EXECUTIVE SUMMARY

Mathematics is a living and flourishing subject. Mathematics is not just a tool to assist science; rather it is an approach to develop scientific tempers, which leads to the high level of the human enquiry. But mathematics is not a subject of choice for many students. Majority of students are afraid of mathematics and develop a phobia towards mathematics. Analysis of the probable cause-data at the site indicates that students were frustrated, bored and inattentive because their needs were not being met through the current educational system in which students of all ability levels were being taught in the same class room. Because students learn at different rates, the same methodology for everyone is too difficult for some and too easy for others. The purpose of the study is to address this issue. So the researcher has focused on the question that 'how will differentiated instruction based on ability grouping affect the academic achievement in mathematics'.

For this, researcher developed instructional designs appropriate for high ability students, average ability students and low ability students and checked the effectiveness in an experimental condition with the mixed ability students. To check the shift in attitude of students in mathematics the Fennema-Sherman Mathematics Attitudes Scale (MAS) was used. Data analysis were done with the help of statistical technique 'Analysis of Covariance' and the results show that there is a significant difference in the mean post test scores of high ability students, taught through differentiated instruction, when compared to mean post test scores of high ability students in mixed ability group. Also there is a significant difference in the mean post test scores of average and low ability students, taught through differentiated instruction, when compared to the mean post test scores of average and low ability students respectively in mixed ability group. Regarding attitude towards mathematics, all the three groups taught through differentiated instruction shows a significant difference. This result may be used for the professional development of the mathematics teachers.