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STUDY OF VARIOUS PROBLEMS FACED BY THE STUDENTS AND TEACHERS IN LEARNING & TEACHING MATHEMATICS AND THEIR SUGGESTIVE MEASURES

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Abstract: *This paper describes a qualitative study dealing with the problem faced by students and teacher in learning and teaching Mathematics in higher Secondary School and Colleges. The study adopts the descriptive survey design using simple frequency and percentage in analyzing data. Five students are randomly selected from 5 Higher Secondary Schools and 5 Colleges and one teacher is selected from those institutions in Jorhat District of Assam. The results show the various problems faced by students and teachers in learning and teaching Mathematics in Higher Secondary levels.*

Keywords: *Student attitude , Jorhat District, Higher Secondary*

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1. INTRODUCTION:

Mathematics is an inherently social activity, in which a community trained practitioner (Mathematical Scientist) engages in the science patterns, i.e. systematic attempts based on observation, study and examination, to determine the nature or principle of regularities in system. The tools of Mathematics are abstraction, symbolic representation and symbolic manipulation. However being trained in the use of these tools no more means that one thinks mathematically , as knowing of use of shop tools makes one a craftsman. Learning to think mathematically means (a) developing a mathematical point of view valuing the process of Mathematization and abstraction and having the predilection to apply them and (b) developing competence with the tools of the trade and using the tools in the service of the goal of understanding. Structure –mathematical scene making (schoenfeld 1992).

Mathematics is regarded as a queen of science, as it is used as a tool of analysis in various other, discipline such as Engineering, Medical Science, Architecture, Commerce, Economics and even Humanities. Hence to understand various other discipline knowledge of Mathematics is very essential. Now a days Mathematics is indispensable for career building. But for all these we must know about attitude towards mathematics.

Attitude towards mathematics denote interest or feeling towards studying mathematics. It is the disposition of an individual towards liking or disliking the study of Mathematics, So this may vary from individual to individual. It may be favourable or one of discouraging. An attitude towards Mathematics is determined by the aptitude, interest and ability of an individual in solving problems, assessing ideas and making decision. Review of relevant literature reveals varying opinions and findings on the student's attitude towards mathematics and their performances. Study of the relevant literature show that study on attitude of student towards mathematics has been prevalent for ages. Some studies reveal consistency across countries and age levels within a country, is the average level of attitude towards mathematics by students. The researchers, however, reveal that there is a marked difference in attitude between the ten year olds and fourteen year olds towards mathematics. However in countries where there is an emergent emphasis on student attitude towards mathematics, and academic achievement among secondary level students for industrial and technological development, there is less, favourable attitude towards Mathematics. But in counties that have attained high level technological and industrial

development, the findings show attitude towards mathematics is more natural. Studies also reveal that boys hold more favourable attitude towards mathematics.

While going through the attitude of student and teacher towards mathematics we find students and teacher's face various problems in the process of learning and teaching mathematics. So in this paper an attempt has been made to find out various problem faced by students in learning mathematics and problems faced by teachers in teaching the subject.

1.1. Need and Significance of the study

Normally we see that students have a fear towards the subject Mathematics. They are unable to understand the basic concepts of Mathematics and their technique due to various reasons. The problems that occur in the process of learning mathematics are relatively less in case of other subjects. Hence, for common students mathematics becomes a *tougher* subject and *consequently,* they try to avoid it. Problems related to mathematics occur not only in case of students but also in case of teachers. It is seen that most of the mathematics teachers are not aware of alternative simple methods of teaching mathematics and different skills of solving the same problem. *Hence*, there is a need to study in detail the problems faced both by students and teachers in learning and teaching mathematics. So this study has been conducted with the sole objective of identifying various problems faced by students and teachers in learning mathematics and *solicit* suggestive Measure in *favour* of those.

2. METHODOLOGY

The present study is among secondary level students of schools and colleges of Jorhat district of Assam. For the study, 5 higher secondary schools and 5 colleges are selected randomly from study area.

As a result, total no of institutions are ten. To obtain information, five student from each institutions are randomly selected and as a result total number of sample students were 50. Again, to know the attitude of teacher, one teacher from each institution were selected randomly and as a result, number of sample teachers respondent were *ten.* The data have been collected by personal interview method by the investigators themselves with the help of an interview schedule. A lot of information have been obtained through personal observation and interaction with the students and teachers.

Table (1) Problems faced by the student

	Nature of Problem	Frequency	Percentage
1.	Too complex to understand	30	60%
2.	Not interesting due to lack of applications	12	24%
3.	Lots of formulae to be memorized	24	48%
4.	Time consuming (Needs more practices, so its time consuming)	20	40%
5	Due to lack of practical not aware of its applicability	18	36%
6.	Learning mathematics needs extra coaching which is unaffordable for many students	15	30%
7	Students do not get the expected marks	10	20%
8	Base of Mathematics is not perfectly clear at school level	15	30%

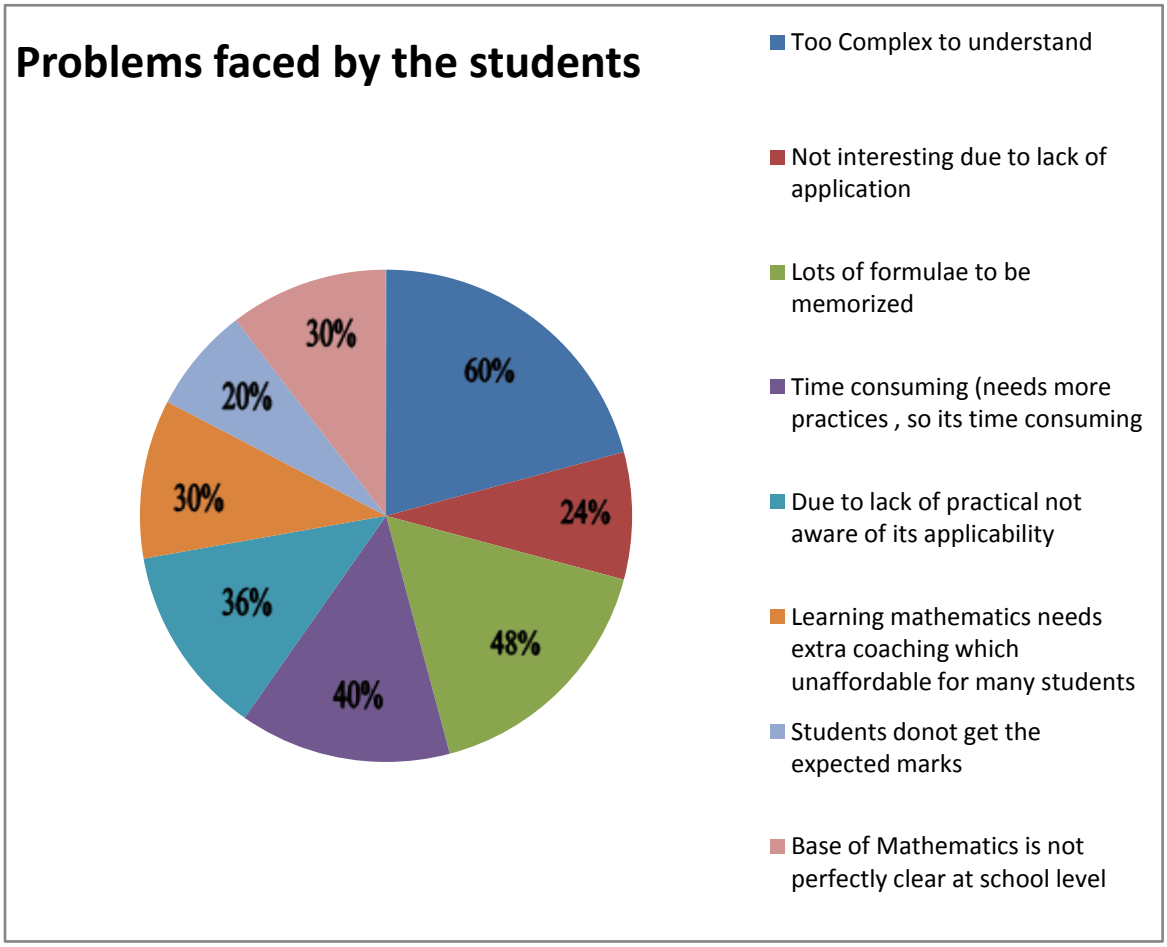
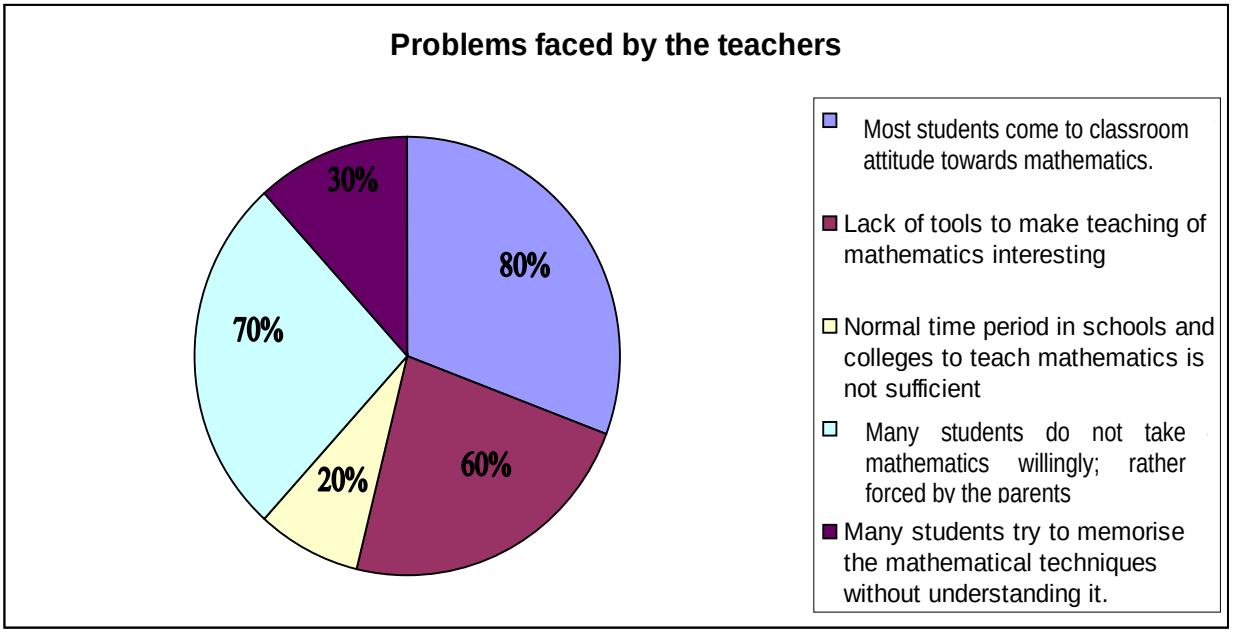


Table II Problems faced by the teachers

Sl No	Nature of Problem	Frequency	Percentage
1.	Most students come to the classroom with negative attitude towards mathematics.	8	80%
2.	Lack of tools to make teaching of mathematics interesting	6	60%
3.	Normal time period in schools and colleges to teach mathematics is not sufficient	2	20%
4.	Many students do not take mathematics willingly; rather they are forced by the parents	7	70%
5.	Many students try to memorise the mathematical techniques without understanding it.	3	30%



3. Results & Discussion:

Table -1 reveals the various problems faced by the students in learning Mathematics. 60% of student reveal that mathematics is much complex to understated in comparison to other subjects. This problem is mainly felt by the students of Arts and commerce. Moreover, in this study, shows, this problem was mostly confronted by the girls students .

Again, 48% of students convey that in mathematics lots of formula are to be memorized specially in Algebra, trigonometry and calculus. Consequently the subject becomes much time consuming as revealed by 40% of students. In case of science stream students, who understand subjects like physics, chemistry and statistics practically. But 36% of students

reveal that in mathematics due to lack of practical they cannot understand the practical applicability of subject. 30% of students say that Mathematics classes in schools and colleges are not sufficient, therefore extra coaching is required in the subject. This creates problem for the students from poor background who cannot afford the costly coaching.

20% of the students reveal that they do not get expected marks in exam. because, they are of the view that due to absence of step marking they do not get the marks they expect. Again 30% of the student reveal that their mathematical base was not clear at school level. This problem was felt by them only when they start classes of Higher Secondary mathematics. As a result they cannot understand mathematical problems in depth.

The investigators tried to examine the problems faced by teachers in teaching mathematics. Problems expressed by them are given in table no-2

The table reveals that 80% of the teachers feel that most of the students come to class with a negative attitude towards mathematics. They have fear for the subject, yet they take it in order to build their career. 60% of the teacher's expressed that mathematics lack practical tools like physics and chemistry to make the subject interesting among the students. Again, 20% of the teachers reveal that normal time period of 45 minute or 1 hour in schools and colleges are not sufficient to teach mathematics. Some problems are so complex and lengthy that those cannot be completed in the stipulated time.70% of the teacher's feel that many students do not take mathematics willingly ; rather they are forced by their parents specially in case of higher secondary students. 30% of teachers say many students, specially girl students try to memories the mathematical problems without understanding it.

Suggestive Measure

1. Measure should be taken to make mathematics interesting at school level.
2. Exhibition of mathematical model at school and college level should be conducted.
3. Mathematical quiz should be organized in schools and colleges at regular interval.
4. Regular students' seminar should be arranged to highlight the importance of mathematics for the career development of the students.
5. Teachers should use the simplest and the most interesting method to teach mathematics by taking examples from daily life.
6. Regular refresher courses should be arranged for the mathematics teachers at district level.

7. Time period of mathematics classes in regular routine should be increased.

CONCLUDING REMARKS:

The investigators are to finally conclude from present research study that Mathematics students and teachers face various problems in learning and teaching Mathematics. This paper recommends that the teacher should develop positive relationship with students and stress class room activities that involve active teaching-learning process and student's participation in the class. Schools and college should organize periodic seminars and workshops for students, parents and teachers designed to promote positive attitudes towards Mathematics.

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