The purpose of this research was to examine the effect of flipped classroom model and problem solving strategies on achievement and student engagement in mathematics in relation to critical thinking. The study was confined to class IX mathematics students of English medium public schools with facility to teach through computer and broadband connection of Amritsar City affiliated to Central Board of Secondary Education, New Delhi. The study was experimental in nature, employing pre-test and post-test factorial design. The total sample was divided into two experimental groups and one control group. Tools used to collect data were achievement and student engagement scale in mathematics developed by investigator herself, and critical thinking scale developed by Murthy (2015). In order to analyze the data, descriptive statistics (mean, standard deviation, skewness and kurtosis) and inferential statistics (like 3×3 Analysis of Variance and t-test) were used. The results revealed statistically significant differences in favour of experimental groups (flipped classroom model and problem solving strategies) for increasing achievement and student engagement in mathematics. Further, the results highlighted significant interaction effect of instructional strategies and critical thinking on achievement and student engagement in mathematics. In the light of findings, the research work concludes by discussing educational implications and suggestions for further research.

Submitted by:

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