In this age of science and technology, mathematics undoubtedly plays a very important role. It is therefore quite natural that mathematics education be put on sound footing meeting all its requirements, more particularly, at the school stage of education.

During the past decade and a half, a number of advanced countries such as USA, USSR, UK, France and Belgium have done enough to improve mathematics education. In India also, attempts have been made to improve mathematics education by way of modernising mathematics courses at all levels. In fact, school mathematics has been revised in the light of the requirements of new mathematics and necessary syllabi and text books have also been prepared.

But the school level mathematics education in Assam, has so far received scant attention in the universities and other state level administrative agencies and academic institutes. The number of analytical work on the subject is few and far between barring a couple of exploratory ventures made by some individuals. It is a fact that Assam is lagging far behind in the field of experimentation of mathematics education. The change of mathematics curricula requires proper experimentation. An example may be cited in this connection that in Gujarat, before introducing the new syllabus of mathematics, an experiment was conducted to measure the degree of suitability of the new syllabus. In Assam, the revised syllabus of mathematics has been prepared and prescribed to all secondary school, but without trial. It would have been appropriate to institute a series of studies at the time of the change, but not much attention has been paid for analytical and experimental work to lay a proper foundation.
It has been observed that the performance of pupils in mathematics under the new syllabus in the H.S.L.C. Examination of Assam has deteriorated year after year. The large scale failure in the above examination is a great national wastage. While analysing the facts of failure, it is observed that the performance of pupils has been poor in most of the subjects, mainly in English and Mathematics. The number of failure in mathematics is so increasing year after year that it becomes a disease of our society.

This thesis is, therefore, the result of a long drawn plan under the above background while I was a teacher in a teacher training college, I was very much fascinated by the problem of mathematics teacher education at school level. I observed the low standard of knowledge attained by pupils in learning mathematics at the secondary stage. It has, therefore, been ventured to study in this project the root causes of the low achievement of pupils in school mathematics particularly in the State of Assam and made up my mind to study the problem with a view to suggest ways and means of improving the teaching and learning of school mathematics.

In order to study the subject in depth, I have chosen arithmetic and algebra, because these branches are inter related and have a major part in the mathematics syllabus and it is suspected that the low achievement may be due to the poor performance in these areas. So the study, in short, constitutes the selection of sample of pupils - the construction of sequential test their administration - analysis of data - discussion of facts and observations thus obtained and some other allied factors like exercise book analysis, error analysis,
problem solving attitude of pupils and individual guidance. At one stage I intended to do some experimental works based on the present findings, but for the fear of increasing the bulk of the thesis and trespassing the limit of the main objective, I am obliged to leave the same for future work.

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