FACULTY DEVELOPMENT-NATIONAL EXPOSURE VISIT TO PALAMPUR -2023-24 ON ASSESSMENT FOR CORE ACADEMIC UNIT &EXAM BRANCH OF DIRECTORATE SCERT/DIET FACULTY WITH AVISHKAR CENTRE FOR SCIENCE MATHS ARTS &TECNOLOGY
(Organised by SCERT, Delhi)

Coordinator: Dr. Seema Srivastava

Team: Core Academic Unit (CAU) & Exam Branch DoE

The team of 32 officers of Directorate, /SCERT / DIET faculty members from Delhi attended Exposure Visit on Assessment with Avishkar Centre for Science Maths arts & Technology organised by SCERT, Delhi from ***6 October-10 October,2023.*** Aavishkaar is helping teachers and educators fall in love with Maths and Science. The unique way of teaching through gamification helps students to develop the understanding of concept in joyful manner. Conceptual building throug charcha and questioning in a simplified manner develops critical thinking and creativity. The program focused on equipping and enabling the members of the Core Academic Unit, Exam Branch of DoE and Teacher Educators of SCERT /DIET with the necessary competencies to nurture creativity, conceptual understanding and create assessments aligned with NEP 2020.

The workshop was thoughtfully structured, providing a comprehensive perspective on various assessment tools, pedagogy, teaching methodologies, and educational strategies. One of the highlights of the workshop was the opportunity to engage in active learning and collaborative activities. The interactive sessions led by experienced educators like Prapti mam, Sandhya mam, Sarit sir and Kavita mam allowed me to explore innovative teaching techniques, understand the significance of inquiry-based learning, and enhance my skills in creating an active thinking classroom. The practical exercises, such as one cut geometry, make 24 in different ways, observe the insect, science and math exhibition etc. enabled me to grasp complex concepts and made the learning process engaging and memorable.

Emphasis on open-ended and close-ended questions and their role in stimulating critical thinking among students. Additionally, the introduction of the KWL chart, which focuses on what students know, want to know, and have learned, is a valuable tool that can be implemented in any subject. The [Five Es: Engage, Explore, Explain, Extend, and Essence] concept encapsulates the essence of effective teaching and learning. The visit to the math exhibition was eye-opening, as it showcased innovative gamification methods to make math more accessible and enjoyable for students.

Brief of the sessions are as under: (6-10 October,2023)
06/10/2023
Day 1: Session 1:

Facilitators: 1.Ms. Prapti 2. Ms. Kavita 3. Ms. Sandhya 4. Mr. Sarit

Introduction: Participants and facilitators introduced themselves to each other. Each participant introduced another participant. Followed by **Dot Exercise** where Participants were shown a paper with eight dots and given a few seconds to think about it. Each person had different responses to how they interpreted or viewed the dots. Math Activity was conducted Participants were given the task of adding two numbers in different ways which engaged them in mathematical thinking.

Discipline Rules: The workshop's discipline rules were discussed, including no shouting and no raising hands (only using thumbs up, possibly as a way to manage discussions).

Session 2:

Math and Science Exhibition: Participants were taken to a math and science exhibition, where various gamification methods were used to make learning, these subjects more engaging. Some of the methods mentioned include different sounds, "aankh ki gehrai" (depth perception), foam fractions, flipping coins, "ek pe ek" cards, snake and ladder games, and tangram puzzles.

Session 3: Facilitator: 1. Mr. Sarit

Definition of Science: Science is about trying to understand the world in a simple, clear, and easy way.

Conclusion: The first day of the workshop aimed to engage participants in various assessment activities and also exposed them to innovative and interactive methods of teaching math and science. The definition of science provided at the end of the workshop emphasizes simplicity and clarity in understanding the world.

07/10/2023
Day 2

Session 1:

Theme - Questioning (Led by Ms. Kavita)

Storytelling: Ms. Kavita told a story and incorporated questions into the narrative.

Example Question: An example question was, "If you consume 3 liters of milk a day, then how much milk have you consumed in a week?" This question likely encouraged participants to think mathematically and apply multiplication as a form of addition.

Learning Cycle: Ms. Sandhya discussed the learning cycle, which consists of four stages:

1. Conceptual understanding
2. Procedural fluency

3. Procedural flexibility

4. Application

Session 2:

Theme - Thinking Classroom (Led by Mr. Sarit)

Outdoor Activity: Mr. Sarit took all the participants to a forest or natural environment. Observation Task as given to participants and they were asked to observe and describe at least one insect based on three observations given below: For each observed insect, participants were instructed to note the unique and interesting features of the insect.

Ask Questions: Additionally, participants were asked to formulate two questions related to the observed insect. Mr. Sarit provided a concluding statement, emphasizing the role of the teacher as the manager of learning opportunities.

Session 3: Facilitators: Ms. Prapti

Mr. Prapti provided participants were given some sets of secondary-level question papers and instructed us to create a comparative table categorizing the questions into three types. The participants were asked to calculate the percentage of each type. Here's a breakdown of what was likely done:

Objective:

Analyze the types of questions on the secondary-level question papers and categorize them based on their cognitive level.

Activity:

Participants reviewed the provided secondary-level question papers. They categorized the questions into three types:

1. **Recall Questions**: These are questions that require the recall of factual information, often testing memory.

2. **Understanding Questions:** These questions assess the comprehension of concepts and require a deeper understanding of the material.

3. **Other Types (Application, Analysis, Synthesis, Evaluation, etc.):** This category includes questions that go beyond mere recall and understanding, such as those that require applying knowledge, analyzing information, synthesizing ideas, and evaluating arguments.

Outcome:

After categorizing the questions, participants created a table listing the percentage of each

5. Procedural flexibility

6. Application

Session 2:

Theme - Thinking Classroom (Led by Mr. Sarit)

Outdoor Activity: Mr. Sarit took all the participants to a forest or natural environment.

Observation Task: Participants were asked to observe and describe at least one insect based on three observations given below:

2. **Write Unique Features:** For each observed insect, participants were instructed to note the unique and interesting features of the insect.

3. **Ask Questions:** Additionally, participants were asked to formulate two questions related to the observed insect.

Sum-Up Statement: Sarit Sir provided a concluding statement, emphasizing the role of the teacher as the manager of learning opportunities.

Session 3: Facilitators: Ms. Prapti

Prapti Mam provided participants with some sets of secondary-level question papers and instructed us to create a comparative table categorizing the questions into three types. The participants were asked to calculate the percentage of each type. Here's a breakdown of what was likely done:

Objective:

Analyze the types of questions on the secondary-level question papers and categorize them based on their cognitive level.

Activity:

Participants reviewed the provided secondary-level question papers. They categorized the questions into three types:

1. **Recall Questions**: These are questions that require the recall of factual information, often testing memory.

2. **Understanding Questions:** These questions assess the comprehension of concepts and require a deeper understanding of the material.

3. **Other Types (Application, Analysis, Synthesis, Evaluation, etc.):** This category includes questions that go beyond mere recall and understanding, such as those that require applying knowledge, analyzing information, synthesizing ideas, and evaluating arguments.

Outcome:

After categorizing the questions, participants created a table listing the percentage of each question type. This activity is a valuable exercise in curriculum and assessment design, as it helps educators ensure that assessments are balanced and include a variety of question types that assess different cognitive skills. It also encourages teachers to reflect on the depth of thinking and understanding that assessments promote among students.

Conclusion: The Second day of the workshop aimed to foster questioning skills, teaching strategies, and a hands-on approach to learning, encouraging participants to think critically and engage actively in the educational process.

08/10/2023

Day 3

Session 1:

Session 3: Facilitators: 1. Ms. Prapti 2. Ms. Kavita

Theme: Active Thinking

Classroom Activities:

1. **Using Geo Boards**: Participants were provided with geo boards, which typically consist of a grid of squares and an array of pegs. The purpose of these boards is to facilitate the exploration of geometry concepts and measurement. Participants were instructed to make observations about the geo boards and the squares on them. These observations likely encouraged participants to become familiar with the tools and materials.

2. **Creating Shapes:** Participants were asked to use the geo boards to create different shapes, likely including rectangles and triangles. This hands-on activity promoted active engagement and practical application of geometry principles.

3. **Calculating Area:** After creating the shapes, participants were given the task of calculating the area of these shapes using the squares on the geo board. This exercise allowed participants to grasp the concept of measuring area through counting squares.

Major Outcomes:

1. **Area Measurement:** Participants likely discovered that the area of a rectangle and the area of a triangle can be measured by counting the squares on the geo board. This realization highlights the fundamental concept of measuring area by unit squares.

2. **Subdivision of Shapes:** Participants learned that larger shapes can be divided into smaller shapes. This is a crucial understanding in geometry and lays the foundation for more complex geometric concepts.

3. **Equal Base and Height:** Participants may have observed that if the base and height of a rectangle are equal, then the area of the rectangle is equal. This relates to the concept that the area of a rectangle is calculated by multiplying its base and height.

09/10/2023

Day 4

Session 1:

Theme - Exploring the Unknown (Led by Ms. Sandhya) Activity:

Participants were given sheets of paper with various shapes and were tasked with cutting the paper only once to create a geometric shape. This activity likely encouraged participants to think creatively and explore the possibilities within geometric constraints.

Session 2

Theme - Open-Ended and Close-Ended Questions (Led by Ms. Kavita) Activity:

Kavita Mam introduced the concept of open-ended and close-ended questions. Participants were given a task in which they were asked to identify what was the same and what was different between two statements. The two statements were: "Solve 12 multiplied by 2" and "Make twenty- four in different ways." This task likely encouraged participants to distinguish between closed questions that have one correct answer and open-ended questions that have multiple possible answers or solutions.

Session 3
Theme - Creating Open-Ended Questions (Led by Ms. Prapti)

Activity:

Resource Person provided participants with question papers and instructed them to create open-ended questions. This activity aimed to promote the development of open-ended questions, which encourage critical thinking, exploration, and discussion. In this session a KWL chart was also introduced. The KWL chart is an educational tool that helps learners organize and reflect on their knowledge and learning progress regarding a specific topic. KWL stands for "What I Know," "What I Want to Know," and "What I Learned."

The KWL chart is a useful tool for promoting active engagement and self-assessment in the learning process. It encourages participants to reflect on their prior knowledge, express their curiosity about the topic, and document their new learnings as the session progresses. This can help both educators and learners tailor the teaching and learning process more effective.

10/10/2023
Day 5:

Session 1:

Recap of Workshop: Ms. Prapti presented a recap summary of what had been covered from Day 1 to Day 4. The main takeaways were described as the "Five Es": Engage (charcha), Explore (khoj), Explain (samajh), Extend (vistar), and Essence (saar). These appear to be guiding principles for effective learning and teaching.

Mathematical Problem-Solving: Ms. Sandhya gave participants a paper with a 10x10 square, where the border squares were darkened. Participants were asked to count the darkened squares. The conclusion was a formula for this pattern: 4n-4 (where 'n' represents one square). This formula could be used to calculate the number of darkened squares for a given pattern.

Analytical Paragraph: Participants were provided with a graph showing the population of India and China. They were tasked with writing an analytical paragraph, likely exploring trends, differences, or insights based on the data presented in the graph.

Session 2:

Math Exhibition: The organizers took the participants to a math exhibition, where various gamification methods were used to make math more engaging. Some of the methods mentioned include "7 flips," "dimagi kasarat," "jhapatta maro," "rangometry," and "tangram." These methods are likely interactive and hands-on approaches to teaching math concepts.

Session 3:

Certificate Distribution: The organizers distributed certificates to the participants, acknowledging their completion of the workshop.

Vote of Thanks: Dr. Seema Srivastava, Mr. Sanjay Subhash & Mr. Parvinder expressed

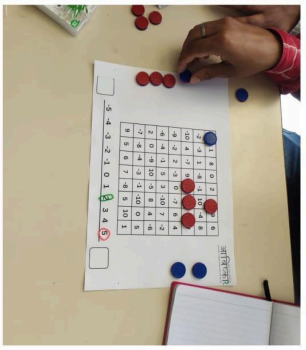
their gratitude to the organizers for conducting a wonderful and knowledge-rich workshop. This final day of the workshop included a combination of recap and summary of key learnings, mathematical problem-solving activities, hands-on experiences at a math exhibition, and the formal recognition of participants' completion of the workshop through certificate distribution and expressions of gratitude.

Glimpses







Other Places of Visit ….

Palampur has important and beautiful tourist spots. Few places of visit by the team include Bir Billing Para Gliding, Baijnath Temple, Tashi Buddhist Monastery, Tea Garden-Wah! Tea Estate, Saurabh Van Vihar Mclodganj, Chamunda, Nandikeshwar temple, Theckchin Monastry, Bhagsunath temple, Church of St. John in wilderness, Mata Sri Bagla Mukhi Temple -Vankhandi and Palampur Science Centre etc.

Glimpses