

Chapter I

Introduction

Background of the Study

Mathematics is the backbone of our civilization. Mathematics is the study of quantity, structure and change. Mathematics has an important role in the development of science and technology. It is essential for understanding every discipline.

Mathematics was created to fulfill human needs and later it was introduced into formal education system.

Mathematics teaching refers to the sequential process of teaching and learning of mathematical information and knowledge. In this process mathematical concepts are delivered from more known person to less known person, from teacher to students, from educators to learners by using appropriate teaching methods and materials.

Bhatia and Bhatia (1987) write "Mathematics is such a subject which has to be taught by doing rather than by reading and reciting. Otherwise it creates problem in teaching and learning of mathematics."

The main purpose of the teaching of mathematics is to develop the understanding, reasoning and analyzing powers which are necessary to various aspects of human civilization and development. Mathematics is an organized series of relations among mathematical concepts and teaching mathematics is the learning process of new mathematical knowledge on the basis of pre-requisite and pre-experience of learners under the guidance of teachers. Problem of instructions in mathematics refers to those challenges which cause difficulties in learning mathematics (Bhat 2017).

Teachers are facing many problems in teaching mathematics. These problems are related to contents, teaching activities, students' background characteristics, students' interest and participation, classroom management school administration, and teacher training. Teaching should be established a harmonious relationship between teacher, pupil and subject. So that three dimensions of teaching are pupil, teacher and subject. Pandit (2001), wrote in his articles "Education and development" mathematics teaching in Nepal is disturbed by so many factors such as lack of teachers involvement in curriculum planning, lack of efficiency to conduct teaching practice of the students, lack of books and journals and teaching facilities and aids, students weak background in the subject matter, lack of opportunity given to upgrade their knowledge and the huge number of problems of the teacher.

The school administration had the major role for maintaining good learning environment by providing good physical resources, organizational discipline and solving the casual problem which can hamper the learning process. If school administration become weak, the learning environment deteriorates and we cannot expect the good result. Also for meaningful teaching it is required to manage a classroom properly. The interest and participation of students in classroom activities play a vital role in learning the mathematics.

Teaching is a skillful job. So for different skills, teacher should be trained and it is also necessary to apply the knowledge and skill gain in training in the classroom. If not so it is occurred as a problem. Teaching method and material are the main way of teaching and learning of particular topic. Teacher is the main agent of teaching method and material. If the instructional method and material are not properly used then it is occurred as a teacher problem in teaching. Lack of prior knowledge about the content is also a problem of the teacher.

In the above context, many government and non-government official research indicate huge amount of time and money which has been spent to find the problem of teaching in mathematics but no satisfactory result was found. Hence no successful solution can be found to address the teacher's problem in teaching mathematics at secondary level.

The mathematics teachers are facing many problems in teaching and learning of mathematics which has affected in the mathematical achievement. Researcher is also a mathematics teacher at secondary level and facing many problems on teaching mathematics. So researcher felt that it is necessary to study the teaching learning problems related to mathematics education at secondary level.

Statement of Problem

Mathematics is a queen of all science (Gauss, 1856). It plays vital role in science and technology. Nepal is multicultural, multilingual, and multi religious country. According to National census 2011 there are 123 Nepalese language spoken as a mother tongue and there are 125 caste and ethic group including 63 indigenous peoples, 59 castes including 15 Dalit castes and three religious group including Muslim group. So there are many students from various background in a classroom. In this situation, it is difficult for teacher to teach them by addressing their capacity and needs. There is unavailability of sufficient teaching materials. Although only few teachers are used available materials properly. For proper use of materials, teacher should be trained. Refreshment training for teacher is insufficient. However the trained teacher did not use their trained knowledge in classroom activity because of lack of sufficient material.

The school administration has the major role for maintaining good learning environment by providing good physical resource. If school administration become weak, the learning environment destroys and we can't expect the good result. Students take mathematics as hard and boredom subject, so they have less interest in learning mathematics and they can't actively participate in mathematics learning. This study concerned about the problem and their remedial solution of secondary level mathematics teacher. Thus this study answered the following research questions:

-) What are the problems faced by mathematics teacher at secondary level?
-) What are the remedies of the problems faced by the mathematics teacher in teaching mathematics at secondary level?

Objective of the Study

The main objectives of this study are:

-) To identify the problems faced by mathematics teacher in teaching mathematics.
-) To find out the remedies of the problems faced by the mathematics teacher in teaching mathematics.

Significance of Study

Mathematics is an essential part of school curriculum. So it is included as the compulsory subject at all level of school education. Also mathematics is included as optional subject at secondary level. The mathematics teachers are facing so many problems in teaching. Problems may arise because of the lack of knowledge about the proper use of teaching materials and classroom management. The study contributes a lot in identifying the teachers' problems. Thus, the study is significant for the reason

that it will helpful to provide information to concern agencies to reform and improve the mathematics teaching at secondary level. Also it would be help to improve mathematics teaching especially for untrained teachers. Similarly the result of this study provide some materials for improvement of professional position of teachers by removing the problems related to their profession.

The significance of the study is presented below:

-) This study could provide some logical and valuable information about the problems of secondary level mathematics teachers in teaching mathematics.
-) This study is useful to policy maker for addressing teachers' problems.
-) This study helps to give the solution of those problems which are facing by mathematics teacher.
-) This study helps to create sound environment to parents as well as concern administration.

Delimitation of the Study

The limitations of the study were following:-

-) The study was limited to Parbat district.
-) The study was limited to secondary level mathematics teacher.
-) The study was limited to forty secondary level mathematics teacher.

Definition of Related Term

Different words can give different meaning according to the context in which they are used. Hence researcher feel it is necessary to define following terms which will be frequently used in this research work.

Problem. Problem means the difficulties faced by secondary level mathematics teachers in the area of students' background characteristics, teacher training, students' interest and participation, instructional methods and materials and school administration.

Student. Student refers to those students who are studying in Secondary level at Parbat district.

Secondary school mathematics teacher. The teacher who teaches mathematics at grade IX and X.

Trained teacher. The teacher who have passed bachelor or higher level in mathematics education or were taken 10 months training provided by MOE or NCED or FOE as trained teachers.

Untrained teacher. The teacher who has bachelor or higher level in any faculties of mathematics except education faculties and aren't taken 10 month training provided by MOE or NCED or FOE are defined as untrained teachers.

Chapter II

Review of Related Literature

This chapter concerned to review the related literature to compare the study which provides the strong knowledge about the related topic. It describes learning theories on mathematics. Number of books, research reports, papers and other booklets can be found which are concerned with curriculum, teaching materials, methods and so on. It helps to construct the framework to achieve the objective of this study. This chapter deals with the review of related literature about facing problems concerning with teaching instruction, method and materials, classroom management and teachers and student's characteristics on teaching activities. I have reviewed some related literature as follows:-

Empirical Review

Yadav (2010) conducted his thesis entitled a "Study on problem faced by teacher in teaching optional mathematics" with the objective to find the problem faced by mathematics teacher in teaching mathematics and to analyze the problem faced by mathematics teacher in teaching mathematics. It was descriptive survey research design. He selected 10 Secondary level mathematics teacher out of them 4 schools are from urban area and 6 of them are from rural area of Siraha district. He concluded that the teachers faced many problem in teaching mathematics because of not support of school administration in the field of managing the physical facilities, improving the evaluation technique and any program for teacher's professional development. On the other hand, the researcher found that some problem related to optional mathematics instruction, various background characteristics of students and curriculum and text.

Teaching is professional skill. In this process, teacher faced many problems on that fact Bhat (2017) conducted a thesis entitled "Problem faced by student in learning set". It was descriptive survey design. For the study, the researcher selected five hundred students (250 boys and 250 girls) of ten school of grade X of Baitadi district. The researcher developed opponnaire and interview as a tool for data collection. Mean weightage was used to determine the problem faced by students in learning the content set at class ten. And Z-test was applied to compare the problem between boys and girls.

The main objective of the study was to find problem faced by students in learning the content Set at grade X and to compare the problem faced by girls and boys in learning the content set at grade X. He concluded that learning problem in Set is not satisfactory at grade X in Baitadi district. He found that there were numerous problems faced by student due to content, instructional materials, teaching learning activities, and pedagogy causes of language problem, mixed question, prior knowledge, availability of instructional materials, use of talk and chalk method, lack of infrastructure and large number of student are the main causes of facing more problem in learning set at Baitadi district.

In various area of content different problems are appearing in teaching and learning mathematics, Shah (2008) did a research on the topic " A study on the problem faced by students and teachers in teaching and learning vectors." The main objectives of this study were to find the problems faced by the teachers and students related to classroom activities, pre-knowledge of students, teacher's belief, attitudes and interest, instructional materials,

Methods and evaluating techniques. He had selected only two government school out of one hundred ninety for sample of Kavreplanchork district. Head teacher, mathematics teacher, parents and five/five students respectively from each school were respondents of this study. He collected the data by classroom observation, interview framework, then analyze descriptively. He concluded that both of school don't have sufficient mathematical materials, lack of practices for learned topic, lack of motivation and encouragement to students etc. Are the main causes of problems faced by mathematics teachers in teaching and learning vector geometry.

Curriculum is the main source of teaching but teachers and students are also facing problem on it. In this case Devkota (2009) conducted a research entitled "Problem faced by mathematics teacher in existing curriculum of grade ten at Dang district". The objective of that study was to identify the problem faced by mathematics teacher in existing curriculum of grade ten and to suggest some suitable measure to overcome the identified problem. He used questionnaire for the teacher consisting 24 questions and concluded that teachers are facing problems in the content, instructional material, teaching learning activities, researcher textbook and evaluation. The existing curriculum cannot solve the problems of teachers and students.

Gautam (2009) conducted a thesis entitled "A study on problem faced by higher secondary school teacher in mathematics". It was descriptive survey study and questionnaire were used for data collection. For this study four public and four private higher secondary school of Makwanpur district were selected. The main objectives of this study were to identify the higher secondary school teacher in mathematics teaching and to compare the problem faced by public and private school teachers. He concluded that the teachers are facing many problem related to curriculum and text book, classroom management, different background characteristics of the students and

educational administration and also he concluded that public school teacher faced more problems than the private school mathematics teacher.

Acharya (2006) conducted a thesis entitled "A study on the problem faced by school level teacher in teaching mathematics". It was descriptive survey and questionnaire were used for data collection. Fifteen school of Kathmandu district were chosen for this study. The main objective of this study were to identifying the problem faced by higher secondary school mathematics teachers and compare the problem faced by trained and untrained teacher. He concluded that prescribed curriculum and existing text book were not well planned, sequential and practical problem were not well managed. On the part of trained and untrained teacher, it was found that both were facing similar problem in Kathmandu district.

Cultural background plays important role in teaching and learning. In that area Acharya (2015) conducted a mini research on "Problem encountered in teaching learning mathematics in multicultural classroom". The purpose of his research was to explore classroom practices in teaching mathematics through a cultural perspective and to explore the challenges faced by teacher and students while teaching and learning mathematics in culturally diverse classroom. He adopted ethnography approach for inquiry then he found that lecture based teaching activities, less participation, lack of teacher's knowledge to teach mathematics in the cultural setting are the major factor for not supporting in learning mathematics in culturally diverse room.

Further it was found that home and school environment was not suitable for the mathematics learning to culturally diverse students. There were linguistic problems at mathematics classroom. The teachers were found incompetent in teaching

mathematics in multicultural situation as they had not been trained to teach yet. The pedagogies they used were found monoculture using Nepali language.

Machaba (2013) conducted a research in "Teacher challenges in the teaching of mathematics at foundation phase". The aim of the research was to establish the approaches together with the research technique commonly used with it, namely observation, interview and document analysis was deemed appropriate for the investigation. The outcome of the investigation revealed that the multilingual classes made it difficult to assist all children who experienced mathematics problem because of learning of the school.

Another obstacles that prohibited teachers from spending adequate time with children with mathematics problem was the time. Teachers were expected to spend on intervention programs from the department of basic education aimed at improving schooling in general. Teacher could not make additional time that could afford children for the opportunities of individual attention. The research recommended that the teacher should use whole class teaching approach in teaching and also teacher use a variety of teaching method in order to accommodate all children and also encourage children to use concrete object.

Kelly (2017) write an article "The thing that worry the math teacher most". She wrote math curriculum often builds on information learned on previous year. If the student does not have the prerequisite knowledge than math teacher is left with the choice of either remediation or forging ahead and cover material the student cannot understand. Kelly recognize 10 problem of teacher which are:-

-) Prerequisite knowledge
-) Connection to real life

-) Cheating issues
-) Kid with math block
-) Varying instruction
-) Dealing with absence
-) Grading concerns
-) Need after school tutoring
-) Having student different ability in class
-) Homework issues

Erden (2010) conducted a thesis entitled "Problems that preschool teacher face in the curriculum implementation". This study aimed at investigating the challenges preschool teacher face in the curriculum implementation and whether these challenges differ in relation to teacher's level of education department they graduate from the type of the school they are working in teaching experience and level of in service training. In addition in this study it was also aimed to find out the underlying reasons of most frequently stated issues of implementation from the teacher's perspectives. In this study both qualitative and quantitative data were collected. The quantitative data were gathered through questionnaire from 223 preschool teachers, teaching in public and private kinder garden in Ankara.

The qualitative data were gathered through interview with group of participants selected from the 223 teachers. One way repeated measure of ANOVA and multivariate analysis of variance (MANOVA) were employed to analyze a quantitative data. For the qualitative data content analysis was conducted. The result indicated that the most frequently repeated by the participants were the problem related to evaluation and physical facilities followed by the ones related to planning

science and math activities, organizing field trips, providing parent involvement and inclusion result showed that the problems related to physical facilities experienced by preschool teacher working in kinder garden were significantly different compared to teachers working in private preschool.

Theoretical Review

There are many learning theories related to teaching learning activities. Such as constructivism theory, cognitivist theory, behaviorism theory and so on. In this research, researcher reviewed constructivism theory.

Among student learning theories, constructivism is one of the theories to analyze and interpret the data of mathematics on resolve the problems. This theory encourages the students to involve themselves actively in teaching learning activities. This theory has to analyze the solution of problem of mathematics teacher in teaching mathematics. Constructivism will become one of the possible theories to solve the problems on the topic of "A study on problem faced by mathematics teacher in teaching mathematics at secondary level".

This theory states that learning is an active process of creating meaning from different experiences. In other words, students will learn best by trying to make sense of something on their own with the teacher as a guide help among the way.

Constructivism answers that learners construct their knowledge on the basis of interaction with environment. In this contest Piaget's writes "knowledge is not passively received rather knowledge is actively created by students mathematical idea are made by children, not like an accepted from other like a gift". He says, "Children don't get ideas, they make them by creating products or artifacts and the student are the builder of knowledge and not the receptor of knowledge applied by teacher".

Social constructivism maintains that human development is socially situated and knowledge is constructed through interaction with others. Social constructivism was developed by post-revolutionary soviet Psychologist Lev Vygotsky. Vygotsky was the cognitivist but rejected the assumption made by cognitivist such as Piaget and Perry that it was possible to separate learning from its social context.

Vygotsky argued that all cognitive functions originated in social interaction and that learning did not simply comprise the assimilation and accommodation of new knowledge by learners. It was the process by which learner were integrated into a knowledge community. Vygotsky emphasized the vital role of language and culture in cognitive development. He believed knowledge is not simply constructed, it is co-constructed. In this theory zone of proximal development is main way of learning. ZPD is the distance between student's ability to perform a task under adult guide. It comprises cognitive structure that are still in the process of maturing, but which can only mature under the guidance of or in collaboration with other.

Constructivist teaching is based on constructivist learning theory.

Constructivist teaching is based on the belief that learning occurs as learner are actively involved in a process of knowledge construction as opposed to passively receiving information. In a constructivist, classroom instruction is active, student centered and inquiry based. The classroom is characterized by open-ended question, group work, research, exploration, alternative assessment such as portfolios and narratives written by teacher, learning through problem and interdisciplinary studies. Constructivism is basically a theory based on observation and scientific study about how people learn. It says that the people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experience. In constructivism approach, the teacher is a scaffolder.

This theory focused on the active participation of student in teaching learning activities where teacher is as a facilitator or a guider. As our classroom are running in traditional teaching strategies where student are passive learner and teacher solve each and every problem that's why teaching learning activities become less effective. Chalk and talk method doesn't introduce the children needs and interest. The teacher doesn't apply the new knowledge and teaching strategies gain in pre-service and in-service training because of lack of sufficient knowledge, lack of necessary management and administrative support and so on. So, it is also occurred as a problem of teacher.

From the literature review, researcher found that there are various problem in teaching and learning mathematics. These problems are in the area of content, student background, teaching method and material, classroom management and lack of prior knowledge about content etc. Many researcher are conducted their research to find out problem of teaching and learning activities but no research have been done to find the solution for different area of problem. Also less research are conducted on the area of problem on less interest and participation of student in learning mathematics and teacher training. So, this research focused to find out the problem of mathematics teacher in the area of student interest and participation, teacher training, school administration, instructional material and teaching strategies. And also find out the remedial solution of different area of problem.

Conceptual Framework

This study was focused to identify the problem and remedies for the mathematics teacher in teaching mathematics. From the study of various related literature and the theoretical review, the researcher concluded and sketched the following framework:

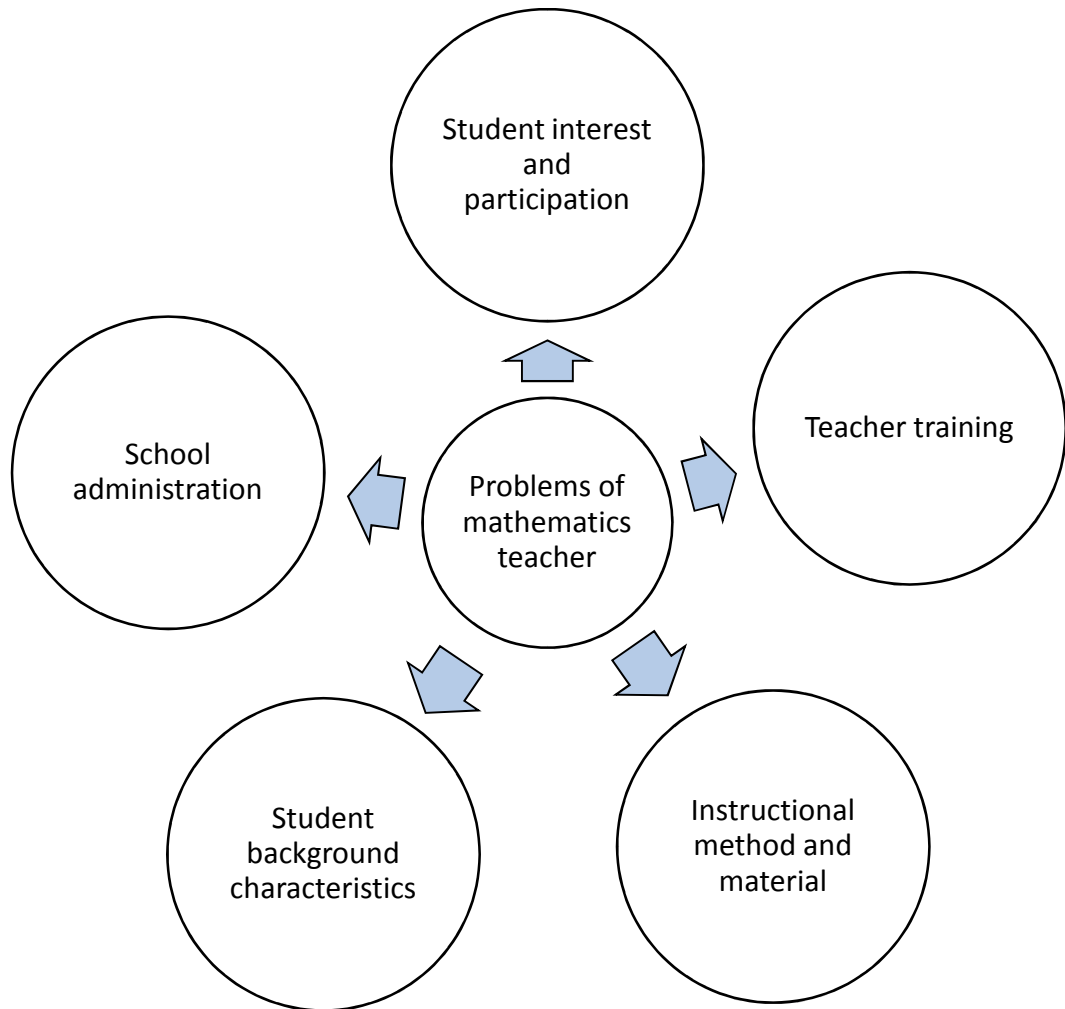
Problems of secondary level mathematics teachers

Figure: 1

Mathematics is not easy to teach and learn as we should struggle with various problems. Learning mathematics means getting ability to solve the problem. There are mainly five problem such as student interest and participation, teacher training, instructional method and material, student background characteristics and school administration. Student are the main body of teaching and learning activities. For gaining knowledge, the interest of student play a vital role. In a class if the student

actively participate in learning activities then the learning is meaningful. Otherwise the classroom is full of boredom and it is occurred as problem.

The teaching method used in mathematics classroom is traditional and teacher centered. So, student are less active in the class. The instructional material to teach mathematics are not sufficient, also teacher and student are not properly using the available material. Different students may have come from different environment with different background. So, it is difficult to teacher to address the every students need in teaching activities. If any student has strong background he/she can learn many thing easily in compared to the student with low background.

Teaching is skillful job so the teacher have needed the different capacity and ability to fulfill the needs of the learner. So, the teachers' training is essential for their profession. But the experience teacher who have trained were not applied their skill and knowledge which are gained in training. The school administration had the major role of maintaining good learning environment by providing good physical resources, organizational discipline and solving the casual problem which can hamper the learning process. If school administration become weak, the learning environment deteriorates and we cannot expect the good result.

Chapter III

Methods and Procedure

This chapter deals with procedure of the study, which was carried out to achieve the objective of the study. The study is descriptive survey research with systematic and analytical in nature. The study was concerned with the problem faced by mathematics teachers in teaching mathematics at secondary level. This chapter comprises design and method of study, population, sample and sampling strategies, data collection tools and techniques, data collection procedure and process of data analysis and interpretation.

Research Design

This study is about the problem of teacher in teaching mathematics at secondary level. The design of the study was descriptive survey. Survey are most commonly used descriptive methods in educational research and may vary in the scope from large scale governmental investigation to a small scale studied carried out by the single researcher (Cohen and Manion 1985, as cited in Bhatt, 2017, p.15). Most survey are based on sample of specified target population. The researcher often wishes to generalize the result obtain from the sample to the population from which sample are drawn.

Population of the Study

Seventy eight mathematics teachers of Parbat district who teaches mathematics in community school at secondary level are population of the study.

Sample of the Study

According to the record of DEO Parbat, there are seventy eight secondary level mathematics teachers in Parbat district. Out of these teachers of Parbat district I selected forty secondary level mathematics teacher. From those forty teachers three teachers were selected for interview. The sample design of this study was stratified sampling method. Out of forty teachers twenty teachers are from rural area and twenty teacher are from urban area.

Data Collection Tools

For the collection of primary source of data, the researcher used the questionnaire and interview schedule.

Questionnaire

The questionnaire was developed by the researcher herself with the help of supervisor. It included the item relating to various problem which are being faced by secondary school mathematics teachers. The area of problems were related to student interest and participation, instructional methods and material, student mathematical background, school administration and teacher training program. At the end of the each section of questionnaire the researcher requested to comment on the area that are not covered by the item in the questionnaire.

Interview schedule

The interview schedule was used for the further information about the problem faced by mathematics teacher. The open ended questions were asked to them with the help of interview guidelines develop by researcher herself with the help of supervisor. As researcher is also a secondary level mathematics teacher, researcher included her

own experience and problem on teaching mathematics at secondary level in this study.

Reliability and Validity of the Tools

Reliability of the tools refers to consistency of tools and validity of tools refers to appropriateness of tools. Reliability is necessary but not sufficient condition for validity. However reliability and validity of the research instruments are the necessary quality of instruments. For ensure the reliability of the questionnaire, item were piloted on five secondary level mathematics teachers at Kaski district. After piloting three questions were modified and two questions were corrected. Before finalizing the instruments the supervisor will be ensured the validity of questionnaire which are prepared by researcher herself with the help of supervisor. The expert judgment method was applied to ensure the validity of the tools.

Data Collection Procedure

For a data collection, the researcher visited each of the sample school along with the questionnaire, interview schedule and requested letter from T.U. to render any help needed to the researcher from the school administration. After explaining the purpose of visit, researcher requested the teacher to fill the questionnaire. Researcher explained and clarify any confusion that arose in understanding the statements. After collecting questionnaire, researcher were categorized the information on tabular form. Furthermore the researcher thanked teacher and principal of the school. The interview was conducted to the selected sample teacher of school by using interview guidelines. Also researcher included her own experience on problem of mathematics teacher in teaching mathematics at secondary level.

Scoring Procedure

For the analysis of items weightage of 1, 2, 3, 4 and 5 were assign to statement and were stated “strongly agree, agree, undecided, disagree, strongly disagree” respectively. For the statement opposing to the point of view item was taken in opposite order. Mean weightage was calculated for each statement, if calculate index was greater than three then it was concluded that the statement was problems. If the index measure was less than or equal to three than it is weak favor to the problems.

Data Analysis Procedure

After collecting data, the researcher analyzed and interpreted using both quantitative and qualitative methods. The researcher used five point likert scale as a statistical tool for the analysis of questionnaires. Mean weightage was used to find whether a statement is problematic or not and qualitative theme were interpreted in more descriptive way on the basis of quantitative result.

The obtained data were analyzed and interpreted with the help of following statistical technique:

Mean weightage was used to locate the central position of the responses to the statements of teacher as a whole in the rating scale. Each statements were studied in term of whether the teacher problems are up to the index or not. If the calculated weighted mean is greater than three then it concludes that the statement indicates the problems and it is strongly favor to it. If the weighted mean is less than or equal to three then it is less favor to the problems.

Next, the data collected interview schedule were to be used in the forms of direct quotes followed by its brief interpretation. Interaction with the respondents were categorized according to their category and then different themes were given in the text of interview. Finally these themes were summarized. Then the data from these tools were triangulate. Data triangulation is the way of interpreting information from different tools. Finally researcher triangulate the data obtained from both tools.

Chapter IV

Analysis and Interpretation of Data

The data were collected for the study from forty secondary level mathematics teachers in Parbat district. The collected data were tabulated and analyzed according to the objective of the study. The obtained data were statistically analyzed and interpreted by using statistical tool: mean weightage. Also the data obtained from interview schedule were analyzed in descriptive way. The data were analyzed item wise in the various problems related to teachers who teach mathematics at secondary level.

The whole data were categorized in five groups. These groups are, teacher training, student interest and participation, instructional methods and materials, school, administration, student background characteristics. Thus the collected information were analyzed and discussed under the following topics:-

-) Problem related to students background characteristics
-) Problem related to teacher training
-) Problem related to students interest and participation
-) Problem related to instructional methods and materials
-) Problem related to school administration

Problem related to students background characteristics

Students are main body of teaching learning process. It is generally agreed that students ability are dissimilar ability in learning mathematics due to various background such as age, intelligence, gender, maturity, socio-economic status. Poor motivation and failure to provide clear insights into the meaning and methods of the

subject to student in mathematics learning is main problem for the teachers. Problem related to students background characteristics have been categorized into six items to identify the response of teachers. These six question and their mean weightage are given below:-

Table: 4.3 Problem related to students background characteristics

S.N.	Statement	Mean weightage
1.	It is difficult to determine individual needs and treat individually to the student because of limited time boundary.	3.4
2.	Problem in teaching due to poor background in basic level.	3.875
3.	Difficult to involve both weak and strong background student equally in teaching learning.	3.7
4.	Difficulties in evaluation because of heterogeneous classroom.	2.425
5.	Difficulties in teaching learning mathematics due to various age, individual difference and intelligence of students.	3.725
6	Difficulty to involve both male and female students equally in teaching learning	2.55

Above table shows that it is difficult to determine individual need and treat individually to the student because of limited time boundary. The mean weightage of response to this statement is 3.4, which signify the problem. Most of the teachers are

accepted that teachers are facing a problem due to poor background in basic level. The average response to these statements is 3.875, which is a problem. From this field study, it was found that involving both weak and strong background students equally in teaching and learning is difficult. The mean weightage to support this statement is 3.7, which shows that it is a problem.

Teachers disagree with the statement that there are difficulties in evaluation because of a heterogeneous classroom. The mean weightage of this statement is 2.425, which doesn't signify the problem. From this research, it was found that teaching and learning mathematics due to variables of age, individual difference, and intelligence of students indicates a problem. Most of the teachers are in favor of the problem. The mean weightage value for this statement is 3.725. Most of the teachers respond by opposing the statement that there are difficulties to involve both male and female students equally in teaching and learning. The average response to this statement is 2.55. It means there is no difficulty to involve both male and female students equally in teaching and learning.

After summarizing the questionnaire, the researcher came to know that all the teachers were facing the problem to the above statements. Besides this, some problems were strongly faced by all teachers. To find out detailed information about those strongly faced problems, the researcher carried an in-depth study by using interviews. Interviews were administered to get the opinion of the teachers on the problems. The opinion of the teachers on the above statement and other related problems were similar to the statement hypothesized by the researcher. The teacher's view regarding the problem about students' background characteristics is stated as:-

"There are different background student in a classroom and it is difficult to the teacher to address every students' need in a single classroom. Students are main body of teaching and learning activities for gaining knowledge. Also students have poor background in basic level that effect the learning mathematics in secondary level. Various ability student are involve in a same class so all student are not equally participate in teaching learning mathematics. Individual difference, variable of age and intelligence of students are also affecting the achievement of students."

Thus Students are main body of teaching and learning activities for gaining knowledge. If Students have poor background in basic level then that effect the learning mathematics in secondary level. Various ability students are involve in a same class so all students are not equally participate in teaching learning mathematics. Individual difference, variable of age and intelligence of students are also affecting the achievement of students.

For the solution of above mention problem related to student background characteristics teachers are respond as:-

"Teachers should use various techniques such as group work, individual test, unit test, etc. For these act the administration should manage the extra class for students where teacher should use different skill and ability to fulfill the needs of learners."

Social constructivism states that learning is an active process of creating meaning from different experience. Student will learn best by trying making sense of something on their own with the teacher as a guider help among the way. According

to the constructivism learner construct their knowledge on the basic of interaction with environment. Also students are builders of knowledge and not receptor of knowledge applied by the teacher. On that process student background affect to build the knowledge. Thus we says that the people construct their own understanding and knowledge of the world through experiencing thing and reflecting on those background characteristics. From this theory researcher concluded that student experience and background characteristics play a vital role in learning mathematics.

From the teacher's response, interview and the theme of the theory, the researcher concluded that students should treat individually because of their various background characteristics. Teacher should address every students need in learning by understanding their background. Also the teacher should use different skill and ability to fulfill the needs of learner. For teaching different background student, the teacher should divide the students into various group and treat each group according to their needs.

Problem related to teacher training

In the sampled schools, all the teachers are related with mathematical background. Out of 40 teachers, 38 teachers passed bachelor degree in mathematics education. It showed that they are trained and experienced in the teaching process. Especially the experienced teachers who are trained were not applying their skills, knowledge gained in training in classroom teaching and for developing local materials. Application of training skill in real classroom situation is important aspect of teaching. If there was not transferred the training skills then teaching learning activities became traditional and boredom.

For understanding the problem related to teacher training, the researcher raised seven questions. The researcher try to elaborate the following in detail related to the teacher training:-

Table: 2 Problem related to teacher training

S.N.	Statements	Mean weightage
1.	Training is not based on need and demand of teacher. It is only for formality and upgrading.	3.7
2.	I have participated several seminar conducted on mathematics.	3.75
3.	Trainers are well experienced and skillful in the use of ICT to deliver the training.	3.3
4.	Less refresher training are conducted	4.35
5.	The trainers are not very good at content to deliver the training.	2.875
6.	There is no any training schedule to improve teaching learning activities in our school.	3.4
7.	No sufficient materials are available to use trained knowledge in classroom activity.	4.175

From the table, teacher training is not based on need and demand of teacher. It is only for formality and upgrading. The finding of the research support this statements. Mean weightage response of this statement was found to be 3.7. The mean score of the response to the statement, I have participated several seminar conducted on mathematics is 3.75 which is greater than three thus that indicate the problem. That means teacher are not participated on several seminar. The statement, "Trainers are well experienced and skillful in the use of ICT to deliver the training" is problematic.

Average response to this statement is 3.3. It means trainers are not well experienced and skillful in the use of ICT to deliver the training. From the research it was found that less refresher training are conducted for mathematics teacher. The average response to this statement is 4.35 which signify the problem.

Most of the teachers disagreed that the trainers are not very good at content to deliver the training. The average response to this statement is 2.875 which doesn't signify the problem. From the research it was found that there is no any training schedule to improve teaching learning activities in school. The average response to this statement is 3.4. Also teachers are claimed that no sufficient materials are available to use the trained knowledge in classroom activity. Mean weightage response of this statement was 4.175 which signify the problem.

After summarizing the questionnaire the researcher came to know that all the teacher were facing the problem to the above statements. Besides this, some problem were strongly faced by all teachers. To find out detail information about those strongly faced problem the researcher carried in-depth study by using interview. Interview was administrated to get opinion of the teachers on the problems. The opinion of the teachers on the above statement and other related problem were similar to the statement hypothesized by the researcher. Teacher with regard to the problem about Teacher training stated as:-

"Sufficient materials are not available in school for using gaining knowledge in training. Teacher training are not based on need and demand of teacher that are only for formality. Refresher training to teach difficult and rigor topic are not conduct in school. Supervisor and resource person never give fruitful feedback to the teacher."

Thus Less teacher training and seminar are conducted on mathematics. Most of the training are for formality. Supervisor are not give positive feedback, they only give direction for improvement. Unavailability of sufficient teaching materials for the teacher for using trained knowledge in classroom activity is a huge problem for mathematics teacher.

For the solution of above mentioned problems related to teacher training, teachers are responded as:-

"School administration should provide necessary equipment for teachers and students. It should provide the refreshment training to teach rigor topic and to use teaching material properly. Supervisor and resource person should give positive feedback and suggestion for teacher."

Constructivism theory stated that teacher is a facilitator or a guider. Teaching is skillful job. So the teacher have needed the different ability and capacity to fulfill the need of the learner. So the teacher training is essential for their profession.

According to Mcleod (2013) in constructivism teacher is scaffolder. And zone of proximal development (ZPD) is the main way of learning. For increase ZPD teachers play the important role to guide the students. In constructivist, classroom instruction is active, student centered and inquired based. So teachers' needs refreshment training and seminar to understand the new methods and technique to teach the students.

From teachers' response, interview with teacher and theme of the theory, researcher concluded that teaching is skillful job so the teachers have needed the different capacity and ability to fulfill the needs of the learner. So training is essential for their profession. But the experienced teacher who have trained were not applying

their skill and knowledge gain in training because of unavailability of sufficient material to use trained knowledge in classroom activity. So school administration should manage the materials for the teacher. Also it is necessary to conduct refreshment training and seminar time to time. And training should be based on needs and demand rather than for formality and upgrading.

Problem related to student interest and participation

Students are the main body of teaching and learning activities. For gaining knowledge, the interest of students plays a vital role. In a classroom if the student actively participate in learning activities then the learning is meaningful. From, participation of students in classroom activity they understand the mathematical knowledge. Most of the students are feeling that mathematics is difficult and boredom subject. So students are not interested to learn, that is a huge problem for mathematics teacher. Problem related to students' interest and participation have been categorized into six item to identify the response of the teacher. These question and their weightage are given below:-

Table: 3 Problem related to student interest and participation

S.D	Statements	Mean weightage
1.	Students take mathematics as difficult subject.	3.375
2.	Students are not interested to learn mathematics because of their poor background.	3.3
3.	Students are actively participated in classroom activity.	3.75
4.	Student are laborious.	3.45
5.	Students feel boredom in learning mathematics.	3.2
6.	Students haven't basic knowledge of mathematics.	3.825

Above table shows that students take mathematics as a difficult subject. The average response of this statement is 3.375, which signify the problem. Most of the students have poor background in mathematics, so students are not interested in learning mathematics which is a problem for teacher. The mean weightage for this statement is 3.15. The statement shows students are not actively participated in classroom activity which is problematic. The average response of teacher related to this statement is 3.75. That means students are not actively participated in classroom activity. From this research it was found that students are feeling boredom in learning mathematics. Mean weightage for this statement is 3.36 which is a problem. The statement student are laborious is problematic. Average response of teachers is 3.45. It means student are not laborious.

The questionnaire distributed to the teacher contained six statement related to student interest and participation. After summarizing the questionnaire, the researcher came to know that all the teacher were facing the problem to the above statements. Besides these some problem were strongly faced by all teachers. To find out detail information about those strongly faced problem, the researcher carried in-depth study by using interview. Interview was administrated to get opinion of the teachers on the problems. The opinion of the teachers on the above statement and other related problem were similar to the statement hypothesized by the researcher. Teacher with regard to the problem about student's interest and participation stated as:

"Student participation on classroom activity play a vital role for educational achievement. Also in mathematics learning students are understanding by doing. Even the student are inactive and they are not interested in learning mathematics. Students does not have basic

mathematical knowledge. So in higher student don't understand mathematics because of poor background."

Less interest of student to learn mathematics is main causes of less achievement in mathematics. Students don't practice mathematics exercise rather than do their homework. For meaningful learning student participation is necessary but in class room activity student are inactive in mathematics which is huge problem for teacher.

For the solution of above mention problems related to student interest and participation teachers were responded as:-

"Student are main body of learning activities. So student should active in classroom activity and practice mathematical problem in home and school both. Also teacher should use student centered method on which student are actively participated for this school administration create sound environment in school."

Constructivism theory focused on the active participation of student in teaching learning activities where teacher is as a facilitator or a guider. Our classroom are running in traditional teaching strategies where student are passive learner. And teachers solve each and every problem, that's why teaching learning activities become less effective. So, this theory focused on the active participation of student in learning. Teacher should teach according to students' interest. Students are gaining knowledge quickly if the teacher teach according to their interest. This theory states that learning is an active process of creating meaning from different experience. According to Piaget's knowledge is not passively received rather knowledge is actively created by students. Mathematical ideas are made by children, not like an accepted from other

like a gift. Student are builder of knowledge. They create knowledge according to their interest by active participation.

From the teachers' response, interview and the theme of the theory, researcher concluded that students were actively participated in teaching activities then the learning is meaningful. Otherwise class is full of boredom. So, students should be active in class. Students are less active in class because teacher used the traditional method to teach. For student participation teacher should use student centered methods on which students are actively participated. Most of the students felt mathematics as a difficult subject and they have not interested to learn mathematics. To avoid that concept teacher should use various strategies such as group work, unit test, etc for making student interested in learning mathematics. However we must teach students according to their interest and need.

Problem related to instructional methods and materials

Teaching methods and materials are important part of meaningful teaching and learning process. Teacher is the main agent of the instructional strategies. All the achievement of teaching process depends upon the teachers. In classroom activity teachers and students have vital role for the use of materials. The method of teaching should be based on the knowledge, understanding skill and application. Also teacher should be concentrating on the need, interest and desire of the students.

For the understanding of the problem in mathematics researcher raised ten questions regarding instructional methods and materials. The researcher tried to elaborate the following problem in detail related to mathematical method and materials:

Table: 3 Problem related to teaching methods and materials

S.N.	Statements	Mean weightage
1.	Lack of sufficient teaching materials.	3.7
2.	There is no proper space in classroom to demonstrate instructional materials.	2.925
3.	Less economical support for purchase and construction of instructional materials from administration.	3.6
4.	Lack of time to construct and use of materials.	3.725
5.	Text book and practice book are not available in time	2.925
6.	Difficulties in completion whole course if taught by using teaching materials.	2.95
7.	There is no separate room for mathematics lab.	3.55
8.	School do not have any provision to construct and purchase required materials.	3.725
9.	Confusion on method to be used due to different knowledge	2.725
10.	Some of the units are difficult to teach.	2.55

Above table shows that for teaching mathematics, the teaching materials are insufficient. The mean weightage of the response of teacher for this statement is 3.7 which signify the problem. Most of the teachers disagree to the statement, there is lack of proper space to demonstrate instructional materials. The mean weightage of the response for this statement is 2.925 which doesn't signify problem. Also teachers are agree with the statement there is less economical support for purchase and

construction of instructional material from administration. The mean weightage about this statement is 3.6. Most of the teacher accept that there is lack of time to construct and use of materials. Average response for this statement is 3.725 which signify the problem. Most of the teacher were disagreed to the statement, text book and practice book are not available in time. The mean weightage related to this statement is 2.925 which doesn't signify problem. That means textbook and practice book are available in time.

Most of the teachers are disagreed to the statement, there is difficulty in completion of whole course if taught by using teaching materials. The mean weightage for this statement is 2.95 which does not signify the problem. Most of the teacher are disagreed that there is a separate room for mathematics lab. Average response for this statement is 3.55. From the research it is found that school do not have any provision to construct and purchase required materials. Average response for this statement is 3.725. Most of the teachers are opposing to the statement that there is confusion on methods to be used due to different knowledge. Mean weightage of this statement is 2.725, which doesn't signify the problem. Also most of the teachers are disagreed with the statement some of the units are difficult to teach. Average response to this statement is 2.55, which doesn't signify the problem.

After summarizing the questionnaire, the researcher came to know that all the teachers were facing the problem to the above statements. Besides this some problem were strongly faced by all teachers. To find out detail information about those strongly faced problem, the researcher carried in-depth study by using interview. Interview was administrated to get opinion of the teachers on the problems. The opinion of the teachers on the above statement and other related problem were similar

to the statement hypothesized by the researcher. Teacher with regard to the problem about instructional methods and materials stated as:-

"There are not sufficient mathematical teaching aids. Due to economic crisis of school, school administration cannot add mathematical materials. Although there is lack of protection for available materials for further use because materials are kept in office room haphazardly and not repairing the damage materials. Also due to lack of time to construct and use the materials teaching material are not properly used."

There is lack of sufficient teaching materials in school. School do not have any provision to construct and purchase required materials. Separate room for math lab is not available in school. Head teacher and school administration is not responsible to manage necessary teaching materials. Also teacher do not have sufficient idea to use available materials properly.

For the solution of above mention problems related to teaching methods and materials teachers were responded as:-

" School administration should manage the necessary equipment and teacher should use available materials properly. Also teacher and school administration should protect the materials. Training should be provided to the teacher to use the materials in appropriate way. "

Matthews (2011) wrote that "In the constructivist classroom, the focus tends to shift knowledge from the teacher to the students by collaborative learning. Students are gaining knowledge by peer interaction. Constructivist teaching is based on the belief that learning occurs as learners are actively involved in the process of meaning

and knowledge construction as opposed by passively receiving information." Thus constructivist theory focused on student centered learning.

From teachers' response, interview with teacher and theme of the theory, the researcher concluded that lack of sufficient materials, lack of knowledge to use the teaching aids in a particular topic is a problem. It is also difficult to choose the suitable method to teach a particular content. Also less training are conducted to give the knowledge for proper using of materials to teach is one of the huge problem. School administration should manage the necessary equipment and teacher should use available materials properly. Also teacher and school administration should protect the materials. Teacher should be trained to use the materials in appropriate way.

Problems related to school administration

School administration is one of the important parts of the learning and teaching. School administration plays the vital role to make school environment good. But if it seems to be passive and irresponsible then teacher may face problem mainly on teaching learning process. School administration directly affects the student achievement. So the school administration should be good and responsible to address teacher's problem.

For understanding of the problems related to school administration the researcher raised six questions. These questions and their mean weightage are tabulated as below:-

Table: 5 Problem related to school administration

S.D.	Statements	Mean Weightage
1.	School administration is less responsible to provide the necessary equipment for teachers and students.	3.775
2.	Lack of facility and reward for good performance.	3.375
3.	Compulsion to take more classes because of low number of mathematics teachers.	2.825
4.	Lack of refreshment training to teach difficult and rigor topic	4.475
5.	Library facility is available	3.025
6.	Lack of teacher involvement in curriculum planning.	3.6

Above table shows that school administration is less responsible to provide the necessary equipment for teachers and students. The mean weightage for this statement is 3.775. Most of the teachers respond that there is lack of facility and reward for the good performance. Average response for this statement is 3.375 which signify the problem. Most of the teachers are disagreed to the statement that there is compulsion to take more classes because of low number of mathematics teachers. Mean weightage for this statement is 2.825 which doesn't signify problem. From the research, it was found that lack of refresher training to teach difficult and rigor topic is one of the problem. Average response to this statement is 4.475. Most of the teachers are in favor of the statement, library facility is available in school. The mean weightage of response for this statement is 3.025. From this field study it was found

that lack of teacher's involving in curriculum planning is one of problem. Average response related to this statement is 3.6 which signify the problem.

The questionnaire distributed to the teacher contained six statement related to school administration. After summarizing the questionnaire the researcher came to know that all the teachers were facing the problem to the above statements. Besides this some problem were strongly faced by all teachers. To find out detail information about those strongly faced problem the researcher carried in-depth study by using interview. Interview was administrated to get opinion of the teachers on the problems. The opinion of the teachers on the above statement and other related problem were similar to the statement hypothesized by the researcher. Teacher with regard to the problem about school administration stated as:

"In our school there is Lack of teaching materials, library and other basic needs are not available in school. To use source from their locality as a material, teacher are not prepared mentally because of less support from administration. Sometime bad political opinion of administration affect the teacher's mentality. School administration does not manage refreshment training to teach difficult and rigor topic. Also there is lack of facility and reward for the good performance of teacher."

Thus School administration directly affects the student achievement. Administration should be responsible to address teacher's problem. Due to lack of materials, administration support, lack of refreshment training for teachers, bad political system educational achievement is not satisfactory. Also if the administration

reward for the good performance of teacher that gives positive reinforcement for teacher.

For the solution of above mention problem related to school administration teachers were responded as:-

"School administration should be responsible to the teacher, students and parents. Also school administration should reward for the good performance of teacher. Short term refreshment training should conduct by administration for the teacher to teach rigor and difficult topic it surely positively effect in learning environment. "

According to Vygotsky (1978), learner construct their knowledge on the basis of interaction with environment. For making school environment good, school administration is responsible to the students, teacher, parents and society. According to social constructivism, society is main source of learning. The school administration had major role of maintaining good environment by providing good physical resource and instructional materials. If the school administration became weak and irresponsible then learning environment deteriorates and we cannot expect the good result. According to this theory language, culture and society affect the student learning. So school administration should play a vital role to make society in favor of student learning.

From the teacher response, interview and theme of the theory researcher concluded that school administration should be responsible to the teacher, students and parents. Also school administration should reward for the good performance of teacher. Short term refreshment training should conduct by administration for the teacher to teach rigor and difficult topic it surely positively affect in learning environment.

Chapter-V

Summary, Findings, Conclusion and Recommendations

This chapter deals with the summary, findings, conclusion and recommendations.

Summary of the study

The purpose of the study was to identify the problems faced by mathematics teacher in teaching mathematics and to find out the remedies of the problems faced by the mathematics teacher in teaching mathematics.

The specific objectives of this study were to identify the problems related to students' background characteristics, to identify the problem related to teacher training, to identify the problem related to student interest and participation, to identify the problem related to instructional methods and materials, to identify the problem related to school administration and to find out the remedies solution for these problems.

For this study the problems were categorized into five different areas. The descriptive survey method was used to conduct the study. The researcher herself develop the questionnaire under the guidance of supervisor consisting of thirty five items related to various problem faced by the secondary level mathematics teacher. The questionnaire and interview schedule were tools of the study.

The response were collected from different sample teachers using stratified sampling method. The collected data were quantified based on five point Likert's scale. Questionnaire were also included in each category of problem. Descriptive

analysis of collected response were carried out using statistical indicators mean weightage and interview schedule was analyzed in more descriptive way.

Findings

From the field survey and statistical analysis of the collected data, it was found that teacher had been facing a number of problems in teaching Mathematics at secondary level. On the basis of analysis and interpretation of the data, the major findings of this study are presented below:

-) Because of poor background of students at basic level on Mathematics, there is a problem on teaching mathematics.
-) Students are from different social, cultural, economic and family background. So these are affecting to teach and learn.
-) Individual difference, variable of age and intelligence of students are also affecting the achievement of students.
-) There are not sufficient Mathematical teaching materials available in school. There is lack of protection for available materials due to the unavailability of separate room for mathematics lab.
-) Schools do not have any provision to construct and purchase required materials. There is economic crisis for purchasing materials.
-) There is lack of knowledge to use appropriate teaching method for a particular topic. Teachers are using traditional and teacher center methods.
-) School administration is irresponsible to provide the necessary equipment for teachers and students. There is not any provision of mathematics lab also.
-) School administration does not manage refreshment training to teach difficult and rigor topics in simple and interesting way.

-) There is lack of facility and reward for the good performance of the teacher.
-) Trainers are good at content but poor in the use of ICT and still they are delivering the training in traditional way.
-) The training provided for the teachers are not based on need and demand of teacher. They are providing only for formality and Upgrading. On the other hand, there is less refreshment training are conducted on Mathematics.
-) Most of the teacher aren't applying their skill and knowledge, which are provided by the training, in the classroom. Moreover, there are not sufficient materials available in the school.
-) Most of the students take Mathematics as a difficult subject. They never pay their attention in the study in the classroom. They feel boredom in the mathematics class. They don't practice it in their home too.
-) Students have poor background in basic level. So they have less interest while learning Mathematics in upper class also.
-) Students are not laborious to learning Mathematics and they don't actively participate in classroom activities.
-) To address the students' needs school administration should manage the extra class for mathematics and teacher should divide the group of student according to their capacity and needs and treat each and every group individually.
-) Refreshment training should be organized to teach difficult and rigor topic and to know about the modern technique of teaching and using of materials
-) School administration should manage the necessary equipment for teacher and student and also manage the mathematical laboratory to proper use and protect those materials.

-) School administration should reward the good performance of teacher and manage the mathematical aids for teacher to use trained knowledge in classroom activity
-) Teacher should understand the psychology of student and encourage student to learn mathematics by actively participating in classroom activity.

Conclusion:

From the above stated findings of this study, it can be concluded that teaching learning activities of Mathematics is not satisfactory in Parbat district. Most of the teachers in Parbat district are facing a number of problems due to the students' background, characteristics, teachers' training, instructional methods and materials, school administration and students' participation.

Moreover, it is found that teachers are facing difficulties to address the individual needs of students due to the different background and characteristic of the students. On the other hand, the trained teachers are not applying their skill and knowledge which are gained from training because of unavailability of the sufficient materials in the school. School administration is also less responsible to manage the materials. Poor background of the students in basic level, lack of refreshment training, less interest of students in Mathematics learning, inactiveness of students in classroom, lack of necessary materials, lack of positive feedback of Supervisor, lack of math lab etc. are some of the burning problems of the teacher in teaching mathematics.

For solving the above mention problems refreshment training should be conduct time to time, school administration should be manage the necessary equipment for teacher and students, teacher should be used available materials properly, school administration should manage extra class for mathematics, teacher should understand

each and every student background and treat them individually according to their needs and interest and school administration should reward for good performance of teacher.

Recommendations for further Improvement

Recommendations have been made to improve the teaching learning situation on the basis of findings. Researcher would like to recommend as follows:

-) Teacher should try to find out students interest and need according to their psychology and then apply to suitable pedagogy for teaching Mathematics.
-) Seminar, refreshment training, orientation and supervision should be provided to the teachers time to time.
-) Suitable teaching aids should be used in teaching Mathematics and students should be encouraged to participate actively in the classroom activities.
-) Mathematics teachers are required to use suitable teaching method and materials for teaching and learning activities of Mathematics to motivate students and to create interest in them about Mathematics.
-) School administration should be responsible to manage necessary equipment for teaching and create good environment in school.
-) School administration should create educational environment in the school and teacher should create Mathematical environment in both inside and outside the classroom.
-) School administration should reward for good performance of the teachers.
-) Teacher should use trained skill and knowledge in classroom activity.
Administration should manage the materials for teacher and students.

Recommendation for further study

The researcher has made following recommendation for further study:

-) Similar study can be conducted on the problem faced by basic level.
-) Similar study related to the problems faced by students for the achievement on mathematics can be conducted.
-) Similar study can be carried out with large sample size and various school of different part of Nepal.

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Appendix A

Questionnaire

Respected teachers,

I am a master's degree student of mathematics education, central department of education, Kirtipur Kathmandu. I am writing a thesis entitled on "Problem Faced by Secondary level Mathematics Teacher in Teaching Mathematics" For partial fulfillment of master degree in education. Teaching learning activities couldn't be effective without identifying the actual problems of teacher in teaching. So, to complete this thesis, I have prepared some questionnaire for you. Researcher is very much thankful for your valuable help and would like to express gratitude to you and your institution. The information obtained from you is used for this study and your answer is kept secret.

Researcher

Shamvabi Adhikari

Department of Mathematics

Education, Kirtipur

Kathmandu, Nepal

I request to fill this questionnaire as follows:

-) Please read carefully and respond as you feel.
-) Please don't leave blank for any questions.
-) For open questionnaire, please write your opinion.

Section A

Teacher's Bio Data Form

Name of Teacher:

Sex: Male/ Female Age.....

Name of school:

Academic qualification:

Teaching experience:

Section: B

Please give tick marks which you feel in the best option where

S.A =strongly agree, A = Agree, U = Undecided

D = Disagree, S.D =Strongly Disagree.

S.N.	Statements	SA	A	U	D	SD
1.	It is difficult to determine individual needs and treat individually to the student because of limited time boundary.					
2.	Problem in teaching due to poor background in basic level.					
3.	Difficult to involve both weak and strong background student equally in teaching learning.					
4.	Difficulties in evaluation because of heterogeneous classroom.					
5.	Difficulties in teaching learning mathematics due to various age, individual difference and intelligence of students.					
6.	Difficulty to involve both male and female students equally in teaching learning.					

7.	Training is not based on need and demand of teacher. It is only for formality and upgrading.					
8.	I have participated several seminar conducted on mathematics					
9.	Trainers are well experienced and skillful in the use of ICT to deliver the training.					
10.	Less refresher training are conducted					
11.	The trainers are not very good at content to deliver the training.					
12.	There is no any training schedule to improve teaching learning activities in our school.					
13.	No sufficient materials are available to use trained knowledge in classroom activity.					
14.	Students take mathematics as difficult subject.					
15.	Students are not interested to learn mathematics because of their poor background.					
16.	Students are actively participated in classroom activity.					
17.	Student are laborious.					
18.	Students feel boredom in learning mathematics.					
19.	Students haven't basic knowledge of mathematics.					
20.	Lack of sufficient teaching materials.					
21.	There is no proper space in classroom to demonstrate instructional materials.					
22.	Less economical support for purchase and construction of instructional materials from administration.					
23.	Lack of time to construct and use of materials.					

24.	Text book and practice book are not available in time.					
25.	Difficulties in completion whole course if taught by using teaching materials.					
26.	There is no separate room for mathematics lab.					
27.	School do not have any provision to construct and purchase required materials.					
28.	Confusion on method to be used due to different knowledge.					
29.	Some of the units are difficult to teach.					
30.	Lack of facility and reward for good performance.					
31.	School administration is less responsible to provide the necessary equipment for teachers and students.					
32.	Compulsion to take more classes because of low number of mathematics teachers.					
33.	Lack of refreshment training to teach difficult and rigor topic.					
34.	Library facility is available.					
35.	Lack of teacher involvement in curriculum planning.					

If you have faced any other problems then mention below:

- a)
- b)
- c)

Appendix B

Guidelines For the interview Mathematics Teacher

Name of Teacher:

Sex: Male/ Female

Age.....

Name of school:

Academic qualification:

Teaching experience:

The interview with Mathematics teachers were taken on the basis of following main topics.

-) Student's background characteristics
-) Teacher's training and its transfer in classroom teaching
-) Refreshment training, seminar and other any Mathematical program.
-) Student interest in learning mathematics
-) Involvement of student in classroom activity
-) Mathematical methods and materials
-) School administration
-) Causes of these problem and way to solution

Appendix c

Distribution of Teacher Response on Questionnaire

S.N.	Statements	SA	A	U	D	SD	Mean
1.	It is difficult to determine individual needs and treat individually to the student because of limited time boundary.	7	21	0	5	7	3.4
2.	Problem in teaching due to poor background in basic level.	12	16	7	5	0	3.875
3.	Difficult to involve both weak and strong background student equally in teaching learning.	10	19	2	7	2	3.7
4.	Difficulties in evaluation because of heterogeneous classroom.	2	7	16	0	15	2.425
5.	Difficulties in teaching learning mathematics due to various age, individual difference and intelligence of students.	19	3	11	2	5	3.725
6.	Difficulty to involve both male and female students equally in teaching learning.	3	7	2	25	3	2.55
7.	Training is not based on need and demand of teacher. It is only for formality and upgrading.	7	23	5	1	4	3.7
8.	I have participated several seminar conducted on mathematics.	3	5	2	19	11	3.75
9.	Trainers are well experienced and skillful in the use of ICT to deliver the training.	5	7	10	7	11	3.3

10.	Less refresher training are conducted.	31	2	1	2	4	4.35
11.	The trainers are not very good at content to deliver the training.	4	5	13	18	0	2.875
12.	There is no any training schedule to improve teaching learning activities in our school.	5	23	1	6	5	3.4
13.	No sufficient materials are available to use trained knowledge in classroom activity.	21	11	4	2	2	4.175
14.	Students take mathematics as difficult subject.	6	19	4	6	5	3.375
15.	Students are not interested to learn mathematics because of their poor background.	7	14	9	4	6	3.3
16.	Students are actively participated in classroom activity.	3	5	2	19	11	3.75
17	Student are laborious.	3	7	2	25	3	3.45
18	Students feel boredom in learning mathematics.	9	6	12	10	3	3.2
19	Students haven't basic knowledge of mathematics.	19	2	12	7	0	3.825
20	Lack of sufficient teaching materials.	16	8	6	8	2	3.7
21.	There is no proper space in classroom to demonstrate instructional materials.	9	10	3	5	13	2.925
22.	Less economical support for purchase and construction of instructional materials from administration.	12	11	10	3	4	3.6
23.	Lack of time to construct and use of materials.	14	12	7	3	4	3.725

24.	Text book and practice book are not available in time.	5	9	10	10	6	2.925
25.	Difficulties in completion whole course if taught by using teaching materials.	5	7	12	13	3	2.95
26.	There is no separate room for mathematics lab.	13	14	0	8	5	3.55
27.	School do not have any provision to construct and purchase required materials.	20	8	0	5	7	3.725
28.	Confusion on method to be used due to different knowledge.	3	10	5	17	5	2.725
29.	Some of the units are difficult to teach.	3	7	2	25	3	2.55
30.	Lack of facility and reward for good performance.	11	14	0	9	6	3.375
31.	School administration is less responsible to provide the necessary equipment for teachers and students.	13	17	3	2	5	3.775
32.	Compulsion to take more classes because of low number of mathematics teachers.	17	2	3	6	12	2.825
33.	Lack of refreshment training to teach difficult and rigor topic.	27	10	1	2	0	4.475
34.	Library facility is available.	6	10	10	5	9	3.025
35.	Lack of teacher involvement in curriculum planning.	2	29	0	9	0	3.6