

An Empirical View on Private Tutoring in School Mathematics of Kamrup District

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Abstract- In this study samples are collected from several stakeholders involved with the entire privately organized tutoring system as well as the schools. Data have been gathered through interview from teachers, parents and students of various categories. This investigation mainly focused and why the students go for private tuition and how the tutorial classes build up students' knowledge and skills. The investigation revealed that not only the weaker students go for private tuition in mathematics but the students from all categories. Reasons of going mathematics tutorial classes ranged from getting pass marks to being forced by parents or pushed by class mates. However, common practice for most of the individual tutors is to complete the syllabus. Students expressed boldly that they could learn problem solving more easily in tutorial classes than in school.

I. INTRODUCTION

In the context of globalization the concept of education has been redefining frequently with the needs and aspirations of the people. Increasing demand of quality education creates huge pressure on the formal education system in most of the countries. In this competitive environment parents are eager to go any extent to provide facilities for right education to their children. They attempt to provide their children with the best opportunities in life have resorted to private tutoring as "...a means of retaining a relative advantage for their children in the education race" (Foondun, 2002, p. 491). Private tutoring also represents a significant financial investment by families to their children's education and in some countries is big business, with the majority of students having tutoring at some point during their school careers (Bray,1999). Private tutoring has been establishing globally a trend parallel to the formal school education. In many countries like Cambodia, Egypt, India, Japan, Kenya, Malta, Romania, Taiwan and Mauritius, the prevalence of supplementary tuition is high, and it is expected to increase even further (Bray, 2003).

There are many reasons for the demand for private tutoring. It can be either due to the weaknesses of the students or due to the negligence of the teachers. In some cases, although the teachers may be teaching properly at school, the students still may need tutoring if they are academically weak. In other cases, when the teachers do not teach properly at school, the students require tutoring from the teachers outside the school. In the reviews of such studies (Devin-Sheehan, Feldman, & Allen, 1976; Ellson, 1976; Fitz-Gibbon, 1977; Rosenshine & Furst, 1969) concluded that tutoring programs can contribute to the

academic growth of the children who receive the tutoring and probably to the growth of the children who provide the tutoring as well. However, two of the reviews (Ellson, 1976; Rosenshine & Furst, 1969) reported that these contributions had been clearly demonstrated only for well-structured and cognitively oriented programs. Tutoring programs have definite and positive effects on the academic performance and attitudes of those who receive tutoring; also the tutored students outperformed their peers on examinations, and they expressed more positive attitudes toward the subjects in which they were tutored, described in Peter A. Cohen, James A. Kulik and Chen-Lin C. Kulik (1982).

In the study by Foondun (2002) the private tuition was defined as extra coaching and it was given by the teachers for extra income. Wolf (2002) who was writing about the Third International Mathematics and Science Study (TIMSS) used the term *Extra School Instruction* (ESI) to denote teaching and coaching activities in mathematics and science taking place outside of the regular school structure. But the coaching was not anticipated as extra care taken by the teachers under the auspices of the schools. In many countries in East and South East Asia children have private tuition in school subjects after the end of the normal school day, effectively extending the amount of time they spend learning. This structured support in school subjects has been termed 'shadow education' by Stevenson & Baker (1992) as it follows the school curriculum. It has the potential to make a substantial contribution to pupils' performance in national tests.

The present study aims at exploring a little more the phenomenon of private tutoring in mathematics, and the reasons for taking private tuition, the actual organization of tutorial classes and the knowledge and skills acquired during the private tuition sessions.

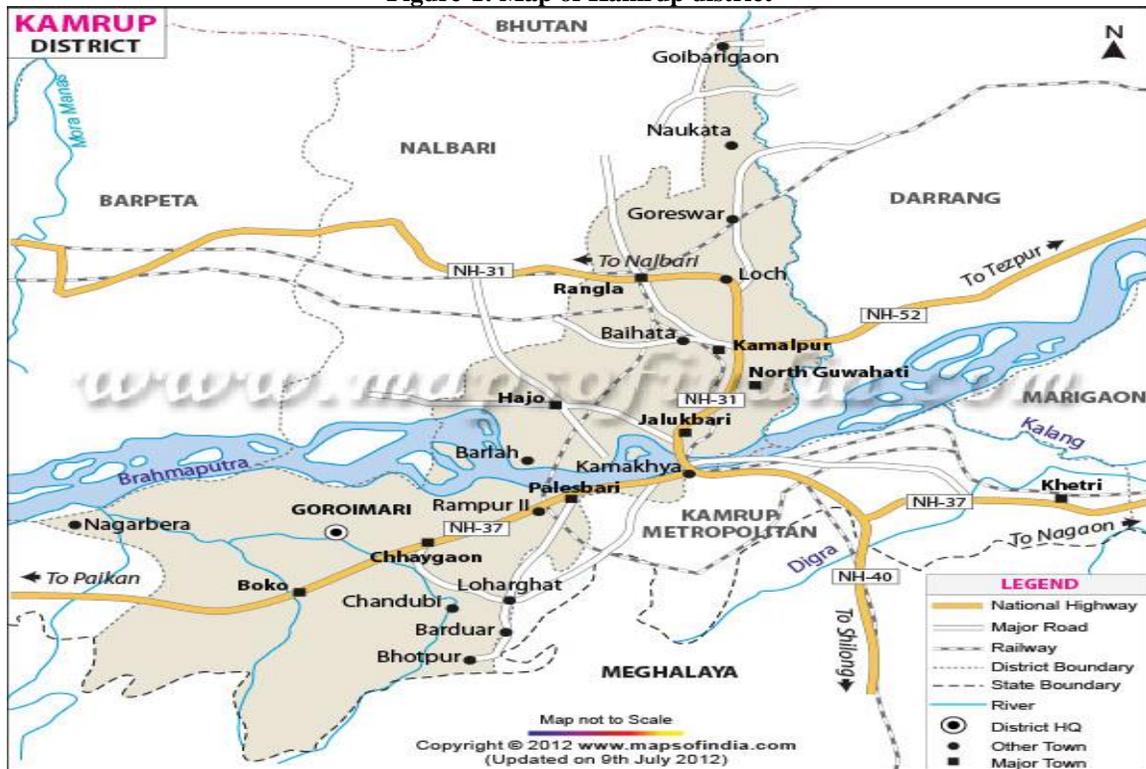
II. BACKGROUND

Kamrup District (Figure-1), one of the districts of Assam in north eastern India is situated between 25.46 and 26.49 North Latitude and between 90.48 & 91.50 East Longitude. With wide plains through which the mighty river Brahmaputra makes its way flowing a steady course from east to west, its demographic pattern is a heterogeneous one. However, there exist a perceptible degree of mutual love, respect and inter-religious tolerance amongst them. Geographically it covers an area of 4,34,500 hectares out of which area cultivated and forest area 1,81,608 and 1,16,694 hectares respectively. Its climate is sub tropical with semi dry summer and cold in winter. Flood occurs generally in the low lying areas of the district during May to August every

year. Late flood during the later part of September & October also occurs. The occurrence of flood in the district is due to the river Bahmaputra and its Tributaries. The population of the district is a unique blend of different races, cultures and religions.

Total population in the district is 35,96,292 and its density 520/km² (1,400/sq mi) with literacy 70.95 percent (census, 2011).

Figure-1: Map of Kamrup district



School education system

As India is developing country with enormous human resources the government has realized the importance of educational development and therefore, provides required importance in education resulting progress. However, there are some areas which are yet to be emphasized. Different levels are there in school education system prevailed in India, given in the Table-1. The list of the various types of the schools prevailed in

the country is given in Table-2. The list of the Boards and Councils administering the school education system is given in the Table-3. There are several subjects taught at school e.g. language, literature, social studies, science and mathematics. From stakeholders' point of view mathematics has been considering as a difficult subject.

Table-1. Levels of schools in India:

Sl No	Level	Description
1	Pre Primary	Here, kids from 3 to 5 years of age prepare to enter school education through play group, nursery and Kindergarten.
2	Primary	It includes the age group of children of 6-11 years studying in classes from I to V
3	Middle	It consists of children studying in classes from VI to VIII of an age rang 12 to 14 years.
4	Secondary	It consists of students studying in classes IX and X of ages 15 and 16

5	Senior Secondary	It consists of students studying in classes XI and XII of ages 17 and 18
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Table-2. Various types of the schools:

Sl No	Type of school	Description
1	Government	Fully managed by Government
2	Provincialized	Partially managed by Government
3	Recognized	Government has recognized for provincialization, but has not come under government management/assistance
4	Non-recognized	Established by private effort and only with permission of Government
5	Private	Established and run by private party

Table-3. Boards and Councils for school education in India:

Sl No	Board/council	Description
1	The Central Board of Secondary Education (CBSE)	Under the department of education, Govt. of India, it conducts examination and looks after the functioning of schools accredited to central education system from primary to senior secondary level
2	Boards under The State Government	State Board of education looks after the educational issues up to senior secondary level. However, Some states have separate board for secondary and higher secondary levels
3	The Council of Indian School Certificate Examination (CISCE)	It conducts two examinations 'Indian Certificate of Secondary Education' and 'Indian School Certificate'. Indian Certificate of secondary education is a k-10 examination for class X completers and Indian school certificate is a k-12 public examination conducted for class XII completers
4	The National Open School (NOS)	It was established by the Government of India in 1989. It is for those students who are unable to attend formal schools.

III. METHODOLOGY

In this empirical study, data regarding the private tutoring practices were gathered from the various stakeholders, amongst others teachers, students, and parents. Total 30 teachers, 51 students and 34 parents from different secondary schools under both of the private as well as government sectors have been participated in the study willingly, when approached. However,

some of the parents hesitated to express openly about the prevailing private tutoring trend. For actual responsiveness from the stakeholders and convenience to conduct survey forms were designed separately to extract their inherent feel on this trend which had to be filled by them. Through the survey form for teachers, some reasons and viewpoints were sought, like reason of giving private tuition, about the organization of effective private tutoring session, what something difference is there in the

school's formal class and in the tutorial class, in spite of teaching by the same teachers. After survey form filling episode an interview programme was structured with the teachers for clarifications. Through another survey form for the sample students, the reasons of taking private tuition in mathematics, how the tutorial class help in understanding mathematical concept were expected from the students. Parents viewpoints on this serious issue were also considered through another separate interview programme.

Survey and interviews for the teachers

The mathematics teachers participated here are from different secondary schools who provide private tuition in mathematics in secondary level i.e., from 6th to 10th standard.

What is your viewpoint on private tuition?

Most common reason was it is extra care to the students, especially to the weaker students. Two teachers stated that it is an attempt by some teachers concerned in the particular subject to lead the students into comfortable zone of learning the subject.

Why do you provide private tuition?

Most of them expressed that they provide private tuition for extra revenue and to enhance their efficiency level of teaching. Another important reason was given that the students need to practice more and more problems especially harder level problems for which they extend their helping hand. Three of them claimed that it was their genuine profession.

What do you focus in private tutoring session?

Their common response was to complete the syllabus with sufficient problems solving. Only two teachers pointed out that they helped the students for preparation of examinations by discussing some previous years examinations question papers.

How many students are there in one tutorial class?

Only three teachers mentioned that they gave private tuition in individual basis. Otherwise, most of the teachers interviewed gave tuitions in groups comprising 5 to 25 students. Although, private tuition provided group wise, individual attention for each student was there, they claimed so.

How do you plan to conduct the tutorial classes?

Most of the teachers mentioned that they used to check home work first given in the previous class followed by explanation about the concerned topic from the syllabus with solving few problems, then asked the students individually if anything was left to understand. Most of them used to teach 2 hours in a week in two classes at their own residence. However, 7 teachers used to attend the tutorial classes at different places and 4 teachers used to teach individually going student's home.

Is tutorial class necessary for the students if they attend the classes regularly in the school?

Unanimously all of them mentioned to be not necessary for all categories of students. However, they agreed on necessity of extra care i.e., private tutoring as they mentioned earlier, in the subject for the weaker students.

What type of materials do you follow for tutorial classes, text books, reference books or notes prepared by you?

The general response in this regards was that they relies on their self prepared notes. However, they mentioned about text books also which was used for practice only. Students to be interested attentive they had to take the help of day to day life situations, few of them opined.

How do you handle if students do not complete their assigned homework?

All of the teachers used to give verbal warnings, calling parents and taking words from the students to complete homework on the spot in front of them.

Do you evaluate the students in your tutoring classes through any tests?

Most of the teachers stated that they organize class tests frequently, immediately after completion of a chapter students had to face a test on that particular chapter. However, few of them disagreed it and mentioned that they assess through the tests held in the schools, because, schools organized sufficient tests and more than that was not necessary.

Finally, do you want to put any comment?

Surprisingly, 5 teachers strongly opposed the private tutoring system that there should be a legal action against the system despite, they involve with the system. Significantly, 7 teachers opined that if the students don't put their interest in school's formal classes regularly because of having private tuition, then it would be a threat to the formal education system. Others commented that for slow learners or weaker students private tutoring system was justified otherwise they would not be able to perform better. However, going for private tuition is being an established culture for all students, they added. A common complain from the teachers was that it was very difficult to make the students involvement concentrated in the regular school classes, because they value activities in tutorial classes more and more than what they do in the school classes.

Survey on students

All of them acknowledged about the contribution of private tuition in their learning mathematics. Private tuition provide an opportunity to understand the concepts and to solve lot of problems including higher difficulty level, they stated. Few students significantly mentioned that there is always a friendly environment among the teachers and the students in the tutorial classes unlike in school for which the students didn't hesitate to ask anything. The students noted that in tutorial classes syllabus is covered comfortably emphasizing on difficult problems with making practice of previous years' examination question papers. The students expressed that they did not choose the private tutor themselves, on the basis of parents' recommendation they choose the tutor. Few students stated that whatever they work in the school classes, if that is practiced again in tutorial classes then that becomes easier to understand.

Survey on parents concerned

The parents, participated in the interview were very concerned about the scenario prevailing in the schools. As

mathematics is key subject in school curriculum it is very important to score good in this subject to be helped in further studies, they commented. So, to improve children's mathematical performance they use to take the help of private tutors. They choose their private tutor on the basis of feed-back from other parents. They believe that only attending the school class students can't perform this subject satisfactorily. The interviewed parents mentioned that they consult with the tutor all everything about their children transparently at the time of start tuition, and later they meet the teacher frequently to have the feed-back. Some parents stated that their children were weak in mathematics, but when they were engaged with a private tuition then they improved. So, they claimed that private tuition in mathematics is extremely necessary for students, especially, weaker students. Two parents pointed out significantly, that if a private tutor can improve the students' performance in one subject only taking two hours weekly, why it is not possible in school taking four hours weekly in that subject. School authorities can rectify this problem by monitoring properly with necessary actions, they added.

IV. DISCUSSION

In this study the data reflect primarily the main reason of private tutoring is to earn extra revenue whereas from students' points of view it gives more and more practices and doubts clearing opportunities. It is very hard to imagine that how the private tutors complete the course by taking only hardly 2 hours weekly with individual attention and more practices. Moreover, students get the opportunity to practice previous year examination question papers also in tutorial classes before examination. It is really questionable. Does the enrichment strategy or remedial strategy play a role in learners' decision about seeking private tutoring (Baker et al, 2001) ?

In this study parents are found to be confident that private tutor can develop students' performance in mathematics. Reasonably, all the stakeholders would expect tutoring to have a positive effect on the learners' performance, but research has not yet been able to demonstrate a definite positive correlation. In Polydorides (1986); Fergany (1994), they conducted a study in

France, Greece and Egypt, but could not make conclusive findings about the effect of private tutoring on academic achievement. However, Bloom (1984) reported that tutoring gave students a two standard deviation gain above the average of students. Although, tutoring can have beneficial impacts on students' achievement and self-concepts, these are inconsistent, which has been reported in the research regarding the effects on attainment, as well-controlled experimental studies demonstrate strong positive effects (Bloom, 1984; Mischo & Haag, 2002) whereas international surveys do not (Baker *et al.*, 2001).

All the students concerned with this study unanimously opined that they go for private tuition, especially in mathematics to enrich the subject. However, analysis of the data from the Third International Mathematics and Science Study (TIMSS) carried out in 1995 by Wolf (2002) showed that except for Japan at Population 1, students performed better in mathematics without extra-school instruction. Also according to the students, individual attention and more practices lead them to be enriched through tutoring classes, but the research on effectiveness for tutorial classes carried out in Shanahan, 1998; Elbaum *et al.*, (2000) revealed that the quality of tutoring and the content of the programme influence effectiveness.

Here in the study, both the parents and the students strongly agreed with the private tutoring system, but, it is not affordable for all parents. So, it may harm enhancing social inequalities by discriminating rich and poor. If the private tutoring system really helps the students in learning mathematics then to what extent the system could be considered to be benefitted by everybody? Both the teachers and the students under the study stated about practices of model/previous year question papers for preparation of examination. Research should be conducted whether there is any significant difference in performance between the students who have access model/previous years question papers and the students who do not. After all, the popularity of private tutoring is growing globally in an unprecedented rate with a potentially large impact. Figure-2, radial cycle represents how various factors contribute to grow up private tutoring and gearing up (Figure-3) for global possession.

Figure-2: Radial Cycle

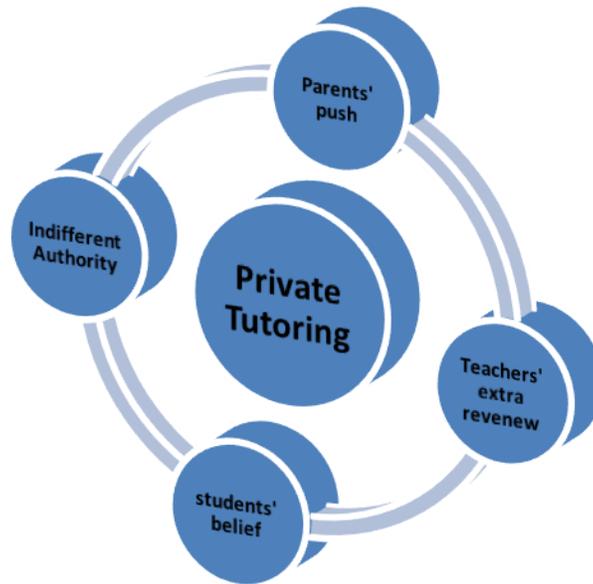
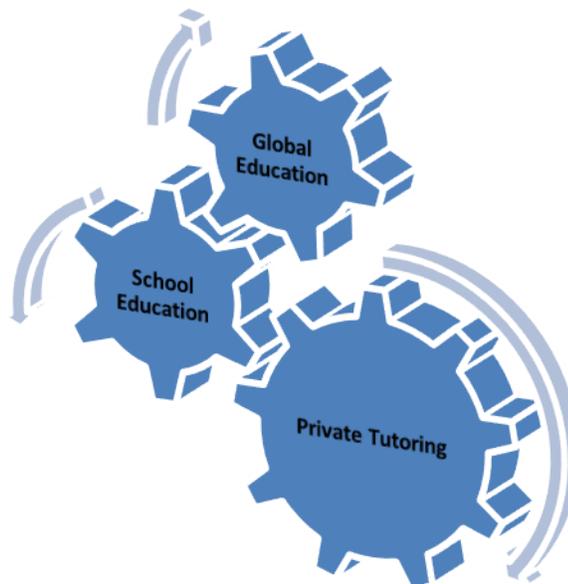


Figure-3: Possessing Globally



V. CONCLUSION

The private tutoring trend has been established in the district as grown up across the country and abroad. The unprecedented rate of growing this system is posing a challenge to the regular formal system of education. Students taking private tuition are neglecting school work and the value system; because, in private tuition tutors guide the students from his/her level best with a challenging attitude to enlarge their domains of profession.

Private tutors treat the students and parents strategically always to keep him/her well impressed. To understand mathematical concepts and to develop problem solving skill students must learn from a pedagogically rich teacher in mathematics. If the students keep ignoring regular school works so, then it would be threat to the formal education system. This serious issue has to be emphasized by the policy makers intervening on curriculum, teachers salary structure, pedagogical development, evaluation system etc., and to think what can be executed for the slow learners.

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Parents Survey Form

Gunendra Chandra Das, M Sc, B Ed, Ph D scholar

Name: Occupation:
 No of children: Type of school:
 Annual income: No of tutors engaged.....

1. Why do you send your child for private tuition?.

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2. Who does insist for private tuition first, you , your child or school teacher?

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3. In which subject/subjects tutorial class is required for your child? And why?

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4. Do you believe that tutorial class is very important to improve in mathematics?

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5. What type of tutoring class do you prefer - individual or group and Why?

.....6. How do you choose tutor?

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7. Can the private tutor finish the syllabus?

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8. Does the tutor teach anything other than syllabus?

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9. What is the fee structure of tutorial classes?

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10. Do you communicate with the tutor to know about your child's improvement?

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