

Beliefs of Students, Parents and Teachers on Use of Unauthorized Study Materials and Success in Secondary Mathematics Education in Nepal

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Abstract

Most of the Nepali students have been widely found using different unauthorized book and study materials for achieving good results in their exams in secondary levels as well as higher levels of education. These unauthorized books and study materials have been found useful as they are mostly exam oriented and have the detailed worked out questions and answers from the past years asked by the examination board of Nepal. A study was conducted to examine the usefulness of such materials in mathematics of secondary level education. It was also aimed to assess the beliefs of students, parents and teachers on the use of unauthorized study materials and achieve success in the secondary mathematics education in Nepal. By using semi-structured questionnaire with students and key informant interviews with selected parents/guardians and mathematics teachers, the researcher has explored the achievements of students and beliefs and attitudes of students along with perspectives of their parents and math teachers.

Key Words: Unauthorized books, guess paper, solution-guide, mathematics, beliefs.

Introduction

It is common that many students use to study different types of books and other study materials to achieve best results in their exams throughout the world. Most of the Nepali students also use to study different unauthorized books and study materials such as guess papers and

solution-guide as they are found useful for achieving good results in their exams. These kinds of unauthorized books and study materials are exam oriented and have the detailed worked out questions and answers from the past years asked by the examination board of Nepal. Many students find these types of books and study materials easy going. In these days, most of the students use unauthorized books and study materials as they are easy to read than other textbooks which are mostly lengthy.

Students in different districts have different feeling towards going to school. In village, children should do different work before going to school. So some of parents have hard life for their children in sending to the school. Most of the guardians don't have time for their children to visit in their school. So, guardians in village rarely visit school. Presently, people are becoming aware of their choice of school and children achievement. Study need hard work with proper guidance. So for this proper textbook is important. However, many students these days don't want to study textbook. Textbook are lengthy and need intense following. While other unauthorized books such as guess paper or solution book are ready made exam based paper. These kinds of books are easy to read and obtain number. So, from early class, students rely on such note for their study which hinder the future core knowledge.

These days' people are more interested in unauthorized books such as guess paper/guide. Most of the students want easy way to get success. So, students choose guide for their success which are exam oriented. One of the students said that he doesn't have much knowledge on any subject. So, he read guide in order to pass the exam. All of the past question are solved in the guess papers which make him easy to study. Guess paper or other unauthorized materials make students dull and they become lazy on any subject. This also means that our future will be in danger if this kind of activity persist.

There are many subject and students are weak in different subject. Guardian are very concerned for their children. As all students want to pass exam, they find easy way to pass exam. So, most of the students choose solution guide to pass the exam. We know that guide make easy for students to pass the exam. So, they use it for different subject. Many students find math, science and other subject as difficult. So they buy almost all solution guide for passing the exam.

These books and study materials are convenient than other authorized textbooks for students. Although, students use authorized textbooks and study materials such as guess papers for achieving best results in all kinds of subjects allocated in the secondary levels of education approved by Ministry of Education in Nepal, most of the Nepali students find mathematics very difficult. This is because it requires extensive hard work and regular practices over time in order to achieve best results in mathematics education.

Role of teacher's beliefs and attitudes is crucial not only in effectively teaching and learning mathematics education but also to develop self-confidence of students and preparing them for a culturally responsive teaching. Culturally responsive teaching is defined as using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively (Gay, 2002). Similarly students possessing positive beliefs towards the mathematics, mathematical problem solving can also work for such behavior because it is founded that there is strongly relationship between the students' belief and their math's achievements (Mason, 2003). In this context, a study was conducted to verify the

correlation study on student achievement in mathematics education and beliefs students, parents and teachers towards the unauthorized books and study materials at grade ten in Nepal.

Materials and Methods

This study is based on the non-experimental cross-sectional quantitative-qualitative research design. The study was conducted in two districts named Dadeldhura and Kanchanpur located at the Far Western Region of Nepal. This study adopted the multi-stage random sampling method for identifying the secondary level schools and students in various government as well as private schools situated at Kailali district of far-western region of Nepal.

Researcher used the lottery system to select the schools and students also from the selected schools. Besides, researcher adopted the purposive sampling technology to select the mathematics teachers and guardians of students for key-informants interview. Math teachers were the appropriate key informants having depth knowledge of mathematical performance and achievement of students with good ideas of use of unauthorized reading materials among grade ten students.

Researcher had also identified the details address of guardians of selected schools' students after taking their individual consent by adopting purposive (Judgmental) sampling who had good knowledge of their children's' educational performance, achievements and practices of use of unauthorized reading materials. The study had used the semi-structured questionnaire for conducting detail survey to the government as well as private schools.

Result and Discussion

General Information on Use of Unauthorized Study Materials

Out of 400 total respondents, 213 respondents were male and 187 were female. Out of these, Brahmin/Chettri were maximum (247) and Dalit were minimum (35). Students were maximum respondents while teacher and parent were least. Most of the participants were secondary level students while least was from lower secondary. Age group of less than 20 were most. It was seen that most of the students had math as their favorite subject.

Mathematics was the favorite subject for many students and their guardians. It showed that maximum percentage of students had Math as their favorite subject followed by Nepali, English, Science and others. Similarly, maximum percentage of teacher also had math as favorite teacher followed by English. Moreover, more than half percentage of guardians had Math as their favorite subject followed by social studies and others.

In this study, most of the students (98.0%) had high score in the not applied subject followed by math and Nepali. It was seen that maximum percentage of respondents (96.2%) were familiar on such unauthorized note. Most of the of students (97.0%) know about guide/guess paper. Similarly, maximum percentage of math teacher and guardian (94.0%) also know about guess paper/guardian. Most of the students (53.0%) knew information about guide/guess paper from friend. Maximum percentage of students (53.0%) knew information through friend (53.0%) followed by bookshop (37.0%), teachers and others. Similarly, math teacher knew the information from bookshop (60.0%) followed by friend (26.0%) and other teacher (8.0%).

Moreover, guardian knew the information from bookshop (56.0%) followed by friend (20.0%) and other teacher (18.0%).

It was seen that most of the students (57.3%) use solution guide and guess papers for almost all subjects. Maximum percentage of students use solution book for almost all subject followed by science (21.3%), Math (15.7%) and others. Similarly, maximum percentage of math teacher (76.0%) also use solution guide for almost all subject followed by math (12.0%) and others. It was also almost similar for guardian. This means that most of the students use unauthorized books and study materials such as guess papers and solution guide for all subjects including mathematics.

Reasons of Using Such Materials

Without reason people do not use anything. Similarly, students and their guardians also use guess-paper and solution-guide for different purpose. As we know people use guide for passing the exam and above all, concerned for future. Maximum percentage of students (34.7%) use guess paper to understand easily followed by to get more marks (30.0%), new knowledge (11.0%), cheat in exam (11.0%) and others.

Guess-papers and solution guides are used to understand knowledge easily (36.2%) followed by getting more marks (27.8%), cheating in exam (12.0%), getting new knowledge (10.5%) and others. Guardian also believed that maximum usage of guess-paper was for understanding the knowledge easily (56.0%) followed by getting more marks (20.0%), knowing new knowledge (12.0%) and others. One of the students said that she uses guess paper so that she could get more knowledge and pass with good marks.

Permission from Teachers and Parents to Use Such Materials

We know every parents or guardians or teacher always want their children to perform good in exam with their ability. They also wish good knowledge for their children. But everything doesn't work according to plan. Students don't read properly and they hesitate to do hard work which result in weak performance. So, students use guess paper or guide for the exam. But teachers always want to give good knowledge to students which is only obtained by good books. So, there might be less usage of guess paper in classroom by teachers.

It was found that maximum percentage of students (69.3%) believe that teacher don't give permission to take guess paper in classroom. Almost all math teacher (84.0%) believed that teacher don't give permission to use guess paper or guide in classroom. Similarly, more than half percentage (52.0%) of guardian also agreed with no teacher permission to use solution guide in classroom. In this context a guardian opined that he has been teaching in this school for 12 years. Over the year, students bring guess paper in class. This rate is increasing which is difficult to control. But we are focused and strongly prohibit to bring guess-paper in classroom. He adds that this type of guess paper hinders the growth of mind so it should not be recommended by any means.

The study found that the maximum percentage of students (66.3%) and almost in same proportion math teacher (64.0%) agreed that there is no guardian's permission to use guess paper or any materials for their study. Similarly, more than half guardian (54.0%) also believed that there is no such permission of guide paper to study. However, some parents want their

children to use guess paper because their children might be weak in some subject and due to lack of time for study. As some family are poor and they have to do hard work for the survival, so such children work for the family and don't have much time to read. This results to use of guess-paper.

Beliefs of Students, Teachers and Parents on Using Such Materials

The belief system is organized into students' conception of mathematics whose components consists of conscious or subconscious beliefs, concepts, meaning, rules, mental images and preferences concerning the discipline of mathematics (Thompson, 1992). Similarly, the beliefs that students possess about their ability to success fully complete mathematics problems predict their mathematics performance and achievement (Stevens, Olivarez, Lan, & Tallent-Runnels, 2004)

Most of the students are weak in the science and Math which need more study time. Therefore, students nowadays don't study much and they hardly do any hard work on such subject. Due to this, they are weak on such subject. This study found that maximum percentage of respondents (65.5%) believed that they had negative effect followed by few positive effect (15.5%).

It was seen that maximum percentage of respondents (65.5%) believed that they had negative effect followed by few positive effect (15.5%). It was seen that maximum percentage of students (66.0%) believed negative effect by using guess paper and guide solution followed by few positive effect (15.0%) on them. Similarly, math teacher also agreed negative effect (66.0%) by using guess paper followed by few positive effects (14.0%) on them. Moreover, guardian also felt negative effect (65.5%) using such books followed by some positive effect (20.0%) on them. Maximum respondents (62.0%) suggested that there was no use of guide. However, some respondents (28.5%) suggested to use guide according to their will. This shows that students' beliefs exert a powerful influence to evaluate their ability and willingness to engage in mathematical tasks and disposition and that personal beliefs, which influence motivational variables (Bandura, 1993), can play crucial role in the prediction of mathematics performance (Hackett & Betz, 1989).

Most of the students (60.0%) agreed that there is no use of guess paper while some of the students (32.0%) suggested to use guess paper according to their own will. Similarly, math teacher (74.0%) also suggested that there is no use of guess paper while some of the teacher also suggested to use guess paper according to their will. However, most of the respondents and students (more than 70%) think that guess papers and solution guides give no benefit to them thinking that, these materials decrease the creativity of students. This statement was equally true for math teachers and guardians.

Most of the respondents including math teachers agreed that weak (38.0%) and average (33.0%) students often use such unauthorized books and guess papers. Similarly, guardians of students believed that average (44.0%) and weak (22.0%) students use such unauthorized materials. Only few percentage of students agreed with the statement. This was also similar for the math teacher and guardian. They disagreed with the statement.

Achieving Success in Mathematics by Using Such Materials

In response to the impact of using guess papers and guide solutions on achieving success in mathematics of secondary level, the study found that maximum respondents do not believe on this statement. They think that there was negative impact (39.0%) followed by easy to pass (32.5%) and others on impact of using guess paper. We can interpret that maximum percentage of students (41.7%) believed that there was negative effect on using paper followed by easy to pass (31.0%), positive improvement (16.3%) and others.

Overall students believed that there was negative impact to achieve success in mathematics using guess paper. This was also similar for the guardian. They also thought that there was negative impact using guess paper. In other hand, math teacher believed that it is easy to pass (50.0%) followed by positive improvement (32.0%), negative impact (18.0%) using guess paper to achieve success in mathematics. Teacher thought the questions are easy and it is easy to pass math exam. They also thought that there was positive impact using such guess paper.

Most of the respondents (34.8%) believed that they did not use such materials. Similarly, at the same proportion respondents (32.5%) also believed that high scoring students also used guess paper for mathematics. It was seen that that most of the students (40.0%) didn't know about such usage of papers from high scoring students. At the same proportion some of the students (33.3%) didn't agree with the statement. They think that high scoring student didn't use such materials. Similarly, some of the students (25.7%) agreed with the statement. While, almost half percentage of math teacher believed that high scoring students used guess paper but some of the teachers (44.0%) didn't agree with the statement. This statement was also similar for the guardian.

Overall reasons for their disagreement they stated were losing creativity (19.8%) and decrease in quality education (15.2%) among others. Particularly, students believed all three statement presented above (38.7%). This was followed by losing creativity (22.7%) as main effect of using guess paper. Which was again followed by decrease in quality education (16.7%). This statement was also true for the guardian in almost equal proportion. While more than half percentage of math teacher (64.0%) believed that all of the above statement were true. Only few percentage of teacher agreed with losing creativity and increasing dependence on guess paper as only negative effect of using guess paper.

Findings of this study also suggest that there is positive relationship between the students' beliefs and their achievements in mathematics education including mathematics teachers beliefs (Mason, 2003). Nepali students also believe that average students don't know that how to solve a mathematical problem (Kislenko, 2005) and use unauthorized book and study materials.

Conclusion

The study has investigated the beliefs of students towards the practice of unauthorized study materials such as solution-guides and guess-papers for secondary level mathematics education. Most of the respondents were familiar on such unauthorized books and reading materials. Bookshop has been found as the main source of knowing such materials for all respondents. Almost students use such materials for almost all subjects including mathematics and science and other subjects.

Overall reasons for using such materials have been reported as being easily understandable, get more marks and new knowledge, and helpful for cheating in examinations. It is interesting to note that some math teachers and guardians also believe that maximum usage of guess-paper was for understanding the knowledge easily followed by getting more marks, knowing new knowledge and others. However, most of them believe that teacher do not permit to use such materials in classroom. They also believe that such materials have had negative effect on achieving success in mathematics education and decrease creativity of students. However, some respondents suggested to use guide according to their will. Maximum respondents also believe that weak and average students often use such materials. Some math teachers believed that it is easy to pass the exam followed by positive improvement.

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