Abstract

Mathematics pedagogies practiced in schools need a greater emphasis on higher order thinking - this is acknowledged by educators throughout the world. But most of the Mathematics classrooms are still stuck with conventional forms of teaching offering only algorithmic or procedural knowledge to students. To use content beyond application level and perform cognitive tasks of analysis, synthesis or evaluation, students must have a very strong conceptual understanding of the respective content. To prove this fact, an Instructional package comprising of lesson plans targeting conceptual understanding; worksheets with scope for guided discovery; and formative assessments with HOTS questions for the topic 'Real Numbers' was developed and implemented. An Experimental study was conducted to check the effectiveness of the Instructional Package over the Conventional form of teaching on students of IX standard in one of the English Medium Schools in Vadodara, India. Students of the Experimental and Control group were compared through Achievement test that included only HOTS questions. The design used in this Study was the Equivalent Posttest Control Group design. The t-test was used for data analysis. Results not only showed a significant difference in the achievement scores of the Experimental group students over the Control group students; but also proved that the Instructional Package was effective in the development of content-specific-higher-order thinking skills in terms of Higher level and Basic level competencies with respect to comprehension, application, analysis, synthesis and evaluation level questions of the topic 'Real numbers' in most of the students of the Experimental group.