

Manuscript No.: IJAR-59453

Title: A Comparative Study of the Effectiveness of Discussion and Demonstration Method on the Academic Achievement in Physical Science of Class IX Students of West Bengal Board of Secondary Education.

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality	✓			
Clarity	✓			
Significance	✓			

Reviewer Name: Dr. Mithilesh kumar shukla

Reviewer's Comment for Publication:

This quasi-experimental study compared the effectiveness of Discussion and Demonstration Methods in teaching Physical Science to 60 Class IX students (West Bengal Board) across two chapters. Using a rotational (counterbalanced) design, each group experienced both methods on different chapters, with pre-tests and post-tests measuring achievement. Results showed both methods improved student performance, but the Demonstration Method produced consistently higher post-test scores and mean gains (combined mean 11.25) than the Discussion Method (combined mean 5.7). The authors conclude that concrete demonstrations are more effective for teaching abstract Physical Science concepts, while discussion still supports explanation and conceptual clarification. The study recommends integrating both methods and providing adequate training and laboratory facilities for teachers.

Recommendation: Accept after minor revision.

Detailed Reviewer's Report

STRENGTHS:

- 1- Clear and well-defined research problem.
- 2- Variables such as teacher, school, class level, syllabus, teaching time, test duration, and evaluation procedure were kept constant, enhancing the fairness of the comparison.
- 3- The paper provides thorough descriptions of how each method was implemented .
- 4- Balanced treatment of both methods.
- 5- The study offers concrete recommendations for teachers, teacher educators, curriculum planners, and schools regarding method selection and resource provision.
- 6- The paper openly states that simulated datasets were used for methodological demonstration,

WEAKNESSES:

- 1- Very small and narrow sample.
- 2- Lack of reliability and validity evidence for the test.
- 3- Limited content coverage and short duration.