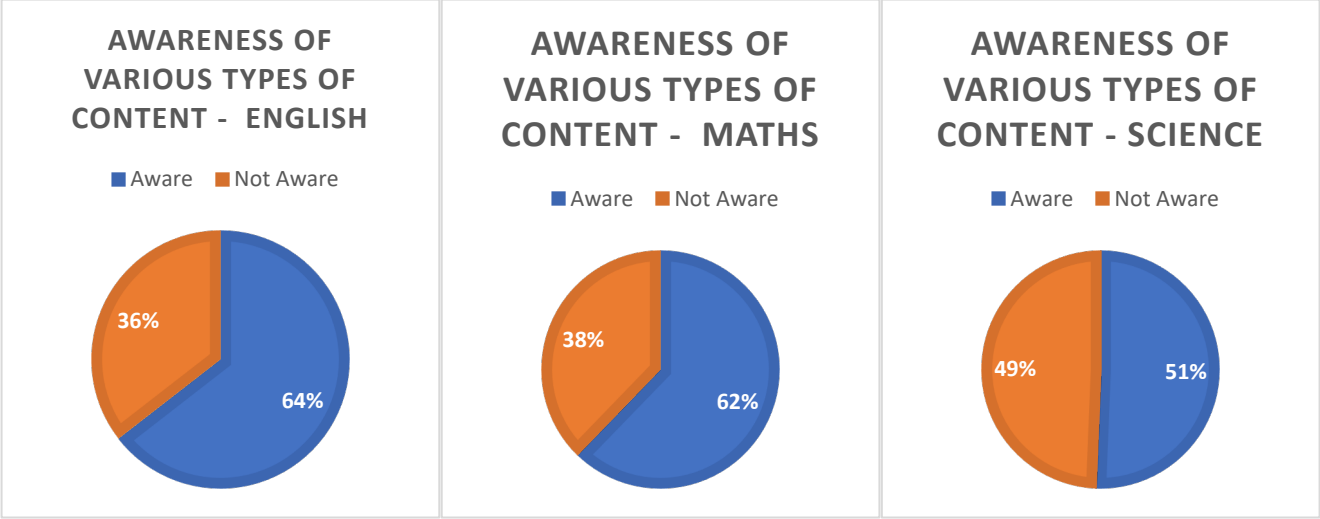
- Whether they felt confident to take up Experiential teaching methodology to their classrooms.
- Their awareness of various types and sources of content available apart from textbook.
- Whether they seek further training on Experiential teaching methodology.



Inference:

- The teachers rated an average of 4.42 out of 5 on how contextual and suitable the concepts and activities were in the program. This can be attributed to the phase of need analysis done, where a list of concepts was identified as 'Hard Spots' through deliberations between both the DIET and CWC.
- The teachers rated an average of 4.34 out of 5 on how the different stages of the training program contribute to enhancing their subject-matter expertise. This can be attributed to the steps taken to bridge their understanding in the concepts in which they had not performed so well in Pre-quiz. Those specific concepts were stressed and scaffolded through modifications to the actual webinar and reading materials.
- The teachers have rated an average of 4.52 out of 5 on how diverse and varied the activities were in the webinar. This could be attributed to the process of using experiential activities to discuss the concepts and ideas (activities) to transact those concepts in the classroom in each subject, using low-cost, no-cost Teaching-learning materials.

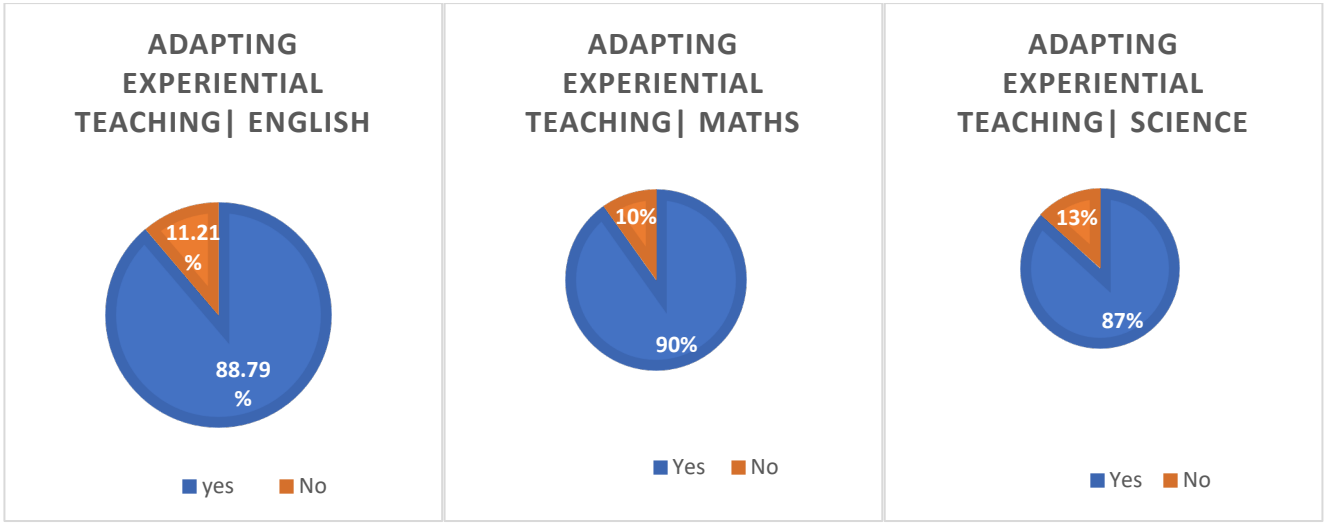
ii. Awareness on the availability of Various Types of Content:



Inference:

- An average of 59% of teachers from all subjects expressed that they are aware of the various types and sources of content/resources that are available apart from the textbook.
- An average of 41% of teachers from all subjects expressed that they are unaware/ not aware of sources of content/resources apart from the textbook. To address this, links to websites/articles etc., experiential activities/ideas to teach concepts, were shared throughout the program (both in the webinar as well as Post-training reading materials) for every concept in each module.
- Hence, on average 41% of teachers came to know about various sources of content/ resources apart from textbook from this training program.

iii. Teaching the concepts experientially:



Inference:

- An average of 88.60% of teachers expressed that the concepts discussed in each module can be taught in the classroom in an experiential way and that they are willing teach these concepts experientially in their classrooms.

- An average of 11.40% of teachers expressed that the concepts discussed in the modules cannot be taught experientially by them, and that they require further training on how the concepts can be taught experientially in the classroom. This is a clear indication that continued and recurring trainings need to be planned and implemented in the future, in the district.

a. Feedback from RPs & Nodal Officers and Scope for Improvement:

The process of feedback from the stakeholders involved in the program is very critical for continuous improvement of the design of the program content, structure of the module and transaction of the module to the participants. The feedback process consists of collecting the feedback at different stages from the stakeholders. The nature of feedback collected at different levels is listed below. The feedback received when analysed give us the insights for developing future training programs.

- Feedback from Nodal Officers and Resource Persons in terms of different elements of training design, like pre and post quizzes, pre and post reading materials, assignments, and projects. The feedback is also taken with respect to coverage of concepts and additional concepts required to be covered in future, which are the hard spots for teachers.
- For some modules, the RPs suggested that a single concept can be delivered, and deeper discussions of such concepts can be held in the webinar, instead of multiple concepts covering in a single module.
- One the other hand, RPs have also suggested on having sessions on the basic concepts of English, Mathematics, and Science to aid the subject matter expertise of teachers.
- The RPs have themselves suggested some topics/ that can be taken up in the upcoming modules.
- The RPs and Nodal Officers have expressed the need for more such experiential trainings to be organised and transacted to the teachers at least once every month. Some resource persons opine that such interventions are necessary to be done on need-basis.
- Majority of the Resource Persons and Nodal Officers have rated positively on the transaction of the trainings, which includes quality of modules, quality of webinar facilitation, etc.
- Mr. Krishnamurthy, DDPI (Admin) and Mr. Y N Ramakrishnayya, DDPI (Development) mentioned about positive outlook of the program and appreciated the efforts of the RPs and CWC for making the program successful and mentioned that they would be happy to collaborate with CWC and conduct such kind of online programs in future. They insisted more on the learnings getting translated into classroom practices by the participants. The DDPI (Admin) also spoke about the advantages of the online training method, which is cost effective, easily scalable, and transactionally effective, and especially safety for the teachers during pandemic times.

6. Duration of the Training Program

The Direct to Teacher training program design was unique in terms engaging participants in every stage of the training program using available technological tools. As this program was implemented online, the modules transaction had to be made more interesting to the participants having dramatized script supported by videos, simulations, poll questions, chat questions, concept maps followed by assignments and projects.

The preparatory phase where the design of the module, orientation to RPs and preparing for facilitation will require 2 months of time as this being done collaboratively with the RPs of the Dept and DIET faculty. The implementation phase which involves the online Webinar sessions to the participants will require 1-2 months to complete transaction of 15 modules in 3 subjects namely, English, Mathematics, and Science. The post implementation phase where the feedback and outcome analysis are done along with preparation of webinar videos will require 1 month time.

In total the time required to design and implement and evaluate the Direct-to-Teacher training program required around 4 months' time to cover all the teachers in the district. In Madhugiri the training development and implementation process started in the month of August 2021 and ended in the month of September 2021.

ENGLISH

SECTION	TOPIC	DATE	FACILITATORS & NODAL OFFICERS	
			CWC	DIET
LPS & HPS	• Tenses • Prepositions • Articles • Subject Verb agreement	16-08-2021	Co-ordinator: • Ms. Krithi Sathish (SPOC & Facilitator) • Mrs. Dhatri Devi (Anchor & Facilitator) Facilitators • Mrs. Pradnya Nimbalkar • Ms. Vaidehi Patak • Ms. Nisarga B S • Mrs. Asha Raman • Mrs. Maria Rashmi	Nodal Officers: • Mr. Katalingappa Facilitators • Mr. Shakur H • Mrs. Chethana H K. • Mrs. Swapna G A • Mrs. Sindhu H M. • Mr. Narendra Kumar M
	• Present continuous tense • Simple present tense • WH questions • Homophones	17-08-2021		
	• Phonics • Punctuations • Simile • Metaphor • Personification	19-08-2021		

MATHEMATICS

SECTION	TOPIC	DATE	FACILITATORS & NODAL OFFICERS	
			CWC	DIET
LPS	Angles	09-08-2021	Co-ordinator: • Mrs. Nagasmitha B.R (SPOC & Facilitator) • Mrs. Dhatri Devi (Anchor) Facilitators: • Mr. Mallesha S. • Ms. Nisarga B. S. • Mr. Sharon Doodmani • Mr. Vijendra B • Mrs. Vishwaja B. • Ms. Shilpa K • Ms. Brundha S J	Nodal Officers: • Mr. Naveenkumar Facilitators: • Mr. Vishwa Prakash M L • Mr. Devendra kumar • Mr. Narasimhamurthy • Mr. Rechaiah T J • Mrs. Madhu J • Mr. Ranganath K R • Mr. Dinesh Y S
	Symmetry	11-08-2021		
	Mensuration	13-08-2021		
HPS	Algebra	30-08-2021		
	Integers	01-09-2021		
	Rational Numbers	03-09-2021		

SCIENCE

SECTION	TOPIC	DATE	FACILITATORS	
			CWC	DIET
LPS	Air	06-09-2021	Co-ordinator: • Mrs. Suma (SPOC & Facilitator) • Mrs. Dhatri Devi (Anchor & Facilitator) • Ms. Anusha S. • Mrs. Bindu Krishna • Mrs. Bhanushree N. • Mr. Rahul Srinivasan • Ms. Nisarga B S • Mrs. Ganga • Ms. Shilpa K	Nodal Officers: • Mr. Manjunath • Mr. Zabiulla Sharieff • Mr. Jayanna C S • Mr. Hanumantharayappa M • Mr. Mohan Kumar C G • Mr. Shashidhar S S • Mr. Suresh Kumar Y S
	Transportation in plants	08-09-2021		
	Matter	13-09-2021		
HPS	Electricity	23-08-2021		
	Body Movements	25-08-2021		
	Habitat and Adaptation	27-08-2021		

7. Factors contributing to the success of the Direct to Teacher training program

Several factors contribute to the success of this Direct to Teacher experiential training model, few of them are very crucial which are explained below.

a. **Institutional Leadership Coordination and cooperation from DIET and Resource Persons of the department:**

One of the important functions of DIETs is to empower teachers academically by designing and implementing continuous professional development programs for them. Having the ongoing pandemic situation, DIET Madhugiri collaborated to implement online teacher training for the Government school teachers in their 4 blocks.

The DIET provided the enabling environment for the execution of the training program by assigning the subject Nodal Officers, space and facilities for online transaction and administrative support. The efforts of DIET in terms of institutionalising the process has paved the way for good response and support from the Block level institutions and_its educational functionaries such as Block Education Officers, Block Resource Centre Coordinators, Cluster Level Resource Persons, Education Coordinators, etc.

b. **Design and development of the modules and facilitation**

CWC had the experience of designing and facilitating sessions for teachers as part of teacher academic development. CWC was successful in engaging teachers in the cluster level processes to enhance their conceptual understanding in English, Mathematics, and Science. This helped CWC to come with the new Direct-to Teacher experiential design of the program. Further, it was necessary for CWC to develop the modules on the topics which were difficult and challenging for the teachers to transact experientially to the students. The topics were selected out of the list of topics which the RPs and DIET felt were the hard spots for teachers where they needed conceptual clarity and help to understand the same.

The facilitation of modules provided enough space and opportunity for Resource Persons (RPs) from the department to involve and participate in the complete facilitation process. This process has not only resulted in the development of not only the confidence among the RPs but also the ownership of the process which has contributed to the success of the program to a very large extent.

8. Relevance for the future of the Training Programs:

The online teacher training program developed and implemented through the collaboration between DIET-Madhugiri & CWC has lot of scope for the post NEP-2020 and post COVID-19 world. There are several key challenges in the traditional teacher training model used by the education department that can effectively be solved using this online training model.

a. **Loss of Quality at the last mile due to Cascading of Trainers:**

The cascading may result in the loss of quality of the training program at the last mile. This new model tested in this program has shown the ability to centralize the trainers at the district or state level and have the most competent person conduct the training program using technology and reach every teacher directly without dilution of the content and quality at the last mile.

b. **Mapping teachers to their specific training needs:**

The online training program developed a process through which teachers who receive training in any subject(s) are the ones who teach that subject in their schools. In a sense, this training program does not force or pressurizes teachers to undergo training neither in the subjects they do not teach nor interested in. The training program also ensured that the modules developed for the training program specifically address the hard spots / challenging concepts for the teachers to transact in their classrooms. This ensured a high degree of acceptance of the training modules by the teachers and specific feedback for further improvement of the modules.

c. **Customize the model to improve the monthly Cluster Academic Meetings:**

This training program can also be conducted in a Blended learning design with higher primary school teachers as a potential solution to significantly improving the quality of the monthly Cluster Sharing / Academic meetings that happen at cluster level. Transmission of learning modules can be centralized at the district / state level by State level resource persons with local facilitation done by subject experts / resource persons in each cluster level. This design has been tested in the Tumkur and has been successfully implemented.

d. **Availability of Training Artefacts post-training:**

All the training materials that the teachers use can be readily made available to the teachers on platforms like Diksha, Youtube etc thereby, providing continuity & reinforcement of learning to the teachers.

e. **Time and Cost Efficiency:**

Leveraging technology to effectively reach out to large number of teachers will result in significant time and cost saving to the education department. It has been estimated that the training programs conducted in Madhugiri districts have saved Rs. 15 Lakhs and above. Each of these programs would have taken more than a year to reach all teachers when conducted through traditional training method. The new model could

successfully reach all teachers in a district in under 4 months including the preparation and implementation time.

f. Generation of Open-Source Teacher Training Assets:

This online training program leverages the capabilities of the technology significantly, the high-quality training modules and assets created during the training programs in each of the DIETs like; reading resources, pre and post-test materials, assignments and project documents, webinar videos, etc., can easily be made available to the other DIETs through open-source platforms like DIKSHA, YouTube etc. These resources are available for the teachers to go through repeated times which reinforces the learning and will also help the DIETs to design new programs on similar lines.

9. Annexure:

9.1 Feedback received from teachers during the training

Eagerly waiting to implement the activities in the classroom

Information was very basic; it is not suitable for HPS

More topics were covered in less time

The program was very neat and structured

All concepts are half explained.Poll was not visible for few participants

Character involvement of facilitators was very nice. So, teachers did not feelbored to watch the webinar at any point

This webinar helped the teacher to update their knowledge and teaching style

Request to explain Algebraic patterns

Request to increase the number of poll questions

The pre-DT and post-DT questions had confusing options

To share DT's answer key

Poll questions were very useful and interesting

The classroom activities shown were excellent and innovative

History of the topic was more. It was not related to syllabus

9.2 Copy of the training circular issued by the DIET

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ಮಧುಗಿರಿ

DISTRICT INSTITUTE OF EDUCATION AND TRAINING MADHUGIRI

Tel: 08137- 282766 **Email::diet.madhugiri@gmail.com**

ಸಂಖ್ಯೆ: ಸಿ1/ಆ.ಶಾ.ಪರೀಕ್ಷೆ:03/2021–22 ದಿನಾಂಕ: 05/08/2021

ಜ್ಞಾಪನ

ವಿಷಯ: 2021–22 ನೇ ಸಾಲಿನಲ್ಲಿ ಜಿಲ್ಲಾ ಶೈಕ್ಷಣಿಕ ಸಂವರ್ಧನಾ ಕಾರ್ಯಕ್ರಮದಡಿಯಲ್ಲಿ ಡಯಟ್ ಮಧುಗಿರಿ ಆಯೋಜಿಸಿರುವ ಪ್ರಾಥಮಿಕ ಶಾಲಾ ಶಿಕ್ಷಕರ ಆನ್ಲೈನ್ ತರಬೇತಿ ಯಲ್ಲಿ ಭಾಗವಹಿಸುವ ಕುರಿತು.

ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಡಯಟ್ ಮಧುಗಿರಿಯು ಈಗಾಗಲೇ ಅನೇಕ ಶೈಕ್ಷಣಿಕ ತರಬೇತಿ ಮಾಡ್ಯೂಲ್‌ಗಳನ್ನು ತಯಾರಿಸಿ ಶಿಕ್ಷಕರ ಅಗತ್ಯಕ್ಕೆ ಅನುಸಾರವಾಗಿ ಸೂಕ್ತವಾದ ತರಬೇತಿಗಳನ್ನು ಹಮ್ಮಿಕೊಂಡಿದೆ. ಪ್ರಸಕ್ತ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನಲ್ಲಿ ಕೋವಿಡ್ 19ರ ಪರಿಣಾಮದಿಂದಾಗಿ ಮುಖಾಮುಖಿ ತರಬೇತಿಗಳನ್ನು ಆಯೋಜಿಸಲು ಸಾಧ್ಯವಾಗುತ್ತಿಲ್ಲದಿರುವುದರ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಆನ್ಲೈನ್ ತರಬೇತಿಗಳ ಮೂಲಕ ಪ್ರಾಥಮಿಕ ಶಾಲಾ ಶಿಕ್ಷಕರ, ಸಾಮರ್ಥ್ಯಾಭಿವೃದ್ಧಿಯ ಕುರಿತು ಜಿಲ್ಲಾ ಶೈಕ್ಷಣಿಕ ಸಂವರ್ಧನಾ ಕಾರ್ಯಕ್ರಮದಡಿಯಲ್ಲಿ ವಿವಿಧ ಕಾರ್ಯಕ್ರಮಗಳನ್ನು ಆಯೋಜಿಸಲಾಗಿದೆ.

ಡಯಟ್ ಮಧುಗಿರಿ ವತಿಯಿಂದ ಸಹಸ್ಯಜನ ಕೋಶದ ,ಕೇರಿಂಗ್ ವಿತ್ ಕಲರ್ ಸಹಯೋಗದೊಂದಿಗೆ ಸರ್ಕಾರಿ ಪ್ರಾಥಮಿಕ ಶಾಲೆಗಳಲ್ಲಿ ವಿಜ್ಞಾನ,ಗಣಿತ ಹಾಗೂ ಆಂಗ್ಲ ಭಾಷೆ ವಿಷಯಗಳನ್ನು ಬೋಧಿಸುತ್ತಿರುವ ಶಿಕ್ಷಕರಿಗಾಗಿ ವಿಶೇಷವಾದ ವಿಷಯ ಸಂಪದೀಕರಣ ಆನ್ಲೈನ್ ತರಬೇತಿಯನ್ನು ಆಯೋಜಿಸಲಾಗಿದೆ. ಕೇರಿಂಗ್ ವಿಥ್ ಕಲರ್ ಸಂಸ್ಥೆಯು ಎನ್.ಸಿ.ಎಫ್. ಹಾಗೂ ಎನ್.ಇ.ಪಿ – 2020 ರ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಚಟುವಟಿಕೆ ಆಧಾರಿತ ವಿಧಾನದಲ್ಲಿ ಕಲಿಕೆಯನ್ನು ಸುಗಮಗೊಳಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ಸಾಮರ್ಥ್ಯಾಭಿವೃದ್ಧಿ ಕುರಿತಂತೆ ಸಂಪನ್ಮೂಲಗಳನ್ನು ತಯಾರಿಸಿ ಆನ್ಲೈನ್ ತರಬೇತಿಗೆ ಆಳವಡಿಸಿ, ಅನುಷ್ಠಾನಗೊಳಿಸುತ್ತಿರುವ ಹಿನ್ನಲೆಯಲ್ಲಿ ನಮ್ಮ ಶಿಕ್ಷಕರು ಈ ತರಬೇತಿಯ ಪೂರ್ಣ ಪ್ರಯೋಜನ ಪಡೆಯಬೇಕೆಂದು ಕೋರಿದೆ.

ತರಬೇತಿಯ ವೇಳಾಪಟ್ಟಿ ಇಂತಿದೆ:

ವಿಷಯ	ಹಂತ	ದಿನಾಂಕ
ಗಣಿತ	ಕಿರಿಯ ಪ್ರಾಥಮಿಕ	9/8/21, 11/8/21, 13/8/21
	ಹಿರಿಯ ಪ್ರಾಥಮಿಕ	30/8/21, 01/9/21, 03/9/21
ವಿಜ್ಞಾನ	ಕಿರಿಯ ಪ್ರಾಥಮಿಕ	06/9/21, 08/9/21, 13/9/21
	ಹಿರಿಯ ಪ್ರಾಥಮಿಕ	23/8/21, 25/8/21, 27/8/21
ಇಂಗ್ಲೀಷ್	ಕಿರಿಯ + ಹಿರಿಯ ಪ್ರಾಥಮಿಕ	16/8/21, 17/8/21, 19/8/21,

ತರಬೇತಿಯ ನಡುವೆ ಒಂದೊಂದು ದಿನದ ಅಂತರ ನೀಡಲಾಗಿದೆ. ಕಾರಣ, ಅಂದಂದಿನ ಮನೆಗೆಲಸ, ಕಾರ್ಯಹಾಳೆಗಳನ್ನು ಪೂರ್ತಿಮಾಡುವುದು ಮತ್ತು ಆಯಾ ವಿಷಯದ ಕುರಿತು ಮನನ ಮಾಡುವುದು ನಮ್ಮ ಉದ್ದೇಶವಾಗಿದೆ.

ಈ ತರಬೇತಿಯ ಸುಗಮ ಅನುಷ್ಠಾನಕ್ಕಾಗಿ ನಮ್ಮ ಡಯಟ್ ಉಪನ್ಯಾಸಕರನ್ನು (ಶ್ರೀ. ನವೀನ್ ಕುಮಾರ್ – ಗಣಿತ, ಶ್ರೀ. ಮಂಜುನಾಥ್ – ವಿಜ್ಞಾನ, ಶ್ರೀ. ಕಾಟಲಿಂಗಪ್ಪ – ಆಂಗ್ಲಭಾಷೆ) ಆಯಾ ವಿಷಯದ ನೋಡಲ್ ಅಧಿಕಾರಿಗಳಾಗಿ ನೇಮಿಸಿದ್ದು, ಅವರ ನೇತೃತ್ವದಲ್ಲಿ ವಿಷಯವಾರು, ಬ್ಲಾಕ್‌ವಾರು ವಾಟ್ಸಪ್ ಗುಂಪುಗಳನ್ನೂ ರಚಿಸಲಾಗಿದೆ. ಒಟ್ಟಾರೆ ಕಾರ್ಯಕ್ರಮವನ್ನು ಹಿರಿಯ ಉಪನ್ಯಾಸಕರಾದ ಶ್ರೀ. ಸಿ.ಎನ್.ಕೃಷ್ಣಪ್ಪ, ರವರು ನಿರ್ವಹಣೆ ಮಾಡುತ್ತಾರೆ.

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9.3 Sample Poster

9.4 Memories of the Training Program

Mr. Dinesh Y S, Mr. D Naveenkumar (Maths nodal Officer) and Mr. Rechayya T J (From Left to Right)

Mrs.Madhu J and Mr.Ranganath K R (From left to right)

Mr. Jayanna C S, Mrs. Manjunath (Science nodal office), Dr.Prasannakumar (CWC) and Mr. Zabiulla Sharrieff (from left to right)

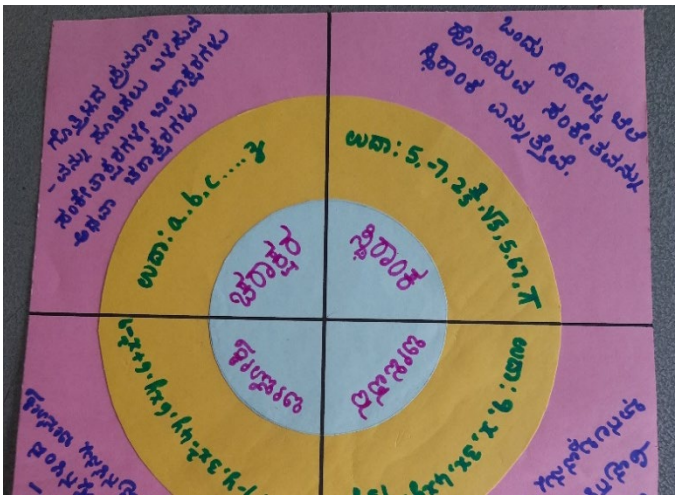
Mr.Hanumantharayappa M, Mr. Manjunath(Science nodal officer), Mr.D Naveenkumar and Mr.Mohankumar C G (From left to right)

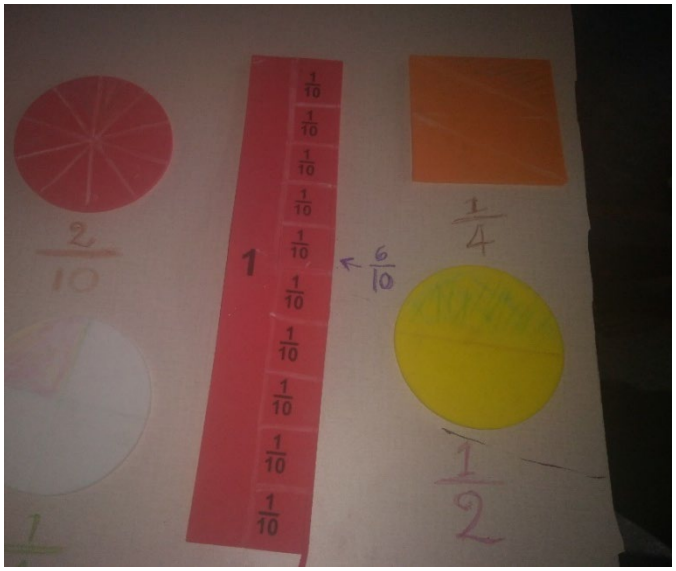
Ms.Sindhu H M, Mr. Narendrakumar M, Mr.C N Krishnappa (Training nodal officer),and Mr.Katalingappa (English nodal officer) (from left to right)

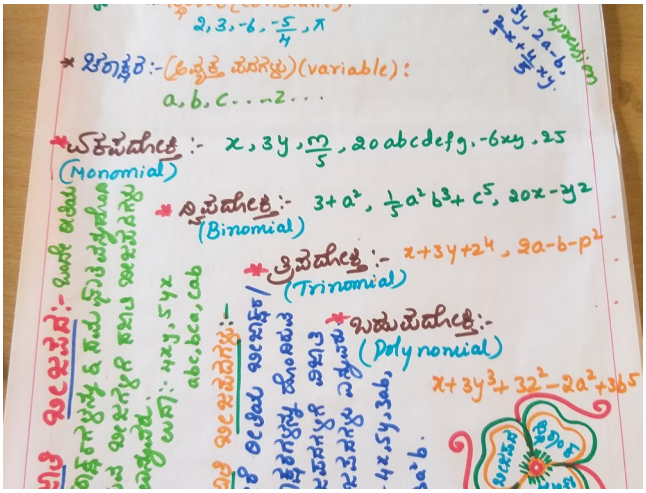
Mrs.Swapna G A, Mr. Katalingappa (English nodal officer)

Mr. Shukur H, Mr.C N Krishnappa (Training nodal officer), Mr.katalingappa(English nodal officer), Dr.Prasannakumar (CWC) and Mrs. Chethana H K (From left to right)

9.5 Assignments and Projects:







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11. List of abbreviations

- BEO- Block Educational Officer
- BRC- Block Resource Co-ordinator
- BRP- Block Resource Person
- CEO- Chief Executing Officer
- COO- Chief Operating Officer
- CPI- Commissioner of Public Instruction
- CRC- Cluster Resource Centre
- CRP- Cluster Resource Person
- CWC- Caring with Colour
- DDPI- Deputy Director of Public Instructions
- DIET- District Institute of Education and Training
- DPI- Department of Public Instruction
- DSERT- Department of State Education and Training
- HPS- Higher Primary School
- LPS- Lower Primary School
- NCERT- National Council for Education Research and Training
- NCF-TE: National Curriculum Framework for Teacher Eductaion
- NGO - Non-Government Organisation
- NISHTHA- National Initiative for School Heads' and Teachers' Holistic Advancement
- PPT- Power Point Presentation
- RP- Resource Person
- SOPs- Standard Operating Procedures
- SPOC- Single Point of Contact
- SSA- Sarva Shiksha Abhiyan