



Workshop/Seminar title: Summer Vacation Professional Development Programme (Mathematics)

Workshop/Seminar Date: 13.05.19 to 16.05.19

Venue: BBPS Training Center -Pitampura

Attended by: Ms. Archana Dhar Mam, Ms. Mukul Srivastava, Ms. Vandana Kaul, Ms. Ruchika Gupta

Resource Persons:

- Mr. Dharam Prakash
- Mr. A. K. Rajput
- Ms. Gunjan Khurana
- Mathematics Text book writing team

1. Content of the Workshop/Seminar

- **Day -1 : Inaguration: Dr. Bishwajit Saha (Chief Guest)**

Session – 1

Motivational speech by Dr. Saha, the Director of Training in CBSE about the important role of Primary Teachers in education, emphasizing on arousing curiosity and interest in Mathematics among young learners. He also stressed upon creating the congenial environment for young learners so that they are encouraged to ask questions.

Session – 2 : By Mr. Dharam Prakash and Text Book Writing team

After a brief introduction, the session started with the discussion on numbers and how the concept of numbers should be taught to the learners. It should be made very clear through examples that number is a symbolic representation of a concrete object and it should always be related to some object. Various activities were demonstrated which could be implemented in the class to give the idea about the concept of a number. The salient features of the Maths textbooks for classes I and II and basic pedagogical philosophy (ELPS) approach was discussed:

E – Experience L – Language P – Pictorial S – Symbolic

Activities in the Maths text books were discussed and activity based learning was focused upon to reinforce critical thinking and estimation.

- **Day 2 : By Mr. Dharam Prakash, Ms Gunjan Khurana and Text Book Writing team**

Session – 1

Concept of Zero (absence of a particular thing) was discussed with role play – enactment of a story of mouse with seven tails. Also importance of zero as a place holder in the Hindu Arabic numeral system was highlighted. Various interactive activities were conducted to demonstrate how we can easily progress from known/ familiar objects to abstract/ symbols.

Session – 2

Even & Odd and grouping of numbers in tens were done with the help of activities given in the maths text book. Importance of framing and discussing right kind of Open Ended Questions was also highlighted.

Van Heile 's treatise on how to help a learner to move to higher levels was also discussed.

Level 0- Visualisation as whole object

Level 1- Analysis of pictures

Level 2- Abstraction / informal deductions

Level 3- Formal deductions

Level 4- Rigor

• **Day 3 : By Mr. Dharam Prakash and Text Book Writing team**

Session – 1

The technique of asking repeated questions was emphasized. It was stressed that students should not be provided ready answers but they should be encouraged to indulge in a process of self-analysis and trial and error so that they discover the answers. In the era of Artificial intelligence, critical thinking and analytical capability of a child should be enhanced.

Importance of framing and discussing right kind of Open Ended Questions was also highlighted.

Session – 2

The environment of the classroom should be democratic and not teacher oriented. Teacher should play the role of a facilitator. Children should be trained to analyze various word problems and be able to identify the data given and work on it accordingly. Games based on various aspects of Class 1 and 2 Mathematics text books were introduced. Concepts dealt were:

- **Place value**
 - **Skip Counting**
 - **Addition**
 - **Subtraction**
 - **Measurement**
 - **Data Handling**
- **Day 4 : By Mr. Dharam Prakash, Mr. A. K. Rajput and Text Book Writing team**

Session – 1

The importance of open ended questions was highlighted so that the children approach to a given question differently . The teachers should shift the vocabulary from a question being “ right or wrong “ to it being “less appropriate or more appropriate“ . Page wise analysis of open ended questions given in Mathematics textbook of Class 1 and 2 was undertaken. The children should be encouraged to indulge in creative thinking and logical reasoning.

Session – 2

Learners should be encouraged to create their own Multiplication tables and rote learning of the same should be discouraged. Innovative techniques for creating tables were as under:

- **Straw arranging method**
- **Number arrangement method**
- **Skip counting method**
- **Number line method**
- **Pictorial method**

The session concluded with Presentations by all the participants from various branches to demonstrate an activity based on any Mathematical concept undertaken by them in their classroom.

BOOK RECOMMENDED FOR TEACHERS AT PRIMARY LEVEL:

An Insight into learning through Children's Errors in Mathematics at Elementary stage

- **Mr. A.K. Rajput and Mr. Dharam Prakash**

2. Learning outcomes (Knowledge and Information) from the workshop/Seminar?

- Incorporating the ELPS method for effective teaching /learning amongst the learners.
- Encourage the students to ask questions.
- Implementing open ended questions while teaching and evaluating.

3. How will you implement the knowledge & techniques acquired to your subject?

- Arouse the element of fun and inquisitiveness among the learners.
- Encourage activity based learning and hands on experiences.
- Strive to introduce the Mathematical concepts through ELPS (Experience-Language-Picture-Symbols).
- Provide the congenial environment to the learners so that they can arrive at a conclusion on their own.
- To ensure that the teacher's role is just of a facilitator and learners should be able to explore and arrive at facts.

4. Comments and suggestions (How do you think the workshop/Seminar could have been made more effective?)

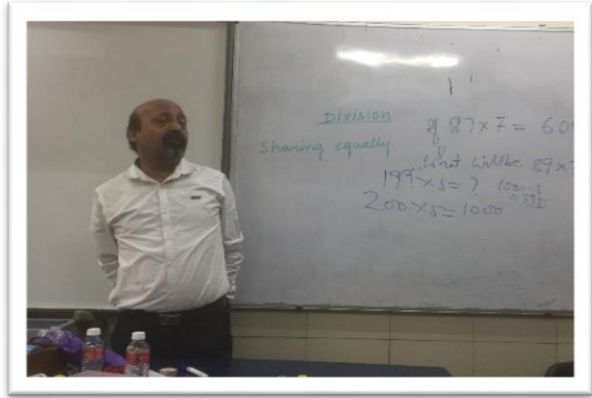
- Some more activities/exercises could have been discussed for gifted and slow learners.

5. Was the advance briefing about the workshop/Seminar appropriate?

- Yes, it was well planned and informed so that all the participants were equipped with the required material.

GENERAL FEEDBACK	YES / No
• The workshop/Seminar was applicable to my job	•
• I will recommend this workshop/Seminar for other faculty members.	•
• The program was well paced within the allotted time.	•
• The material was presented in an organized manner.	•
• The resource person was a good communicator.	•
• The resource person was knowledgeable on the topic	•
• I would be interested in attending a follow-up, more advanced workshop / Seminar on this same subject	•
• I will be able to conduct follow up workshop for the benefit of fellow Staff Members	•

Glimpses of the workshop



Report submitted by:

- Ms. Archana Dhar Mam
- Ms. Mukul Srivastava
- Ms. Vandana Kaul
- Ms. Ruchika Gupta

Designation- PRT
Submission Date – 17 May 2019