

## State of Private Tutoring in Mathematics Learning From School to Higher Education

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### Abstract

*The study aims to determine the state of private tutoring in mathematics learning from school to higher education in the Nepalese education system. Also, the study was intended to compare the practice of private tutoring in mathematics at the secondary level and higher education. The study was conducted within the framework of descriptive and qualitative research design using an interview schedule and observation guidelines as the tools for data collection. Finally, it was found that mathematics is one of the subject in which massive numbers of students demand for supplementary classes at secondary level and even in higher level. Intentionally, they want to join tuition classes at secondary level rather than primary level, and which level the board exam will be administered. Before beginning of semester system at University level those students majoring mathematics want to join private tuition classes to pass their examination. However, in present context, those students who are studying other faculties like management, science, technology demands for it than those who were majoring mathematics.*

**Keyword:** *Mathematics, Private Tutoring, Mathematics Learning, School, Higher Education*

### Introduction

Private Tutoring means an alternative way of learning that provides further support for mainstream education (Bray, 1999; Hon, 2010; Krishnaswamy et al. 2019). It is education provided by any private institution or, individual teacher out of school or out of class time taking some fees from students. Nowadays the practice of private tutoring is growing rapidly as private enterprises (Bray, 2012). As it is believed that private tutoring support and supplement mainstream education, most of the students from different academic level from the school level to even higher education want to take tuition classes formally/informally for their academic success and better achievement in examinations. The data of the student receiving private tutoring is rapidly increasing day by day all over the world and the student receiving tuition more intensively at a secondary level rather than primary level also within those levels they demand more tutoring in grade which leads up to major examinations (Bray, 2009). He also added that the subject given more attention in private tutoring are commonly Mathematics, Language, and Science. In our context, most of the students from school to higher levels feel mathematics a difficult subject. So, they want supplementary support for their good academic achievement. They used to think that tuition center provides quality education, innovative learning techniques which are useful for examination, and coverage of the whole course.

### Statement of the Problem

Private tutoring is a common phenomenon all over the world (Bray & Lykins, 2012). Mainstream schooling has been significantly affected by supplementary private tutoring. Various studies have found positive and negative consequences of such tutoring. It is beneficial for both teachers and students because it helps students to increase their competitiveness, better achievement in examinations, an avenue for private investment in human capital, and incomes for underpaid educators (Bray, 2010; Adhikari, 2022; Subedi, 2018). Correspondingly, it has negative consequences likewise, distortion of mainstream curricula and teacher performance pressure on young pupils, exacerbation of social inequalities, and manipulation of clients by tutors. Although the government of Nepal has mentioned somehow provisions about private tutoring via different policies and programs nevertheless these were not explicitly specified about it is overall management such as infrastructure, criteria of fees, and qualification of tutors. So, the

researcher was motivated to evaluate the practice of private tutoring in mathematics learning from different levels of mainstream education.

### **Objective of the Study**

The objectives of the study are as follows:

- To identify the state of private tutoring in mathematics learning on the secondary level and higher education.
- To compare the state of private tutoring in mathematics at secondary level and higher education

### **Literature Review**

#### **Private Tutoring**

The term 'Private Tutoring' refers to private education by informal education institutions or tutoring informally by individual teachers or outsiders from schools. It is believed that private supplementary tutoring is considered shadow education (Bray & Silova, 2006; Subedi, 2018). It varies in a different countries in the world. In Japan, tuition centers are termed as 'Juku', 'Crammers' in the United Kingdom, 'Frontisera' in Greece, 'darsana' in Turkey, and so on (Bray, 2009; Bray, 2012). He also added there exist three common aspects in every private tutoring; tutoring in academic school subjects, additional provision besides mainstream schooling, and the intention of financial gain. Most of the students from each academic level want to join supplementary private tuition classes for better academic achievement. It has also the common phenomenon in the Nepalese education system, it is conceived as indispensable and supplementary input for mainstream schooling. Currently, there is a common trend of private tutoring among the students of both community and institutional schools (Subedi, 2018). Some scholars view private supplementary tutoring as a form of shadow education because it fulfills the gap between students' expectations and actual learning in the mainstream (Bray, 2009; Subedi, 2018). The very purpose of private tutoring is to complement mainstream education for securing better achievement. Both high-achieving students and low-achieving students may want to receive supplementary where educational needs are not fully satisfied (Upadhaya, 2005; Subedi, 2018). So, private tutoring is becoming a crucial component of mainstream schooling in Nepal.

#### **State of Private Tutoring**

Private Tutoring is a global phenomenon that is perceived as an obvious trend in the education system and exists in most of countries around the globe. For example, 80% of students in grade 10 in China, 73.8% of primary students, and 85.5% of senior secondary students were receiving private tutoring in Hong Kong. Likewise, 77.2% of students in grades 4-8 had received tuition in India, and 60.5% of students in general high school received tuition in Republic of Korea. Similarly, in the Philippines, 46.5% of grade 10 students received tutoring (Bray & Lykins, 2012). It is conceived as an indispensable and common phenomenon all over the world. The data of the student receiving private tuition classes is rapidly increasing day by day all over the world and they would like to receive private tuition classes more intentionally at the secondary level rather than the primary level and they demand more in which grade leads up to major examinations. Also, the subject given more attention in private tutoring is commonly Mathematics, Language, and Science (Bray, 2012). In our context, students of different levels like to receive private tutoring formally/informally for their academic success and they would like to receive private tuition classes intentionally for subjects such as Mathematics, Language, and Science. By analyzing the worldwide trend of private tutoring Mathematics is the one of major subjects for taking tuition classes at different levels.

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### **Legal Provisions about Private Tutoring**

It is globally accepted that private tutoring is indispensable and supplementary support for mainstream education (Bray, 2012). Different research studies show that private tutoring is taken as part of the education system in most of the countries in the world. Also, students from different levels want to involve in private tuition classes formally or informally in Nepal. However, the government of Nepal has given less priority to the overall management of private tutoring.

In Education Act (1971), provisioned about private tutoring as no one shall conduct educational counseling services, bridge courses, language teaching or preparatory classes, or any educational program conducted in a foreign country without obtaining permission under this act. Also, if someone wants to conduct an educational program which is conducted in Nepal in a foreign country, and he submits an application to the Ministry of Education along with the recommendation of the Nepali diplomatic mission abroad, the Ministry shall take the necessary steps in this regard. After examination of the application, the applicant may be allowed to conduct such an educational program subject to the conditions. Similarly, Education Regulation has an endorsement that the person who wants to conduct the coaching classes, should apply the application to District Education Office by specifying the subjects and classes which are going to be taught. For that, the applicants should keep Rs 50,000 as security, in a bank that is assigned by the district education officer. After that, the applicant gets permission to conduct the coaching classes. The applicant should follow the rules and regulations provided by the district education officer to conduct the coaching classes if it is not found then the permission may be canceled. But before canceling, the District education officer asks the applicant the reason for it. (MOE, 2018).

Similarly, School Sector Development Plan (SSDP) has stated about the coaching classes, especially for weak students of grade 10 as his/her remedial support. This shows that the provision of shadow education is somehow introduced in SSDP as in the Education Act and Regulation focuses on the coaching classes. It only focuses on the coaching classes for grade 10 students but it's equally essential for other grade students too. Shadow education is supplementary to mainstream education, however they are independent of each other. As mentioned above the Government of Nepal has introduced some policies and provision about private tutoring via education Act, SSDP and other legal documents, nevertheless these documents have not explicitly specify about its physical management, teachers qualification, criteria for the determination of fees and so on.

### **Research Design**

The researcher has a descriptive research design of qualitative research method to fulfill the objectives of the study. Two tuition centers and their producers from Kirtipur were selected as sources of data who were organizing the tuition class for a long time for each level of schooling.

### **Tools**

Interview guidelines and observation checklists were prepared to identify the state of private tutoring in Mathematics Learning from school to higher education.

### **Data Collection and Analysis Procedure**

After getting permission from the participants, the interview was conducted with the tuition center producers which was recorded on a mobile phone for the originality and naturality of the data and noted the main points in my diary. Similarly, the tuition classes were observed to know about the overall practices of private tutoring. As this study was limited to qualitative research, the major part of the data was analyzed based on descriptive analysis by following the procedure as organizing the data, editing the data, coding, recoding, decoding the data, building theme, reporting, and finding procedure (Khanal, 2017).

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### Analysis and Interpretation

To examine the practices and state of private tutoring in mathematics learning the data was collected via observation and interview with two private tuition center producers in Kirtipur. Both producers of tuition centers have a long experience in operating tuition classes in Kirtipur for different levels. Likewise, the data was analyzed qualitatively through narrative and descriptive processes.

### Findings and Discussion

To examine the state of private tutoring in mathematics learning at different levels of mainstream education, the following themes were drawn after analysis of the data.

- **Types of Courses**

In Nepal, shadow education is understood as 'tuition' from many years (Subedi, 2018). It is rooted for each level of students from the primary level to even at the university level. Massive numbers of students demand it for their academic success and better achievement in their examinations. The tuition centers in Nepal are conducting the tuition classes for SEE preparation classes, all level bridge courses, exam preparation for Intermediate level, Bachelor level, Masters Level, and so on. At the time of data collection, I had got the advertisement for the tuition classes as follow.



- **Forms of Private Tutoring**

Private tutoring is practiced in different forms all over the world. Students of each level of education were involving private tuition classes formally or informally. It has various forms as the involvement and demand of students and their parents. In Republican of Korea, the forms of Shadow education are Cram School, Individual Tutoring, Group tutoring, Home-visiting tutoring, and Internet tutoring (Bray, 2012). In our context, the tuition centers are providing different forms of tuition classes. One tuition center producer Shyam Karna (Pseudo name) said that,

*"We are providing tuition classes based on the demand of learners and their parent's. Most of the students who are from public schools need group-based tuition classes and students who are from high affordable families and private schools want an individual-based tutoring. Before the Covid-19 pandemic, our classes were based on face-to-face mode but after this, we are trying to provide such classes in online mode."*

It's globally accepted that the practice of private tutoring is growing rapidly as private enterprises are all over the world (Bray, 2007; Ireson, 2004). It has a different form in different

countries. As observing the practice in our context, there are Individual teaching, Small group tutoring, large group tutoring, and online-based tutoring are as the forms of private tutoring.

- **Subjects and Level of Education**

Different research studies show that private tutoring has taken a significant role in the worldwide education system which provides additional and supplementary support to students for their academic success. So, the massive numbers students would like to join it for their academic welfare. Students used to demand for tuition classes for the subject which they feel tough to pass and level which lead vital role for their academic career. Bray (2012), elucidated that the subject commonly Mathematics, Language, and Science are given more attention in private tutoring. In our context, mathematics is one of the subjects which the students demand in private tuition classes. In this manner, one tuition center producer Himal Karki (Pseudo name) argued that;

*"Intentionally, most of the student of grade 10 or SEE students wants to take the tuition classes for the subjects as Mathematics, Science, English and Optional Mathematics. It has a common trend in higher education also. Before applying to the semester system at University level most of the students of majoring in mathematics want to join private tuition classes to pass their examinations. However, in the present context, the higher level students who are studying mathematics as a major subject at higher level want few supplementary tuition classes than those students who are studying in other faculties such as science, management, and so on at higher level demand for tuition classes of mathematics."*

With the support of this view, students from each level of mainstream education would like to receive supplementary tuition classes for the subject mathematics. The students of grade 10 or SEE level want private tutoring for Compulsory and optional mathematics also. Correspondingly, those students demand more additional and supplementary classes for the subject mathematics who are studying other faculties like Management, Engineering, and technology rather than those who are studying Mathematics as major subject at a higher level.

- **Tutors / Teachers**

Teachers have an important role in the mainstream education system as well as in tuition classes. Before the formal schools were established, private tutors were employed to teach children in wealthy families (Ireson, 2004). Even today, universal education is available, many teachers and students were engaging on it. Bray (2010) stated that there are normally two types of tutors in private tutoring one of them were the teachers in the mainstream system, and receiving the additional payment, and another were the teachers for whom they do not have any responsibility in mainstream education (Bray,2010). In this regard one tuition center producer Himal Karki (Pseudo Name) added that;

*"We were organizing the tuition classes for different level students. For secondary level tuition classes some of the teachers were tuition centers full-time teachers who are not involved in any mainstream classes and the tuition center could invite other teachers who are also teaching in mainstream schoolings such as government schools, private schools, college teachers, or university level teachers according as the demanding of students and parents. For the higher level tuition classes the college and university level mathematics professors/teachers were invited."*

- **Determinants of Fees**

It is a common trend that most of students and teachers were engaging in private tutoring. Government should have explicit criteria and rule about how to determine the fees and its overall management. However, the Government of Nepal has made any provision regarding the determination of fees. Tuition centers were determining based on the level of students studying

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and the demand of teachers in the market. One tuition center producer Shyam Karna (Pseudo Name) added that;

*"There is no fact provision made by the Government of Nepal about how to determine the fees for tuition classes at different levels of the education system. We were taking 1000 per subject per month at the secondary level, 1500 for the intermediate, and 2500 for the university level. It would be helpful for all tuition centers like us and also transparent for the students and guardians if the government of Nepal makes the criteria about the determining of fees for different levels of school education."*

With the support of this view, Government of Nepal has envisioned no any legal provisions and criteria for determining the fees for tuition classes. The tuition centers determine the fees for tuition classes on basis of the level of students studying and the demand for teachers in the market.

- **Student's Reasons to join the Tuition Class**

Private tuition is personalized support provided by private tutors or a teachers outside the school as the demand of students. The primary purpose of students to join private tuition is to assist their academic goal and expand their potentiality. There are various reasons to join the tuition classes. Most of the students want supplementary tuition classes to pass their exams and securing good marks in their examination. One tuition center producer Shyam Karna (Pseudo Name) said that

*"A massive numbers of the students from school level to university level used to feel mathematics as a tough subject. So, they want to pass the exam and want to secure better academic achievement. Especially, the students of SEE level join the tuition class for the reason those students who are poor in mathematics join tuition to pass the exam and those who are talented, join the tuition classes to secure their excellent result in examination and for their further carrier. Similarly, the students at higher levels join the tuition classes for securing higher marks in examinations and to get a holistic knowledge of content. Before applying the semester system at University level most of the students of mathematics who were being unable to go to the mainstream classes due to their other occupational activity they must join the tuition classes at their favorable time at tuition centers. In the present context, only a few students of Mathematics want to join the tuition classes at a higher level."*

- **Types of Students**

As there is a difference in every person based on their birth, there is also variability in their learning style and ability. Each individual has their own learning ability and style. In this manner, H. Gardner argued that there are eight types learning abilities and styles of students. In present research study, the students were categorized on the basis of their school type either private or public and their ability to learn. Those students who were studying at private schools/colleges and represent from high payable families demand individualized tuition class and those who are from low payable families and from public schools/colleges demand for it as group based tuition classes. Normally, there would be three types of students in each classroom such as slow learners, moderate and fast leaners. Each of them want to pass their exam and secure the good marks. Intentionally, those students who are poor in mathematics want to receive tuition classes to acquire the tricks and knowledge for securing pass mark in their examination. Similarly, moderate students take tuition classes to improve in their achievement and fast learner, or good performing student's wants to join tuition classes to show their Excellency in examination and pave the path of their further educational carrier.

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## Conclusion

With reference to the above findings and discussion mentioned in previous sections, private tutoring is corner stone for mainstream education, it has several impacts in mainstream education which provides the supplementary support for the students. As it has long history in Nepalese education system, most of the students were engaging formally or informally. However, Government of Nepal has given less concern about its overall management. Students want to join tuition classes more intensively at secondary level rather than primary level also within those level they demands more tutoring in grade in which leads up to major examinations even in higher level. Before applying the semester system at Tribhuvan University massive numbers of students who are studying mathematics as major subjects at want more tuition classes nevertheless, in present context, those students demand for private tuition classes who are studying from other faculties like Management, Science, Technology and so on than those who are studying mathematics as major subject.

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