

## **Blueprint - Mathematics Action Research Project 2024-25**

### **Title: The Study Of Effectiveness Of Multipronged Approach in Bridging Concept Wise Gaps Among Grade IX Students**

**Objective:** To use various strategies of tutoring to boost better understanding and bridge the gap in the concepts from middle school to secondary in the learning process of students.

#### **Research Questions:**

1. How can we build up interest in learning Mathematics subjects after a change from middle school to secondary level mathematics for grade IX students?
2. How can we improve the performance of students by using active learning strategies in elevating the academic performance of grade IX ?
3. How can we clear the basic concepts related to topics associated with next grades ?

#### **Hypothesis:**

**Research Hypothesis:** There is a significant increase in the mean scores of post test results of students after implementing the multipronged approach of tutoring strategy for improving students performance of Grade IX.

**Null ( ) Hypothesis:** - There is no significant increase in the mean scores of post test results of students after implementing the multipronged approach of tutoring strategy for improving students performance of Grade IX.

#### **Scope:**

In the scope of the study will be : -

1. All grade IX students in S. B. Patil Public School, Ravet, Pune, Maharashtra, affiliated to CBSE.
2. The present study focuses on secondary school teachers of Grade IX.
3. Primary focus is to improve students' performance by using a multi pronged approach of tutoring strategy among teachers.

**Time Duration:**

The project will be starting from November till December (Tentative) 2024)

**Population and Sample:**

**Sample:** - 1. All sections of Grade IX learners of S. B. Patil Public School.

**Research Design:** Two Group Pre and Post Test Design.

**Research Methodology:**

**Step 1:** A google questionnaire will be provided to students to know about the lessons they find as most difficult in Grade IX mathematics.

**Step 2:** A google questionnaire will be used for teachers to find out the most difficult lesson for teaching in Grade IX mathematics book.

**Step 3 :-** The result analysis of questionnaires of both students and teachers will be done to find the hotspot mathematics lesson/ concept (based on difficulty level) to be used for the study.

**Step 4 :** The teacher peer group of Grade IX along with the HOD will discuss and share their teaching style in the use of different active and inclusive learning strategies and methods of teaching techniques for the same hotspot lesson/concept in the micro-teaching sessions. They will finalize a few learning techniques and active learning strategies to be used with the Research Group students.

**Step 5 :** Students will be divided based on their pre test results of their performance into control and research groups.

**Step 6:** Teachers use the following active learning strategies to improve students understanding of the concept in the lesson they find most difficult:-

1. Peer learning
2. Teacher interchange with the technique of bridging the concepts of

middle and secondary class

3. Guest Lecture

4. Flipped classroom

5. Activity based learning

**Step 7:-** A post test will be conducted with both control and research group students to find out their progress in the concept/ Lesson using active learning strategies.

**Step 8:-** The results will be analyzed by using Post-test scores of all students in the worksheets and will be decisive for achieving the desired learning outcomes.