



SCERT DELHI

MARCH 2023

# Capacity Building Program At TISS Mumbai

14<sup>th</sup> – 16<sup>th</sup> March 2023

**GROUP COORDINATOR**

Ms. Neeta Rani (Assistant Prof.)

# LIST OF PARTICIPANTS

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<b>Satish Kumar</b>	<b>Seema Rani</b>	<b>Shailesh Kumar</b>
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# INTRODUCTION

Teacher Training Program can be resonated with the lighting of a lamp where the teachers continue to illuminate/ignite their knowledge so that it's radiance incessantly reaches out to their students.

Keeping this in perusal the HoS, Teachers and Teacher Educators are provided an outlook/exposure through various National and International training so that, they can motivate their students effectively providing them an insight about various aspects.

Capacity Building Programs are an essential component of the training process because they provide trainees from various environments the chance to work together, share ideas, and see firsthand how sustainable practices have been effectively adopted in the concerned field.

From 14<sup>th</sup> – 16<sup>th</sup> March 2023, SCERT has organized a Capacity Building Program for 50 TGT Mathematics Teachers of Directorate of Education, GNCT of Delhi and Teacher Educators of SCERT Delhi at TISS Mumbai. The purpose of the visit is to enhance learning opportunities, competency and facilitation skills of Mathematics Teachers.

## **Objectives:**

1. To develop mathematical disposition among teachers.
2. To enhance mathematical aptitude and competence among Mathematics Teachers.
3. To build a collaborative environment with TISS, Mumbai to facilitate a mathematical competence among Mathematics teachers.

# DAY 1 - 14.03.2023

## TUESDAY

Day 1 of the training programme was facilitated by Dr. Ruchi Kumar and Dr. Arindam Bose along with their students.

The session began with inauguration and brief introduction of the program. After that each participant introduced himself / herself to resource persons.



Second session was facilitated by Dr. Arindam Bose on the topic “Big Ideas in Mathematics Education” and he discussed about:

- Different Era of Mathematics
- Nature of Mathematics
- Cognitive Dissonance

Third session was facilitated by Mr. Abhijeet and Mr. Rajneesh on the topic “Mind reader/Nim Game” and discussed the logic behind the Mind reader game played in the session.

Next two sessions were facilitated by Dr. Ruchi Kumar on the topic “Design Thinking” and she discussed about:



- An adaptive procedure
- Shift from the focus on production and functionality & semiotic significance.
- Design Thinking in Education
  - Learner Profile
  - Learning Context
  - Teacher profile
  - Learning space
  - Learning resource
  - Pedagogical Content Knowledge (PCK)
  - Assessment
  - Pedagogical pillars

Last session on the topic “Geogebra” was facilitated by Mr. Avanesh and he provided an opportunity for hands-on:

- Drawing a line, triangle and measure of angles.
- Proof of Midpoint Theorem



# DAY 2 - 15.03.2023

## WEDNESDAY

First session was facilitated by Dr. Arindam Bose on the topic “Multiplicative Thinking” and he discussed about:

- Concrete to Abstract shift of learners
- Transformation of Thinking Paradigm
- Situations, procedures & operational gradient
- Differentiation between additive thinking & multiplicative thinking

Second session was an energizer and was facilitated by Mr. Bishal and Ms. Ritika with “Guess the number game” - Mind Meld and everyone enjoyed the energizer.

Third session was facilitated by Dr. Ruchi Kumar on the topic “Students’ difficulties in learning Algebra” and she discussed the research paper published by Rakhi Banerjee & K.

Subramaniam with the title EMERGING IDEAS OF GENERALIZATION, PROOF AND PROVING AMONG GRADE 6 STUDENTS. The broader points discussed are as under

- Transformation of Abstract thinking to Algebra thinking
- Patterns
- Generalisation process
- Name process dilemma
- Conjoining error

Next session was facilitated by Ms. Promila on the topic “Problem Solving & flipping cards” and:

- Practised Turtle
- Shown a Case Study (video) of a classroom scenario of Japan

Last session of the second day was facilitated by Dr. Ruchi Kumar on the topic “Curating Open Educational Resources (OER)” and she guided the participants to explore some OERs:

<https://phet.colorado.edu> , <https://mathigon.org> , <https://nroch.maths.org>

Dr. Ruchi Kumar motivated the participants for reading different prominent research papers regarding conceptualization of Mathematics and were given an opportunity to present our critical conclusions on the research papers published on the concluding day.

As planned by the TISS management a surprise interaction of participants with some international educationists from Bhutan, Tanzania and Nigeria on various projects being run by TISS.



# DAY 3 - 16.03.2023

## THURSDAY

The concluding day was overwhelmed by the active participation of the participants on the different prominent research papers regarding conceptualization of Mathematics. First session was the interaction of different prominent research papers by various groups, followed by answering queries of the groups. Feedback was provided by the trainee students on the presentation of the groups.



Next session was facilitated by Ms Tejaswani on 'Teachers inclusive Mathematics'.

In the final session, we had hands-on design thinking.

After that Group photo of all participants along with facilitators of TISS was done at New TISS Campus.



## CONCLUSION:

The experience in TISS was amazing.

- It changed mindset for teaching methods.
- Focus was on multidisciplinary approach.
- Learned how to Mathematise.
- Research paper reading helped in learning different prospective of teaching.

Overall enriching teaching learning experience

