PROBLEM FACED BY SECONDARY LEVEL MATHEMATICS TEACHER

A

THESIS

BY

RATI BHAN JAISI

IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTERS OF EDUCATION

SUBMITTED TO
DEPARTMENT OF MATHEMATICS EDUCATION
CENTRAL DEPARTMENT OF EDUCATION
UNIVERSITY CAMPUS
TRIBHUVAN UNIVERSITY
KATHMANDU
2015

LETTER OF CERTIFICATE

This is to certify that Mr. Ratibhan Jaisi, a student of academic year 2064/2065 with campus Roll No.347, Exam Roll No. 281218 (2066), Thesis number 1037, Red. No. 9-2-21-332-2000 has completed this thesis under my supervision during the period prescribed by rules and regulations of Tribhuvan University, Nepal. Thesis entitled **"Problem Faced by Secondary Level Mathematics Teachers"** has been prepared based on the result of his investigation conducted during the period of 2014 to 2015 under the Department of Mathematics Education, University Campus, Tribhuvan University, Kirtipur Kathmandu. I, hereby, recommend and forward that this thesis be submitted for the evaluation to award the Degree of Masters of Education.

…….. ……

(Mr. Arjun Neupane) (Mr. Laxmi Narayan Yadav)

Supervisor Head

Letter of Approval

A

Thesis by

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Entitled

"Problem Faced by Secondary Level Mathematics Teachers" has been approved in partial fulfillment of the requirements for the Degree of Master of Education.

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ACKNOWLEDGEMENT

First of all, I would like to express my deep gratitude thanks to my thesis supervisor **Mr. Arjun Neupane**, Department of Mathematics Education, Central Department of Education Kirtipur, Kathmandu, who guided me throughout the study and inspired me to complete within a time. His guidance, co-operation, kindness, valuable suggestion and encouragement were memorable forever.

My sincere gratitude goes to **Mr. Laxmi Narayan Yadav**, Head, Department of Mathematics, Education, University Campus, for his constructive suggestions. My sincere thank goes to my respected **Prof. Dr. Hari Prasad Upadhyay, Mr. Lok Nath Bhattarai** and other teachers and staffs of the Department of Mathematics Education for their intellectual supports in this study.

I am also very much indebted to the head teacher and mathematics teachers of sample school their sincere co-operation and providing opportunity for collection of data. I most extend my heartily thanks to my parents, specially my lovely daughter Supriya Gautam and my son Sasanka Gautam and other friends who gave me the constant inspiration and suggestions to bring the thesis in complete form.

ABSTRACT

This study entitled "Problems Faced by Secondary Level Mathematics Teachers." It conducted in Rukum District. The objective of this study was to identify the problems faced by secondary level mathematics teachers and to analyze the possible ways to reduce these problems. The population for the study was considered to all the mathematics teachers who taught mathematics at secondary level of public schools of Rukum district. Forty teachers were selected as sample for the study by random sampling method. Questionnaire and interview schedule form were the tools of the study. For the questionnaire, thirty eight items were developed by the researcher under the theoretical understanding and the guidance of supervisor. The collected data were organized, analyzed and interpreted statistically and descriptively. For the analysis of data the mean weightage was used to identify the greatest problem and also chi-square test was used to find the attitude of teacher.

After analyzing the data, the researcher found that there were numerous problems faced by mathematics teachers of secondary level due to the curriculum and textbook, professional development of teachers, administration, classroom management and classroom activity. This study also concluded that the lack of the mathematical laboratory , difficult to manage the heterogeneous classroom environment and teaching process according to students needed and interest are the major problems faced by public school mathematics teaches.

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Chapter – I

INTRODUCTION

Background of the Study

Mathematics is regarded as a queen of science, as it is used as a tool of analysis in various other disciplines such as Engineering, Medical Science, Architecture, Commerce, Economics and even Humanities. Hence to understand various other discipline knowledge of mathematics is very essential. Now days, mathematics is indispensable for career building. But for all these we most know about attitude towards mathematics. Attitude towards mathematics denote interest or feeling towards studying mathematics. It is the disposition of an individual towards liking or disliking the study of mathematics, so this may vary from individual to individual. It may be favorable or one of discouraging. An attitude towards mathematics is determined by the aptitude, interest and ability of an individual in solving problems, assessing ideas and making decision. Review of relevant literature reveals varying opinions and findings on the student's attitude towards mathematics and their performances. Study of the relevant literature show that study on attitude of student towards mathematics has been prevalent for ages. Some studies reveal consistency across countries and age levels within a country is the average level of attitude towards mathematics by students.

Problem related to mathematics learning is directly related with the teaching mathematics. This has become a great threat to the mathematics teachers. Some problems of learning mathematics in students might directly be related to the teachers' academic background, classroom practices, school management and leadership. Other problems of learning and teaching mathematics concerned with the per-knowledge of students, cultural background, and motivation of the students. Generally, students may feel difficulty in learning mathematics problems related to understanding the new concepts and relation. Bhattarai (2005) showed the sources of problems in learning mathematics as relevancy of curriculum to daily life, teaching learning activities, classroom management physical activities classroom management physical facilities, evaluation techniques and inherent potentiality and circumstances of the individual learners.

Other aspects which raise the problems to students are beliefs of mathematics teachers, students and parents, social and cultural environment pedagogical context also interrelated among them. The achievement of homogeneous arrangements of student in classroom might be better than heterogeneous. The crowded classroom is one of the major problems of implementation of interactive teaching and learning strategy. Problems occur through the size of classroom, facilities available in classroom kind number of students in cases. Problems of learning mathematics of the side of teachers differ by the level of education. There is various level of education in Nepal. First level is called primary education; second level is secondary education and higher education. Secondary education is the programmed which is expanded for four years; grade IX to grade XII. Mathematics is taught in one up to tenth class as compulsory subject. Mathematics occupies an important place in present education due to its significance and demand. The rapid progress in science and technology has helped to increase the body of mathematical knowledge and had led to more extensive use of mathematics in daily life. These developments demand to improve and update the mathematics curriculum.

Mathematics has always held a key position in the school curriculum because it has been considered indispensable to the educative person. In the school, mathematics knowledge consists in large measure of computational arithmetic. This aspect of mathematics has an important role in the education of the society and today kit is more important to basic education than ever before in the past.

About the aspect of teaching, Bhatea and Bhatia, (1986) said "Teaching is establishing a harmonious relationship between teacher, pupil and subject. It is giving useful information. It is causing the child to learn, it is the stimulation and direction of learning, it is helping the children to make effective adjustment, it is guiding the pupil's activity and it is the training of his emotion." Similarly, according to teaching principle, "Effective mathematics teaching requires understanding what students know and need to learn and the challenging and supporting them to learn" (Upadhyay, 2061 B.S).

Qualities and qualification needed for a teacher to have expert in teaching mathematics, he should have a broad knowledge over subject matter, can use instructional communication techniques and occident in handling its varied structure and application. In these context, Stinnett, (1968) said "Mental ability certainly is a basic

factor of success in teaching. We don’t know all the qualities needed for a successful teacher, but apparently personality, social adjustment, liking for children and Willingness to work are of fundamental importance along with mental ability."

About the participation of mathematics teacher in professional activities Bhatia and Bhatia, (1986) said "A mathematics teacher should be a member of local, state and national organization of mathematics teachers. Besides this he should read journals and news about the latest development and trends in teaching of mathematics. He should be interested in arranging workshops, seminars meeting if mathematics teachers; able to share ad contribute to discussion of the latest trends in mathematics teaching. He should conduct experiment in any aspect of mathematics teaching, gather ideas and write articles for reading and use by other mathematics teacher."

Beside these a successful teacher should be able to explain ideas clearly and in simple language to his students. He should have clear speech and distinct and audible manner of explaining facts, which invites participation of students. Including these there are several other variables in the absence of which teacher encounter problems in classes. Factors responsible for effective teaching can be identified as physical facilities, methods of instructions, instructional materials, mathematics laboratory, teachers training, supervisory help, teacher's guide book, individual difference and metal ability, interest etc. Psychologist and educationist have agreed upon there are certain accepted process of class room teaching which if followed could make classroom teaching defecting and stimulation.

Many government and non-government official research indicate huge amount of time and money have been spent to find the problem of teacher but no satisfactory result was found. Hence no successful solution can be found to address the teacher's problem faced by teachers in executing instruction activities in mathematics classroom of the secondary level in the Rukum district. So this study is focused of exploring the problems they face while teaching mathematics.

Statement of the Problem

This study was mainly concerned with the problem faced by teacher in teaching mathematics at secondary level. So, it is well appropriate to discuss about the problems faced and their causes. The researcher's questions of this research work were stated as fallow:

- What are the problems faced by mathematic teachers in teaching mathematics at secondary level?
- How to minimize these problems faced by mathematics teachers in teaching mathematics at secondary level?

Significance of the Study

Mathematics is an essential part of school curriculum. So, it is included as compulsory subject at all level of school education. There is much confusion among the teachers who are teaching mathematics at secondary level schools. Problems may arise because of the confusion about the subject matter, contents and about the optimal procedures to present them to the students. Problems also arise because of the lack of knowledge about the classroom management. The study contributes a lot in identifying problems once they know what they are. Thus, the study is significant for the reason that it helps to provide information to the concerned agencies to reform and improve the mathematics teaching at the secondary level. Since, teachers are the main agents for the successful implementation of mathematics curriculum only by the hard work of the teachers.

Thus, the purpose of the study identifies the levels and extents of problems faced by teacher in teaching mathematics. This study contributes a lot an identifying the problems and they help teachers to know their actual problems of teaching mathematics. This study may provide some logical and valuable information about the current problems of teaching mathematics faced by the secondary level mathematics teachers. It also helps to provide information to the concern agencies to reform and improve the mathematics content of secondary level.

Every research has its own importance and significance. The present study entitled as "Problem Faced by Mathematics Teachers at Secondary Level" has following significances.

- This study helps to provide appropriate guidelines for mathematics teachers in teaching mathematics.
- This study would helpful for mathematics teachers to provide effective teaching in heterogeneous classes.
- It would help to provide appropriate guideline for mathematics teachers in teaching mathematics.
- It would be helpful for teachers to prepare instructional strategies.
- This study would help those researchers who are going to conduct research related to this topic.
- It would beneficial to policy makers' educationist and mathematics educators to makes further curriculum policies.

Objective of the Study

Each study has its own general and specific objectives. If the objectives of the study are not determined, the researcher cannot achieve his/her goal. So, the researcher should have clear objectives in the research. This study was proceeded to investigate the problems face by teachers in teaching mathematics at secondary level of Rukum district.

The main objectives of this study were:

- To identify the problems faced by secondary level mathematics teachers in teaching mathematics.
- To analyze the possible way of minimize the problems of teacher in teaching mathematics.

Hypothesis of the study

H_0= there has no problems in teaching mathematics at secondary level teacher.

H_1= there has problems in teaching mathematics at secondary level teacher.

Delimitation of the Study

Due to the constraints of time expenses and other related factors the researcher did not overcome the entire field. Therefore, this research was delimited in the following aspect:

- The study was limited in Rukum district.
- The population of this study was limited to the teachers of secondary public schools in Rukum district.
- The sample of the study was selected 40 teachers at secondary through the random sampling method.
- The statistical analysis of the data was limited in percentage and mean score.
- This study was concerned only with current problems faced by mathematics teachers of secondary level.

Definition of the Terms

Teacher

A person, who teaches mathematics at the secondary level in Rukum district.

Secondary Level

A level including in secondary level.

Public School

Public schools are those which receive regular government logistic and financial support.

Problems

The teacher's difficulties by the curriculum and textbook, heterogeneous classroom, classroom management, administration, professional development of teachers and classroom activities.

Teaching Problems

Teaching problems is obstruction of teaching or situation in which a teacher felt difficulty. For example, lack of textbook, level of students, insufficient of teaching materials etc.

Chapter – II

REVIEW OF RELATED LITERATURES

It is essential to review the related literature to compare the study which provides strong knowledge about the related topic. Numbers of books, research reports and papers and other booklets can be found that concern with curriculum, teaching instructional materials, classroom management and so on. Only few of them have been done on the related field. The research studied some of them which are considered as a milestone for this study. Review of some related literature as followings:

Empirical Literature Review

Chaulagain (2005) conducted a thesis entitled "A study on problems faced by secondary level mathematics teacher in teaching geometry" .The main objectives of the study was to identify the problems faced by the secondary school mathematics teachers in teaching geometry. Thus the purpose of the present study was to identify the problems faced by the mathematics teachers in teaching mathematics in class ten. So, both previous and present study can be interrelated to each other. The descriptive survey method was adopted to conduct the study for convenience. Thirty secondary school mathematics teachers of Kathmandu district were included as sample of the study. The questionnaire was the main tool of the study developed by the researcher himself. He analyzed data using the statistical way mean weightage and t-test. He concluded that geometry instruction, teacher's professional development consisting and using instructional materials is the problem in Kathmandu district. He conclude that the teachers are facing many problem due to various background, characteristics of students, geometry curriculum and text, evaluation, teachers, school administration and first priority to arithmetic and algebra by teachers are the main problems.

Alamarat (2010) conducted the thesis on "The Classroom Problems Faced Teachers and the Public School." The study aimed to identify the classroom problems that faced teachers in public schools in Tafila province, and the proposed solutions. The samples of the study were 196 teachers from the public school in Tafila province. By using questionnaire to collect the data, the results of the study show that the mean of the behavioral problems was 2.66 and the mean of the academic problems was 3.08. Also,

the researcher found that statistical significant differences refer to interaction between gender, level of school, and teaching experience in the behavioral problems for male in the basic school, those with work experience less than 5 years. Also, there are no statistical significant differences between gender, level of school, education degree, and teaching experience in the academic problems. The study did give some

Poudel (2010) did a research on "A study on the problems faced by mathematics teacher in private school at secondary level" with the aim to find out the problems of mathematics teachers in private school at secondary level, to compare the problems faced vu trained and untrained teachers in teaching mathematics in private school at secondary level and to find out the cause of the problem faced by mathematics teachers in private school at secondary level. He used to the descriptive survey method was adopted to conduct the study. He took 15 schools mathematic teachers out of 53 schools as a sample by the randomly sampling method. For each school one teacher was chosen. In which seven were trained and eight were untrained teacher to form a sample of the study. The questionnaire and classroom observation form were used tools of the study. For the analysis, he analyzed qualitative data with the help of literature and theory. He used mean weightage was to locate the central position of the responses to the statements of teachers as a whole in the rating scale and t-test. He concluded that both trained and untrained teachers have been facing more or less similar problem in private school. He found that there is no difference between trained and untrained teachers. Due to the lack of basic knowledge of students they are facing difficult subject therefore the interest of student going to decrease which creating the problems. In private school it is focusing on rot learning rather than conceptual as a result their knowledge becoming limited, lack of the proper instructional material and proper pencil test only means of evaluation creating the problems.

Karki (2011) conducted a study on "problem faced by teachers in teaching at mathematics at secondary level in Lamjung distract". The objective of his study were, to analyze problem faced by secondary school mathematics teachers in teaching mathematics in the respect of different factors and to compare the problems faced by the secondary level mathematics teacher teaching at rural and urban schools . He used the method in his study: the descriptive survey method. He has taken twelve school's teacher from each school as a sample. Out of twelve schools, four schools are selected urban area

and eight are from the rural. The statistical device of t-test is applied to find out difference in problem between urban and rural secondary school mathematics teacher towards the response of the statements. The difference is tested at the 5% level of significance. He concluded that most of the SS have not mathematical laboratory. Thus, it is a great problem for teachers and students of teaching learning process.

Bhatt (2013) conducted thesis entitled "Problem faced by teacher in teaching mathematics at secondary level in Kanchanpur district". The objectives of his study is to find the problems faced by teachers in teaching mathematics at secondary level and to compare the problem faced by public and private schools mathematics teachers in teaching mathematics at secondary level. Descriptive survey method is adapted to conduct the study and open questionnaire, classroom observation and interview schedule were used of data collection. For forty secondary mathematics teachers form Kanchanpur district were selected with lone teacher from each school by method of stratified random sampling. He is selected twenty public schools as a sample from 117 public schools and twenty private schools from 48 probate schools. For this study, forty secondary mathematics teachers from Kanchanpur district were selected with one teacher from each school by method of stratified random sampling. Foe the data analysis the mean weightage was used to locate the central position of the responses to the standard of the teachers and students as a whole in the rating scale and t-test was applied to find out difference in problems between public schools and private schools mathematics teachers teaching at secondary level. The difference was tested at the 5 percent level of significance. He concludes that teacher was facing many problems related to the hater opinions classroom management, content, school administration, teaching materials etc.

Paudel (2014) conducted a thesis on "Problem faced by teachers in teaching mathematics at secondary level in Arghakdanchi district". The main objective of his study were to identify and analyze the problem faced by teachers and students in mathematics class at secondary level, to identify cause of the problems which were occurring in teaching mathematics and to suggest some measure for the solutions of the problems. Descriptive survey type (qualitative + quantitative) method was used in his study. For this study forty two secondary schools from Arghakhnchi district were selected with one teacher for each school by methods of purposive sampling techniques. He is used of a questionnaires and class observation as a tool of the instrument of the

study. The obtained data are analysis and interpreted with the help of mean weightage. Mean weightage is used to locate the central position of the responses to the statements of the teacher as a while in the rating scale.

He concludes that mathematics teaching and learning and is not satisfactory in Arghakhanchi district. Among the six different categories described and it founds that there are numerous problems faced by teacher due to classroom management, various background characteristics ,school administration evaluation techniques, like that ; lack of training , crowed number of students lack of proper teaching materials, lack of mathematics lab facilities, poor evaluation process, time factors, lack of motivation , lack of knowledge about children psychology are the boring problems of teachers in teaching mathematics at secondary level. Similarly, negative attitude towards mathematics a major psychological problems.

Sapkota (2014) conducted a thesis on "Problems faced by teachers in teaching mathematics at lower secondary level". The main objectives of his study were intended to identify the problems faced by teachers in teaching mathematics at lower secondary level and to compare the problems faced by urban and rural school teachers in teaching mathematics at lower secondary level. His study was concerned in Kavreplanchok district. He used a survey research. The sample of the study was the 50 lower secondary level mathematics teachers of community schools who taught mathematics till the year 2069 in Kavrepalanchok district. Out of 50 teachers, 40 teachers were selected from rural school and 10 from urban schools by random sampling methods. For analysis the collected data was analyzed and interpreted with mean weighted was used to locate the central position of the responses to the statements of teachers as a whole in rating scale. The quantitative data through questionnaire was analyzed and interpreted descriptively and to compare the response of urban and rural school teachers, the t-test was used the t-test was calculated at the 5% level of significance. He concluded that there are many problems facing by the teachers of lower secondary school level due to the student's activities, teachers physical facilities, teaching methods and materials, curriculum and text books, evaluation techniques. Also, it can be concluded that both urban and rural school mathematics teachers have been facing mare or less similar type of problems.

After study overall literature, no conclusive result was found convening the problems faced by secondary school teachers in mathematics in the area of curriculum

and textbook classroom management and educational administration in Rukum district. So, the researcher took a research problem on the title "The problems faced by secondary level mathematics teachers in teaching mathematics at Rukum district".

Theoretical Literature

Nepal is multicultural, multi ethnic, multi religious and multilingual country. A large number of students in a less facilitated classroom teaching are more difficult and challenging. Classroom is the collection heterogeneous group of students of different interests, needs and attitudes. So, it is too vague to choose appropriate teaching method according to students need, interest and capacity in the subject matter. Achieving targeted goal in classroom is hindered and obstructed by heterogeneous classes.

Constructivism Theory

Among many learning theories constructivism is one of the theories to analyze and interpret the data of mathematics or resolve the problems. This theory encourages the student to involve themselves actively and use techniques of learner centered, group discussion, learning by doing, use outside feels to be more practical and gain high achievement in mathematics rather than classroom. To analyze and find the solutions of the problems of mathematics teachers in teaching mathematics, constructivism will become one of the possible theories to solve the problems on the topic of "A study of problems faced by secondary level mathematics teachers in teaching mathematics."

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 to help them along the way.

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

Constructivists believe all children are engaged in creating a vast array of intellectual structure that gives order to the world in which they live. All these structure most support increasing levels of complexity as each child grows and develops.

Mathematical knowledge is created by students as they reflect on their physical and mental actions. By observing relationships identifying patterns and making abstractions and generalizations. Students come to integrate new knowledge into their existing mathematical schemas.

Vygotsky's Learning Theory

Lev Vygotsky's, cultural-historical theory of cognitive development is focused on the role of culture in the development of higher mental functions, such as speech and reasoning in children. His theory is sometimes referred to as having a sociocultural perspective, which means the theory emphasizes the importance of society and culture for promoting cognitive development. Vygotsky believed that adults in a society foster children's cognitive development in an intentional and systematic manner by engaging them in challenging and meaningful activities. We will return to our introductory example throughout this lesson to illustrate the principles of Vygotsky's theory. In our intro, the father intentionally engaged with his child to help her understand how to fit the blocks into the designated holes. Without this assistance, she would have continued to be unsuccessful. But with the meaningful directions from her father, she was able to successfully get the blocks into the holes herself. Six major assumptions guide Vygotsky's theory. We will discuss each one generally.

1. The first assumption of Vygotsky's theory is that through both informal and formal conversations and education adults convey to children the way their culture interprets and responds to the world. Specifically, as adults interact with children, they show the meanings they attach to objects, events and experiences. Returning to our example, the father is now reading to his daughter a book about transportation. The book describes the different modes of transportation we use in our society. By presenting these concepts, the book shows the little girl how our society classifies modes of transportation.

2. The second assumption of Vygotsky's theory is that thought and language becomes increasingly independent in the first few years of life. We will talk specifically about language and speech development later in this lesson.
3. The third assumption explains that complex mental processes begin as social activities. As children develop, they gradually internalize processes they use in social contexts and begin to use them independently. This internalization process allows children to transform ideas and processes to make them uniquely their own. Returning to our example, the child and father are simply reading a book, but this social activity is transforming the way the child perceives modes of transportation. She will begin to classify these items herself when she sees cars, trucks and boats in real-life settings.
4. Vygotsky also introduced the idea that children can perform more challenging tasks when assisted by more advanced and competent individuals. Vygotsky identified two levels of development: actual development, which is the upper limit of tasks a child can perform individually, and level of potential development, which is the upper limit of tasks a child can perform with the assistance of a more competent individual. According to Vygotsky, in order to get a true assessment of a child's actual and potential development, we should assess capabilities both when the child is performing the activity alone and with a more competent individual. For example, our young child exhibited that her actual development was that she knew the blocks belonged in the holes, but she couldn't quite determine how to actually put them in. Her level of potential development was being able to put the blocks in with the help of her father, an advanced individual.
5. Our next assumption is that challenging tasks promote maximum cognitive growth. Vygotsky described this as the zone of proximal development, or commonly referred to as ZPD. ZPD is the range of tasks that a child can perform with the help and guidance of others but cannot yet perform independently. ZPD will be discussed in more detail in another lesson.
6. The final assumption is that play allows children to stretch themselves cognitively. Play allows children to take on roles they would normally not be able to perform in real life. Let's return to our example, our same little girl who was playing with the blocks is now five years old. She's playing house with a friend. She is the mother and her friend is the child. Through make-believe play, she is

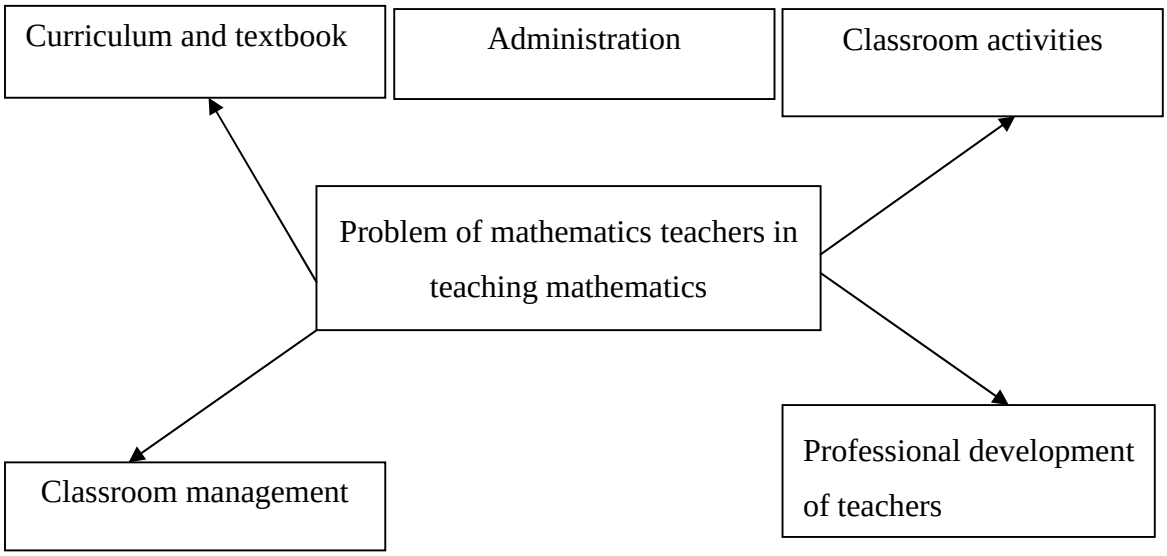
able to exhibit behaviors and be a mommy according to the rules of her society. For example, a mommy takes care of her child, prepares food, etc. That would normally be impossible for a five year old in real-life to do.

Conceptual Framework of the Study

The problem faced by mathematics teacher in teaching mathematics in Rukum district. This study mainly based upon the teaching mathematics in IX and X teachers. From the study of related literature above, the researcher made the framework for this study, so the following framework sketches in drawn.

Diagram-1

A Conceptual Framework of the Study



Although, mathematics is a subject of interest for many schools, it is not easy to teach and learn. We should struggle with various problems to overcome through the problems. Learning mathematics means getting ability to solve problem, various techniques appeared and disappeared to handle the problem at time to time but no one is complete. The major factors related to classroom management are physical environment of the classroom, class size, teacher student relationship and students may have come from different environment etc. The school administration had the major role of maintaining good learning environment by providing good physical resources; organizational discipline and solving the casual problems which can affect the learning process. The mathematic contents stands are number and algebra, measurement and geometry, and statistics and probability.

Chapter – III

METHODS AND PROCEDURE

This study is concerned with the study of problem faced by secondary level mathematics teacher in teaching mathematics. This chapter presents the procedure of the study which is carried out to achieve the objectives of the study and to get the answer of the research question. It explains the design of the study, sample and method of sampling, tools, and data collection procedure and data analysis.

Research Design of the Study

The design of the study was the descriptive (quantitative and qualitative) type. This research was based on qualitative and quantitative approaches. For data collection, the researcher was visited each of sampled school along with the questionnaire and interview schedule any help needed to the researcher from the school administration.

Population of the Study

For this study, the population of this study consist all mathematics teachers who teach mathematics in IX and X in Rukum district.

Sample of the Study

According to the record of District Education Office, There are 98 public secondary schools in Rukum district. Out of this, secondary schools in Rukum district; the researcher selected forty public schools as a sample from 98 public schools. For this study, randomly sampling the forty mathematics teachers from Rukum district were selected with one teacher from each school. Forty teachers were select randomly for interview from public school.

Instruments

Questionnaire was regarded as the main tool of this study which was developed by the researcher himself with the help of supervisor being related to conceptual understanding. The questionnaire for the teachers contained thirty eight statements related curriculum and text book, classroom management, administration, professional

development of teachers, etc. The reliability of the questionnaire was checked and approved by the supervisor.

Interview schedule was used for the qualitative information that consisted open-ended questions. Interview schedule was necessary since the keen objectives of the research could not found only by using questionnaire filled by teachers only. Actually interview schedule help to add more information which questionnaire could not cover. In this case researcher can take interview to get detail information based on conceptual understandings. For this, after collecting questionnaire the researcher would summarize the questionnaire and would find strongly faced peoples. Then, the researcher would use interview to talk very thoroughly about the problems by requesting sampled teachers. According to Young "the interview may be regarded as a systematic method by which a person enters more of less imaginatively into the inner life of a comparative stranger." (Khanal, 2060,).The interview schedule was developed by the researcher himself with the help of supervisor. Interview schedule was constructed in such a manner that could find the problems related to mathematics teachers in teaching mathematics at secondary level.

Reliability and Validity of Instrument

Before finalization the instrument the 25 closed interview question were piloted in ten grades IX and X mathematics teachers to check the appropriateness of items. After piloting 4 questions were modified, 3 were rejected and 5 were corrected and some other questions were developed in the interview period. Despite of several attempts, researcher was able to collect only questions. Finally, researcher should questionnaire to the supervisor for validity. Thus the questionnaire was prepared for final administration.

Data Collection Procedure

For the data collection at first, the researcher visited to the selected schools with the questionnaire and interview schedule. After explaining the purpose of visit the researcher, in his presence, requested administration and every teacher of each school which were selected for sample to fill the questionnaire honestly as instruction given. The researcher explained any confusion that arose in understanding the statements. Finally the researcher took interview to the sampled teachers.

Scoring Procedure

For the analysis of the items, weightage of 5,4,3,2 and 1 assigned to statement and state "strongly agree, agree, undecided, disagree, strongly disagree" respectively for the negative statements and the score of positive statement was conversely. i.e.,1 for "strongly agree" and 5 for "strongly disagree". Mean weightage was calculated, total score of five point Likert scale is 15, thus its average score is 3. If the calculated index is greater than 3, then it was concluded that the statements contain in strong favor to the problem. If the index measure is less than or equal to 3, then it is weak favor to the problems.

Data Analysis Procedure

The obtained data was analyzed and interpret with the help of following statistical techniques;

The mean weightage and percentage were used to locate the central position of the responses to the standard of the teachers as a whole in the rating scale. Each statement was studied in terms of whether the teachers' problems would be up to the index or not. If the calculated mean weightage is greater than three it is calculated that it is strongly factorable to the problem. The mean weightage is less than or equal to three then it is less factorable to the problems. Also the test of Chi-square was used for the proving the hypothesis. Whether there was a problem or not a problem in teaching mathematics?

Interview is another effective and popular technique of collecting data is well established, practicable and reliable method of data collection. In this study, the researcher used interview for the qualitative triangulation among the teacher's response towards their difficulties and to find the problems of mathematics teaching. Also analyze the problem with their minimizing process.

Chapter – IV

ANALYSIS AND INTERPRETATION OF DATA

This is a descriptive survey (qualitative + quantative) study related to the problem faced by secondary level mathematics teachers in teaching mathematics of Rukum district. This chapter describes the analysis and interpretation of data. The data were collected for the study from 40 secondary school teachers at Rukum district. The collected data were tabulated an analyzed according to the objectives of the study. The major tools used for this study were questionnaire and interview schedule. The obtained data were statistically analyzed and interpreted by using statistical tools: mean weightage, percentage and interview.

Curriculum and Textbook

This component of the questionnaire consisted of eight statements with five responses (from strongly agree to strongly disagree). The likert scaling technique was assigned to the responses which yielded a total score for each statement. Mean score and percentage were used on each statement. Mean score on each statement was calculated and it was compared to the score "3" to decide problem existed or not (table 4.1).

TableNo.4. 1
Problems Related to Curriculum and Textbook

S.N	Statements	Mean weightage	X^2	Remarks
1	Objectives of mathematics are not stated clearly.	3.6	10.25	Yes
2	Difficulty to complete whole course in time.	3.56	12.75	Yes
3	Curriculum does not care about learners need and interested.	4.2	32.75	Yes
4	Evaluation techniques of students are not suitable.	2.9	1.75	No
5	The curriculum has not been much helpful for teachers to select appropriate teaching methods.	3.89	16.25	Yes
6	The curriculum does not address perfectly the social needs of mathematics.	3.93	17.25	Yes
7	The school has not provided curriculum to the teachers which has created problem.	4.0	22.25	Yes
8	Methods and strategies in the curriculum are not accordance with objectives and content.	3.4	11.5	Yes
	Total	3.53		

From the table 4.1, the responses were given a statement 1, which was related to the objectives are not stated clearly. The responses obtained from informant were 35 % of total respondent strongly agree, 25% percent marked agree, 10% marked undefined, 22.5% percent marked disagree, 7.5% percent strongly disagree m in this statement which indicate that problem. The above statement mean weightage 3.6, show that there was a problem. So on the whole, there were problems on the curriculum and textbook related aspect. The second statement was focused on the problem of difficulty to complete whole course in time. The responses obtained from informant were 27.5 % of total respondent strongly agree, 37.5% percent marked agree, 15% marked undefined, 5% percent marked disagree, 15% percent strongly disagree, in this statement which indicate that problem. The above statement mean weightage 3.57, show that there was a problem. So on the whole, there were problems to complete whole curse in time.

The third statement, the responses obtained from informant were 42.2% of total respondent strongly agree, 40% percent marked agree, 15% marked undefined, 2.5% percent marked disagree, none of them strongly disagree, in this statement which indicate that problem. The above statement mean weightage 4.2, show that there was a problem. About the mathematical curriculum, majority of the teachers agreed that there curriculum does not care about learners need and interested. So on the whole, there were problem to curriculum and textbook. On the forth statement, the responses obtained from informant were 20% of total respondent strongly agree, 15% percent marked agree, 20% marked undefined, 27.5% percent marked disagree, 15.5% marked strongly disagree and above statement mean weightage 2.8, in this statement which indicate that no problem. About the evaluation techniques of students was not problem.

The statement 5, the responses obtained from informant were35% of total respondent strongly agree, 30% percent marked agree, 25% marked undefined, 7.5% percent marked disagree, 15.5% marked strongly disagree and above statement mean weightage 3.89, in this statement which indicate problem. About the curriculum has not been much helpful for teachers to select appropriate teaching methods was problem.

The statement 6, the responses obtained from informant were37.5% of total respondent strongly agree, 30% percent marked agree, 20% marked undefined, 12.5% percent marked disagree, none of them strongly disagree and above statement mean

weightage 3.93, in this statement which indicate problem. About the curriculum does not address perfectly the social needs of mathematics was problem. The statement 7, the responses obtained from informant were 40% of total respondent strongly agree, 35% percent marked agree, 15% marked undefined, 7.5% percent marked disagree, 2.5% strongly disagree and above statement mean weightage 4.0, in this statement which indicate problem. About the school has not provided curriculum to the teachers which has created problem. The statement 8, the responses obtained from informant were 35% of total respondent strongly agree, 20% percent marked agree, 20% marked undefined, 10% percent marked disagree, 15% strongly disagree and above statement mean weightage 3.4, in this statement which indicate problem. About the methods and strategies in the curriculum are not accordance with objects and content which has created problem.

By testing the hypothesis the chi-square tests was tested of significance level at 0.05. The tabulated chi-square value was 9.488 at degree of freedom 4. Thus the calculated chi-square value was in the above table and by comparing the tabulated and calculated value there was no problem in question 4. But the entire above related question shows that there were a problem in teaching mathematics and teacher were faced more other problems also. Except question 4 all other reject the null hypothesis and accept the alternate hypothesis. That is there was a problem in teaching mathematics.

The questionnaire distributed to the teacher contained eight statement related to curriculum and textbook. After summarizing the questionnaire the researcher came to knew that all the teacher were facing the problem to the above statements. Beside this, some problems 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 administered not to get detail information only but to get opinion of teachers of the problems. The opinion of the teachers on the above statement and other related problems were similar to statement hypothesized by the researcher. Teacher with regards to the problem about curriculum and textbook stated as;

> *"Mathematics textbook is built with many aspects such as algebra, arithmetic's, geometry, statistics and probability etc. For some content, which are not suitable for student's level. In some unit, some topics are easier but some topics are difficult. Similarly in each lesson were not given as a hint for*

learners and examples are also not sufficient. With this difficult and vast topic student feel problem due to the lack of practice also and mathematics skill which students get from lessons is not much useful in their daily life, so students do not keep interest towards learning mathematics. After teaching students ability does not satisfy the objectives of the course." (Teachers view)

In curriculum reveals that it is largely a monolithic system perpetuating a kind of education which has resulted in a set of practices adopted for development of curriculum, syllabus and textbooks that is guided by the patterns and requirements of the examination system, rather than by the needs determined by a mix of criteria based on the child's learning requirement, aims of education and the socio-economic and cultural contexts of learners.

The objectives of the curriculum are not clearly mentioned. There is more difficult to finish the course in time by the problem of course design. The evaluation system is only depending up on the yearly written examination and only depends up on the theory not in practical. There is not given a way to teach suitable method, so many teachers were confused in choice of method. Much public school of Nepal, there is a problem to provide the curriculum in time whose also make a problem to finish the course in time. Mathematics is a technical subject which can be teach different way but in curriculum there is no clear method and strategies is given.

After studying above views, content, teaching method, examples, period and use of mathematics are not balance each other. So, we find there were problems in mathematics text book. If we balance between content, objectives and time period, Clare method and materials and suitable example for the study were given, then the problem related to content is reduced.

Classroom Management

It is generally agreed that problems related to classroom management due to different background such as gender, age, cultural, family environment, size of the room, furniture of the room, size of the black board etc. This component of the questionnaire consisted in to twelve statements. Table No. 4.2, consists of mean score on each of statements on problems related to student's background and nature together with remark in the interpretation of the mean scores. A problem related to classroom management has been categorized from 9 to 20.

Table No. 4.2

Problem Related to Classroom management

S.N.	Statements	Mean Weightage	X^2	Remarks
9	The mathematics classroom is crowded.	3.44	10.13	Yes
10	The classroom is not well lighted and ventilated.	3.2	12.5	No
11	The classroom is neat and clean.	2.4	9.05	No
12	The Blackboard shines and inadequate.	3.16	13.25	Yes
13	The furniture's are not adequate.	2.28	7.75	No
14	There is lack of a separate room for mathematics instruction.	4.5	36	Yes
15	Teachers faced difficulties in classroom management due to age and an individual difference.	4.7	69.75	Yes
16	Difficulties in teaching because of social cultural and family background of students	4.72	76.25	Yes
17	Difficult to involve both male and female students in teaching and learning activities.	2.4	3.75	No
18	Difficulties in teaching because of various family environment of student.	3.47	16.25	Yes
19	Difficulties in teaching learning management due to individual differences.	4.07	15.75	Yes
20	Difficult due to poor economic condition of students.	2.93	2.75	No
	Total	3.44		

From the above table, it is concluded that the mathematics teachers in general, were of the opinion that classroom of secondary level are crowded. The statement 9, the responses obtained from informant were 35% of total respondent strongly agree, 20% percent marked agree, 20% marked undefined, 5% percent marked disagree, 20% strongly disagree and above statement mean weightage 3.44, in this statement which indicate problem. Most of the teachers agreed that they faced problems in their instructional activities because of crowded classroom. A few of teachers claimed that they didn't face the problems. As a whole, an average measure of the order of 3.44 in the rating scale of the response indicates that the crowded classroom is indeed a significant problem.

About the statement 10, the responses obtained from informant were 27.5% of total respondent strongly agree, 20% percent marked agree, 17.5% marked undefined, 17.5% percent marked disagree, 17.5% strongly disagree and above statement mean weightage 3.2, in this statement which indicate problem. In response of the statement 11, most of the teachers agreed that the classroom is neat and clean. A few of the teachers were of the opinion that the maintenance of classrooms was not satisfactory enough. The table show that, the responses obtained from informant were 7.5% of total respondent strongly agree, 20% percent marked agree, 15% marked undefined, 20% percent marked disagree, 37.5% strongly disagree and above statement mean weightage 2.4, in this statement which indicate the less problem.

Some of the public schools are very poor in their economic status. So, that, they use the board of cement and wood. In answer to the statement 12, the responses obtained from informant were 27.5% of total respondent strongly agree, 22.5% percent marked agree, 10% marked undefined, 20% percent marked disagree, 20% strongly disagree and above statement mean weightage 3.16, in this statement which indicate problem. One-half of the teachers agreed that the blackboards in the classroom shine and inadequate. About the statement 13, the most of the teachers agreed that the furniture is adequate. Only a few percent of the teachers were opinion that the furniture is not adequate. The mean weightage is the order of 2.28 in the rating scales of the teacher's response. From the above table, the responses obtained from informant were 10% of total respondent strongly agree, 17.5% percent marked agree, 7.5% marked undefined, 20% percent marked disagree, 45% strongly disagree. About the furniture has created the problem.

The statement 14 is about the existence of a separate mathematics class room. The responses obtained from informant were 60% of total respondent strongly agree, 30% percent marked agree, 10% marked undefined, none of them disagree and strongly disagree responses. Above statement mean weightage 4.5, in this statement which indicate problem. About the classroom management due to age and an individual difference in teaching learning activities which was created problem. It is found that all teachers disagreed. The mean weightage of 4.5 in the rating scale revealed that have of the schools included in the sample had a separate mathematics classroom.

The statement 15, the responses obtained from informant was 77.5% of total respondent strongly agree, 15% percent marked agree, 7.5% marked undefined, none of them disagree and strongly disagree responses. Above statement mean weightage 4.7, in this statement which indicate problem. About the classroom management due to age and an individual differences in teaching learning activities which was created problem.

The statement 16, the researcher obtained from informant were 80% of total respondent strongly agree, 12.5% percent marked agree, 7.5% marked undefined, none of them agree and stringy agree and above statement mean weightage 4.72, in this statement which indicate problem. About the social cultural and family background of the student which has created problem in teaching mathematics. The statement 17, the responses obtained from informant were 10% of total respondent strongly agree, 15% percent marked agree, 20% marked undefined, 12.5% percent marked disagree, 42.5% strongly disagree and above statement mean weightage 2.4, in this statement which no indicate problem. About involve of both male and female students in teaching and learning activates which has not created problem. The statement 18, the responses obtained from informant were 27.5% of total respondent strongly agree, 25% percent marked agree, 22.5% marked undefined, 20% percent marked disagree, 5% strongly disagree and above statement mean weightage as a whole 3.47, in this statement which indicate problem. About the various family environment of the students which has created problem.

The statement 19, the responses obtained from informant were 40% of total respondent strongly agree, 35% percent marked agree, 17.5% marked undefined, 7.5% percent marked disagree, none of them strongly disagree and above statement mean weightage 4.07, in this statement which indicate problem. About the teaching learning management due to individual differences which has created problem. The statement 20, the responses obtained from informant were 20% of total respondent strongly agree, 17.5% percent marked agree, 15% marked undefined, 30% percent marked disagree, 17.5% strongly disagree and above statement mean weightage 2.93, in this statement which not indicate problem. About the poor economic condition of students which has no created problem. The average mean weightage for the twelve statements was found 3.44 which indicated that on the whole, there was a problem for the teachers due to classroom management.

By testing the hypothesis the chi-square tests was tested of significance level at 0.05. The tabulated chi-square value was 9.488 at degree of freedom 4. Thus the calculated chi-square value was in the above table and by comparing the tabulated and calculated value there was no problem in question 11, 13, 17, 20. But the other entire above related question shows that there were a problem in teaching mathematics and teacher were faced more other problems also. Except question 11, 13, 17, 20 all other reject the null hypothesis and accept the alternate hypothesis. That is there was a problem in teaching mathematics.

The questionnaire distributed to the teacher contained twelve statements related to classroom management. Which is depends upon the student's diversity and physical condition of the classroom. After summarizing the questionnaire the researcher came to know that all the teacher were facing the problem to the above statements. Beside this, some problems 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 administered not to get detail information only but to get opinion of teachers of the problems. The opinion of the teachers on the above statement and other related problems were similar to statement hypothesized by the researcher. Teacher with regards to the problem about physical facilities of the classroom stated as;

> *"In classroom each student has their own different qualities, weaknesses, interest, physical condition, mental condition. But in the context of Nepal buildings of schools are ancient but population is increasing rapidly. Due to this problem in a single classroom huge number of students can be seen. Therefore, teachers are unable to care for all students whether poor or brightly one within limited time. But bitter truth is that this condition is not cared by stake holders."*
>
> *(Teachers view)*

> *"In school we can see congested classrooms filled by huge numbers of students. Beside this lack of sanitation, shortage of infrastructures: like having small blackboard, not having fans, benches and enough desks for students etc. are also problems in teaching and learning activity. In the case of small blackboard we have to erase previous steps to solve further steps of same question."*

(Teachers view)

"It is difficult to handle the class due to large no of students', more than fifty percentages of boys and girls talk each other while teaching; boy teases the girls from the back side which disturb the whole class. Such activities were also fund in the classroom and create unnecessary tension in the classroom."

(Teachers view)

Classroom is one of the factors to determine the effective teaching. In our contexts all the classroom is so crowded. It make difficult to manage and provide the individual learning. The classroom is physical well lighted or ventilated which make the classroom environment is fitness. The black board of the classroom is very small which make difficult to learn mathematics to the student. All students cannot see the board and teachers also fill difficult to teach in classroom. The size of the room is not so fit which make difficult to do the classroom activity.

Classroom management also depends on the student's diversity and their individual activity. Most of the classroom is gathered with different age, language, religion, cast, student's individual difference etc. The teachers view under the student's diversity as,

"It is difficult to teach the students having various individual differences in terms of capacity, religion, culture, language, family background, educational level, needs and interests within a single classroom. Students are different in their nature, intake capacity, common sense, problem solving scale and obviously are very in their need and interest. By using same kinds of materials and methods in teaching heterogeneous classroom, we can't teach effectively. For example we need to repeat same lesson many times to poor students while bright student may feel boring in class. Thus teaching in heterogeneous class room is difficult". (Teachers view)

"In the condition of developing country like Nepal, the condition of being shortage of various basic things,, individual differences of students in the classroom,. To fulfill the objectives of education, textbooks are made and have been using for decades. Being based on these textbooks teachers made lesson

plan. Within these lesson plans we cannot cover various needs, interests and capacity of the students. " (Teachers view)

The class room is gathering with different age and individual difference so teachers fill difficult to teach how to teach equally. Students are from different cultural and there is own language for each individual, so they cannot learn by own language, so it is difficult to understudied in course of constant. All student home environment is not equal it also make difficult to learn mathematics. Due to the lack of proper materials and learning books student cannot develop their understanding in mathematics. So all this factor make difficult in learning and also it is the faced problem of the teacher.

Classroom management is one of the most important sectors of students learning. Teacher faced problems towards this management such as student's diversity in language, cast, religion and age group of the students. Classroom diversity plays the role towards the teaching learning activity. Most of the teachers feel difficult to teach effectively. But maximum number of teacher cannot decided, how to teach and manage the problem. Students learning are depend upon the student's activity in a diversity group but it is difficult to manage such group and make difficult to understanding behavior of students each other. All this activity makes classroom management difficult, so by reducing such problem it make easy to teach and manage the room environment.

In sum, researcher concluded that lack of classroom management creates many problems in teaching learning process in mathematics such as small size of classroom, huge number of students and lack of proper space to demonstrate teaching materials. The main problem for most of the school is separate and crowded classroom with limited furniture and size of the room. The researcher has concluded that in mathematics teaching teachers were facing problems due to individual difference in pupil's need, interests, capacity and personality. In this situation it is problematic to teach by using same lesson plan, evaluating students using same tools, involving students in group work without knowing students need, interest and level.

For all such problem like students diversity, classroom size, size of the board, crowded class with limited furniture etc. are the main problems of classroom management. If we manage classroom size with number of students and make activity inside the room then our maximum problem will be reduce. If most of the teacher were

trained then reducing problem related to student's diversity and teaching learning activity going effectively.

Administration

Secondary school administration plays a vital role to construct necessary instructional materials, mathematics laboratory and training. But if it seems to be passive and irresponsible to the teachers, they may face problem on teaching learning process. Problems related to school administration have been categorized into seven categorizes from 21 to 27.

Table No. 4.3

Problems Related to Administration.

S.N.	Statements	Mean weightage	X^2	Remarks
21	Lack of mathematics laboratory.	3.94	10.25	Yes
22	Lack of training opportunities.	3.5	16.25	Yes
23	Lack of facilities and award for the good performance.	3.6	9.52	Yes
24	Unavailability of curriculum and teachers guide on time.	3.17	23.5	Yes
25	Lack of help from school administration.	2.78	2.25	No
26	Easily unavailability of necessary raw materials.	3.4	26	Yes
27	Lack of refreshment training to teach topics.	3.6	9.56	Yes
	Total	3.43		

About the statement 21, the responses researcher obtained from informant were 37.5% of total respondent strongly agree, 30% percent marked agree, 22.5% marked undefined, 10% percent marked disagree, none of them strongly disagree which has created the problem in teaching mathematics. About the statement 22, the responses obtained from informant were 27.5% of total respondent strongly agree, 25% percent marked agree, 22.5% marked undefined, 20% percent marked disagree, 5% strongly disagree which has created the problem.

About the statement 23, the researcher obtained from informant were 35% of total respondent strongly agree, 25% percent marked agree, 12.5% marked undefined, 20% percent marked disagree, 7.5% strongly disagree which has created the problem. About

the statement 24, the responses obtained from informant were 27.5% of total respondent strongly agree, 22.5% percent marked agree, 10% marked undefined, 22.5% percent marked disagree, 17.5% strongly disagree which has created the problem. About the statement 25, the responses obtained from informant were 15% of total respondent strongly agree, 20% percent marked agree, 15% marked undefined, 27.5% percent marked disagree, 22.5 % strongly disagree which has not created the problem.

About the statement 26, the responses obtained from informant were 35% of total respondent strongly agree, 17.5% percent marked agree, 17.5% marked undefined, 12.5% percent marked disagree, 17.5% strongly disagree which has created the problem. About the statement 27, the responses obtained from informant were 35% of total respondent strongly agree, 25% percent marked agree, 12.5% marked undefined, 20% percent marked disagree, 7.5% strongly disagree which has created the problem. From the table 4.4, data shows that mean weightage respondent of rating scale 3.94 have taken this statement as a problem. Most interesting finding during the study was that none of the school had mathematics laboratory. Most of the teachers were not getting training opportunities. The mean weightage of this statement was 3.4, indicating favorable on the problem. Similarly, they were not getting such facilities as they respond. Mean weightage, of this respondent was 3.6, indication as favorable on the problem. Teachers were also indication problem of unavailability of curriculum and teachers guide and well as necessary raw materials. The mean weightage, response in these two statements are 3.17 and 3.4 respectively.

There is a lack of the administration. The mean weightage of this respondent was 2.78, indication that there was no problem. Teachers need refreshment training time to time for difficult and rigor topics to foster a geed education. However, during the research it had been found that most of the teachers were not getting such type of training. The mean weightage response on this statement was 3.6, indication favorable on the problem. The average mean weightage response 3.43, signify the problem on this category. Table 4.4, summarizes the overall situation on problem related to school administration.

By testing the hypothesis the chi-square tests was tested of significance level at 0.05. The tabulated chi-square value was 9.488 at degree of freedom 4. Thus the

calculated chi-square value was in the above table and by comparing the tabulated and calculated value there was no problem in question 25. But the other entire above related question shows that there were a problem in teaching mathematics and teacher were faced more other problems also. Except question 25 all other reject the null hypothesis and accept the alternate hypothesis. That is there was a problem in teaching mathematics.

The questionnaire distributed to the teacher contained seven statements related to school administration. After summarizing the questionnaire the researcher came to know that all the teacher were facing the problem to the above statements. Beside this, some problems were strongly faced by all teachers. To find out detail information about those strongly faced problem the researcher carried in-dept. study using interview. Interview was administered not to get detail information only but to get opinion of teachers on the problems. The opinion of the teachers on the above statements and other related problems was similar to the statement hypothesized by the researcher. Teacher with regards to the problem about school administration stated as;

> "*Lack of teaching materials, library and other basic needs are not available in the school. To use sources from their locality as a material, teachers are not prepared mentally. If some teachers like to do so they can't prepare due to economic condition, time and ability. As a result without using teaching materials, we can't teach mathematics effectively in class and face trouble in teaching and learning mathematics."* *(Teachers view)*

By the teacher's view, the researcher has concluded that teachers are facing problems due to lack of involvement of teachers in curriculum planning, lack of physical infrastructure, lack of refreshment training for teachers, and unavailability of educational journals, dissertation, and resources related to mathematics. The main problem related to administration is lack of the mathematics laboratory, facility and award for the good performance of the teacher**.**

Administration is the most important factor to progress the school environment. So every school environment most be affected by administration. So many schools are without mathematics laboratory. Laboratory makes easy to learn mathematics to the students and students can learn mathematics by their one activity. Teacher in every school cannot get chance to take training. Without training all teacher cannot teach well

and they cannot satisfy the students in teaching activity. For teaching, teacher also need curriculum and teachers guide for completing teaching at a time and decide to complete the objectives, method of teaching and teaching materials. For concrete teaching in mathematics materials are also need, which provide the concept of mathematics easily.

Professional Development of teacher

Generally professional development is regarded as teacher development. Different views of different authors in defining professional development such as teachers as learner, teacher as a researcher, teacher as a problem solver and teacher as a reflective practitioner. From the field study it had been found that most of the teachers were facing on professional development.

Table 4.5

Problems Related to Professional Development of Teachers

S.N	Statements	Mean Weightage	X^2	Remarks
28	Lack of teacher's readiness.	2.6	9.2	No
29	Lack of information about the new method of teaching.	3.6	9.55	Yes
30	Lack of opportunity of higher study.	3.06	22	Yes
31	Confusion on method to be used due to different knowledge level of students in different chapter.	2.78	2.25	No
	Total	3.01		

About the statement 28, the responses obtained from informant were 20% of total respondent strongly agree, 15% percent marked agree, 10% marked undefined, 15% percent marked disagree, 40% strongly disagree which has not created the problem. On the statement 29, the responses obtained from informant were 35% of total respondent strongly agree, 25% percent marked agree, 12.5% marked undefined, 20% percent marked disagree, 7.5% strongly disagree which has created the problem. According to the statement 30, the responses obtained from informant were22.5% of total respondent strongly agree, 17.5% percent marked agree, 17.5% marked undefined, 27.5% percent marked disagree, 15% strongly disagree which has created the problem.

According to the statement 31, the responses obtained from informant were 15% of total respondent strongly agree, 20% percent marked agree, 15% marked undefined, 27.5% percent marked disagree, 22.5% strongly disagree which has not created the problem. In the table 4.5, mean weightage response of 28th statement is 2.6 which signify the less favor on the problem. Nepal is a developing country, so it is difficult to develop new method itself. But teachers are also far from the excess of new method of teaching. On the 29 the statements asked by researcher, mean weightage response was found to be 3.6 which signify the favorable problem.

Most of the Nepalese teachers are poor in their economic status. So, they could not get opportunities for higher education to develop knowledge on subject matter. Mean weightage response on 29th statement is 3.06 which signify the problem. But on the 30th statement the teachers were not agreed confusion on using method due to different knowledge level of the student in different chapter. Mean weightage of this statement is 2.78 indicating as less significant of the problem. That is on the whole, there was problem due to professional development of teachers.

By testing the hypothesis the chi-square tests was tested of significance level at 0.05. The tabulated chi-square value was 9.488 at degree of freedom 4. Thus the calculated chi-square value was in the above table and by comparing the tabulated and calculated value there was no problem in question 28, 31. But the other entire above related question shows that there were a problem in teaching mathematics and teacher were faced more other problems also. Except question 28, 31 all other reject the null hypothesis and accept the alternate hypothesis. That is there was a problem in teaching mathematics.

The questionnaire to the teacher contained four statements related to professional development of the teacher. After summarize the questionnaire the researcher came to know that all the teachers were facing the problem to the above statements. To find the difficulty of the teacher the researcher carried out in-depth interview. Interview was administered not to get detail information only but to get the opinion of the teachers on the problems. The opinion of the teachers on the above statements and other related problems was similar to the statement by the researcher. Teacher with regards to the problem about teaching pedagogy stated as;

"In the present situation some teacher were untrained but most of the teacher were trained, for the teachers readiness most of the teacher were prepare before class room teaching but some of the teacher were so busy so that they were not prepare for the teaching activity. The most of the teacher were aged so they did not want to know new technology and method and media. Some new teachers want to know new technology and they also want to develop their study. Most of the teacher do not confuse how to teach for the different level students?"

(Teachers view)

By the above view we find that most of the teacher were trained but they were have no interest in new method and media. Many teachers are not ready to teach in classroom without preparation class activity is also not effective. By the recent situation of the teacher, maximum number of the teacher was without knowledge of new method of teaching. Maximum number of the teacher were not get high level of study because they were spent much of the time in school and they were fill leggy.

By the research, the main problems related to professional development of teachers are lack of information about the new method and lack of opportunity for higher study. Professional development of the teacher is most important factor which increases the teacher capacity and it helps the teacher to teach in classroom. Teacher most informative about the new method of teaching which increase the teacher activity and classroom is also effective. More knowledgeable person is well trained and having higher knowledge with new method they can sear their knowledge with students easily. Teacher's capacity decides how to teach in classroom and how we provide good knowledge to the students. The low capable teacher cannot decide to identify the level of the student.

Classroom Activities

There are numbers of techniques which can be effectively used for the teaching of mathematics. Some of them are oral work, drill work, class work and homework, assignments, group work, review etc. Problems related to Classroom activity have been categorized into seven categorizes from 32 to 38, whose statements were in negative sense then above statements as (32-38).

Table No.4.6

Problem Related to Classroom Activity

S.N	Statements	Mean Weightage	X^2	Remarks
32	Problems to engage students on their classwork as well as homework.	3.72	19.25	Yes
33	Lack of extensive use of teaching materials.	3.5	36.25	Yes
34	Difficult to make talented students to help other	2.3	3.78	No
35	Lack of time to review of important chapter of topic.	4.0	22.25	Yes
36	There is problem to interaction between teacher and students.	3.56	9.59	Yes
37	Teamwork between students.	2.23	6.75	No
38	Student centered learning activities are not apply.	3.8	72.25	Yes
	Total	3.3		

About the statement 32, the responses obtained from informant were 37.5% of total respondent strongly agree, 30% percent marked agree, 10% undefined, 12.5% percent marked disagree, 10% strongly disagree which has created the problem. In the statement 33, the responses obtained from informant were 27.5% of total respondent strongly agree, 30% percent marked agree, 22.5% marked undefined, 20% percent marked disagree, 5% strongly disagree which has created the problem. From the statement 34, the responses obtained from informant were 10% of total respondent strongly agree, 15% percent marked agree, 20% marked undefined, 12.5% percent marked disagree, 42.5% strongly disagree which has created the problem. About the statement 35, the responses obtained from informant were 40% of total respondent strongly agree, 35% percent marked agree, 15% marked undefined, 7.5% percent marked disagree, 2.5% strongly disagree which has created the problem. In the statement 36, the responses obtained from informant were 35% of total respondent strongly agree, 25% percent marked agree, 12.5% marked undefined, 20% percent marked disagree, 7.5% strongly disagree which has created the problem. On the statement 38, the responses obtained from informant were 37.5% of total respondent strongly agree, 30% percent marked agree, 15% marked undefined, 10% percent marked disagree, 7.5% strongly disagree which has created the problem.

By testing the hypothesis the chi-square tests was tested of significance level at 0.05. The tabulated chi-square value was 9.488 at degree of freedom 4. Thus the calculated chi-square value was in the above table and by comparing the tabulated and calculated value there was no problem in question 34, 37. But the other entire above related question shows that there were a problem in teaching mathematics and teacher were faced more other problems also. Except question 34, 37 all other reject the null hypothesis and accept the alternate hypothesis. That is there was a problem in teaching mathematics.

During this study it had been found that there were favorable problems on this category. However, there were not significant uses of teaching materials, poor approach to make talent students help others and group discussion. The mean weightage values 3.72, 3.5, 2.3, 4.0, 3.56, 2.23 and 3.8, respectively shows problem on this statement. The mean weightage response was 2.3 and 2.23 which indicates the less favorable attitude of teachers towards the problem. That is in the whole, there was problem due to classroom activity of teachers.

> "*Many teachers were not responsible to their teaching and they do not activate the children. The materials which were useful to their class activity also use easily because they tell that the course was not finished at a time after using materials for all the topics. Most of the teacher were unable to review of the chapters because the course content is higher than period. Also teachers were unable to make group discussion and interaction in class by their capacity to do both activities at the period."* *(Teachers view)*

As a whole in a class activity, there is a problem for classwork, teaching materials, help each other, review and interaction in the class room. It shows that the teacher has no good knowledge about teaching activity. In this research, researcher fined that most of the classroom activity is problematic by the diversity classroom. Most of the classroom activities without teaching materials which also make difficult to learn mathematics to the student. Maximum number of student has low level of mathematics knowledge. They cannot sear the mathematics knowledge. Also the diversity classroom make difficult to manage and share the knowledge between students.

The course of activity is so higher than that time of period, so teacher cannot revise the important chapter. Most of the classroom is not well maintained as the students activity, if one of the classroom is make discussion that affect the other classroom. So school's physical characteristics also decide how well teaching environment create. Most of the school environment is not well so it make difficult to make discussion and interaction in crowded classroom. Diversity of the student also make difficult to do the classroom activity.

Main problem in classroom activity is to teach student centered learning activity, review of the important topics and classwork as well as homework. If teacher can manage to teach student centered activity then student upgrade their knowledge easily. Classroom activity of the teacher is very important activity. In which student can learn more informative way. So teacher most includes the entire student in classroom activity. Teacher most use the teaching materials for giving the concept about any topics which helps to provides concrete concept about the topics. If the course of the activities is maintained with time period teacher can finish the course in time and also provide farther knowledge for difficult topics.

Analyzing to Minimize the Problems

From the interview and questionnaire, most of the teacher told that mathematics is very important subject for human beings. Mathematics has close interred relationships with human life. So curriculum should address the individual's interest, need, social needs as well as national and international goals. Content must be up to data and evaluation system should be more precise and scientific. Teacher most be participate to develop the curriculum and school need to provide a separate mathematics classroom where equipment such as black board and materials should store in, also school need to make mathematics laboratory. For teaching activity teacher should accept the student's diversity and treat them by individually if possible. Much greater attention need to be given to the matter of individual differences.

School need to provide physical facility, educational facility and good environment facility as well as good administration. Teacher should never give the punishment to the students and keep positive attitude towards students. Time to time modern and refreshment training, orientation and supervision should be provided to teacher. Teacher should try find out student's interest and need according their psychology and then apply to suitable pedagogy for teaching mathematics. Mathematics related to many social subjects and technology. Research show that student cannot learn mathematics effectively by passively listening disengaged from the learning process. Many of the people could not understand its

importance. It is necessary to popularization of the mathematics means sharing mathematics beauty and its power with a wider public, it is trying to change the mathematical attitudes of public, trying to get away from the unpleasant feeling about mathematics, encouraged the people to be more active mathematically. In this study, researcher found that there were problem on teaching learning materials also.

By the theory of Vyogtsky's, student learns mathematics by their own capacity or by the environment where the teacher's activity and school environment is the environment factors. In student's learning teacher faced the different problem which depend on the different factors such as classroom activity, student's diversity, class room management, text book etc. which directly related to students learning. If such environment factors are well maintained than students learning is going increasly. By the theory student's learn mathematics by more knowledgeable others which shows that the teacher and their activity also affect the students learning. Teacher who were trained, high academic qualification, knowledge about teaching materials and method's they were teach effectively than others. In theory ZPD is the range of tasks that a child can perform with the help and guidance of others but cannot yet perform independently. This shows that the teachers and other persons help is more important in students learning process.

From the above findings suggest that, the ideal role of teacher is that of providing scaffolding to assist students on tasks within their zone of proximal development. During the teaching teacher should built interest and engage the learner. By this activity student is actively participating and the given task should be simplified by breaking it into smaller subtask. Teacher need to keep the learner focused, while concentrating on the most important ideas of the assignment.

By the above discussion teacher should actively participate and make discipline, participation, interest, effective learning martials, individual awareness are the most important factors for the students learning process. Teacher's problems not only depend up on the student activity it is also depending up on the school environment, teacher's activity, home environment. If all of these factors were positively occurrence in the students learning it may highly achievement in learning. So teacher's problem in teaching is also the problem in school administration, student's diversity and also the problem of course of study.

Chapter – V

SUMMARY, FINDING, CONCLUSION AND RECOMMENDATION

Summary

The study is to identify the levels and extents of problems faced by secondary level mathematics teachers in teaching mathematics and suggest measure for the solution of these problems.

The descriptive survey method is used to conduct the study. The researcher herself developed the questionnaire consisting of thirty six items related to various problems faced by the secondary level mathematics teachers. The questionnaire is finalized with the consolation of mathematics experts and under the guidance of supervisor. The questionnaire and interview schedule were main tools of the study. The responses are collected from different sampled teacher using purposive sampling method. The collected data are quantified based on five point likert scale. Questionnaire area also included in each category of problem and descriptive analysis of collected responses is carried out, statistical indicator such as mean weightage is used for the analysis of the problem.

Findings

The problems in the classroom and schools in general, were considered one of the most serious factors facing the component of the educational process, such as parents, teachers, educational administrators, and supervisors, failure in the school, poor study accomplishment, lack of educational facilities such as equipment and technology, the physical environment, unavailable of curriculum and textbooks with students hand in time allocated , the model of curriculum and textbook against the student's needs and interest, teachers professional development and the violence against teachers and students. All these issues could threaten the whole educational process. The results of this study show that, from the descriptive survey and statistical analysis of the collected data it was found that, teachers has been facing numerous problems in teaching mathematics of secondary level. On the basis of analysis and interpretation of data, the findings of this study were presented below:

- Most of the teachers complain that the course of secondary level could not be completed within the time allocated.
- The curriculum has not been much helpful for teachers to select appropriate teaching methods. The curriculum does not address the social needs and students interest. Also methods and strategies in the curriculum are not accordance with objectives and content.
- Difficulties in teaching because of social, cultural background of students. Unavailability of curriculum and teachers guide on time.
- Most of the school's blackboard dither shines of inadequate especially in public school and classrooms were usually crowded and the furniture was not adequate.
- None of the schools has separate classroom and mathematics laboratory for doing mathematical activities. Also student cannot make group discussion and interaction in class.
- There was the lack of the refreshment training to teach difficult topic and were lack of facilities and award for the good performance.
- The test of chi-square test there was a problem faced by mathematics teachers in teaching at secondary level.

Conclusion

The researcher finds that, there are myriad problems that cause teaching and learning process is not satisfactory level at Rukum district. Among the five different categories described above it is found that there are numerous problems faced by teachers due to the problem related to curriculum and textbook, heterogeneous classroom, classroom management, help of administration, professional development of teachers and classroom activities. Researcher has found that public secondary school mathematics teachers have been facing more similar problems. Most of the problems has arisen sequence of presentation. Objectives of the curriculum are not stated clearly, Lack of time, use of method, age and individual difference, social, culture and family background of students, crowded classroom, lack of separate classroom for using mathematical activities, inadequacies of textbook and teachers guide, inadequate teacher training, teacher training to each difficult rigor topic, lack of award and facilities for teachers, are

the burning problems of the teachers in teaching mathematics at secondary level. Teachers did not have access to modern teaching technique methods and materials. Most of the secondary schools haven't mathematical laboratory, difficult to manage the crowded and heterogeneous classroom, curriculum did not perfectly address to the social needs and students interest. Thus, it is a great problem for teachers in teaching learning process. Most of the great problems faced by mathematics teacher were found as follows;

Recommendations for the Educational Implication

In the light of the results of this study the researcher recommends the following

- The curriculum and textbook should not be posed as to make burden to students and teacher.
- To develop and change on students' background the careful and suitable teaching learning should made on previous.
- School administration should keep good relation with teacher and they should create the good environment for teaching.
- In teaching, school should provide enough instructional materials required to teach in secondary level.
- In evaluation, the summative evaluation should not be there devices of evaluation.
- Retracement training, workshop, seminar and different orientation programmers should provide to the teacher in such a way to remove the teacher's confusion and problems.
- Teacher should be responsible for good results of the students in teaching activities.

Recommendations for the Further Study

The researcher studies about the problems of mathematics teacher and causes to these problems on the basis of his finding and his data collection and observation the other researches can be done on the flowing problems:

- How the problems of mathematics teacher can influence on student learning.
- How to establish the interrelationship between school staff.
- How to create positive attitudes towards the mathematics of parents and students.

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APPENDIX (A)

Questionnaire for Teachers

Respected teacher,

I am a master degree student of Mathematics Education, Central Department of Education, Kirtipur, Kathmatdu. I am writing a thesis entitled on "fulfillment of master degree in Education. Teaching learning activities couldn't be effective without identifying Problem Faced by Mathematics Teachers in Teaching Mathematics at Secondary level " for partial the actual problems of teachers in teaching. So, to complete this thesis, I have prepared some questionnaires for you. Researcher is very much thankful for your valuable help and would like to express gratitude to you and your intuition.

Researcher

Rati Bhan Jaisi

Department of Mathematics Education

Introduction of teacher:

Name of the teacher: ……Sex: Male ( ) Female ( )

Name of school: …….

Located place: …….

E-mail address of respondent: …….

Training: ……

Teaching experience: ……..year

Please (√) to response for the problems you faced which are given below.

S.A=Strongly Agree, A= Agree. U= Undecided, D=Disagree, S.D=Strongly Disagree

Questionnaires for Teachers

S.N.	Statements	S.A.	A.	U.	D.	S.D.
1	Objectives of mathematics are not stated clearly.					
2	Difficulty to complete whole course in time.					
3	Curriculum does not care about learners need and interested.					
4	Evaluation techniques of students are not suitable.					
5	The curriculum has not been much helpful for teachers to select appropriate teaching methods.					
6	Teachers faced difficulties in classroom management due to age and an individual difference.					
7	Difficulties in teaching because of social cultural and family background of students.					
8	Difficult to involve both male and female students in teaching and learning activities.					
9	The mathematics classroom is crowded.					
10	The classroom is not well lighted and ventilated.					
11	The classroom is not neat and clean.					
12	The Blackboard shines and inadequate					
13	The furniture's are not adequate.					
14	There is lack of a separate room for mathematics instruction.					
15	Lack of mathematics laboratory.					
16	Lack of training opportunities.					
17	Lack of facilities and award for the good performance.					
18	Unavailability of curriculum and teachers guide on time.					
19	Lack of help from school administration.					
20	Easily unavailability of necessary raw materials.					
21	Lack of refreshment training to teach topics.					
22	Lack of teacher's readiness.					

23	Lack of information about the new method of teaching.					
24	Lack of opportunity of higher study.					
25	Confusion on method to be used due to different knowledge level of students in different chapter.					
26	Difficulties in teaching because of various family environment of student.					
27	Difficulties in teaching learning management due to individual differences.					
28	Difficult due to poor economic condition of students.					
29	Difficulties in teaching because of social cultural and family background of students.					
30	Difficult to involve both male and female students in teaching and learning activities.					
31	Teachers faced difficulties in classroom management due to age and individual differences.					
32	Problems to engage students on their classwork as well as homework.					
33	Lack of extensive use of teaching materials.					
34	Difficult to make talented students to help other					
35	Lack of time to review of important chapter of topic.					
36	There is problem to interaction between teacher and students.					
37	Teamwork between students.					
38	Student centered learning activities are not successfully apply.					

Appendix (B)

Interview Guidelines for Mathematics Teachers

School name and Location: ……

Types of school: Public [ ] Private [ ]

Name of respondent: ……

Gender: ……..

Qualification: ……..

Teaching Subject: …….

Teaching experience: …….years

Focus point of Interview:

-Lesson plan, teaching strategies, materials in teaching mathematics

-Encouragement and motivation in mathematics.

-Problems in heterogeneous classroom

-Classwork and homework.

-Teacher and students attitudes, belief and interest teaching and learning mathematics.

-Teaching learning environment of classroom.

-Help of school administration.

-A curriculum and textbook.

-Other special techniques, activities of teaching while teaching mathematics.

-Relation between teacher staff.

-Attitude towards the mathematics of parents and students.

-Coordination of head teacher.

-Opportunity of teacher's training.

-Conceptual teaching process.

Interview Schedule

Problem Related to Curriculum and Textbook

1. What curricular changes do you hope to see over the next few years?
2. How would you integrate language arts across the curriculum?
3. How would you handle varied reading abilities in the content areas?

Problem Related to Classroom Management

4. What experience have you had with students from culturally diverse background?
5. What opportunities have you had to bring multicultural education into your Classroom? How would you create and promote a safe atmosphere in your classroom?
6. What is your classroom management style? What are your goals?
7. Share three interesting classroom management techniques used in your classroom.

Problem Related to Administration

8. What should a principal expect from teachers?
9. What kind of principal would you like to work for?
10. How do you keep parents informed about the daily/weekly progress of their son/daughter?

Problem Related to Professional Development of the teachers

11. How would you include cooperative learning in your classroom?
12. What techniques do you use to keep students actively involved during a lesson?
13. Describe different student learning styles and how you adjust lessons to benefit those differing styles.
14. What do you include in your daily lesson plans?
15. Describe your use of paraprofessional aides in your classroom.
16. Are all the students actively involved when you are taking a lesson?

Problem Related to Classroom activities

17. How do you deal with the unmotivated student?
18. What would you do if 50% of your class did poorly on a test?
19. What kinds of materials have you used to assess student strengths and/or weaknesses?
20. What does “teamwork” mean to you? Give an example.
21. How can you get students to be excited about learning?
22. How do you develop self-esteem in your students?
23. How do you maintain balance between assertiveness and friendliness with your students?
24. Do you give enough attention to all the students in class or do you prefer involving only selected students to be involved with the class activities.
25. How would you cheat and promote a safe atmosphere in your classroom?

Appendix (C)

Distribution of Teacher Responses on the Questionnaire

No. of statement	Response										Mean weightage	Remarks
	S.A	%	A	%	U	%	D	%	S.D	%		
1	14	35	10	25	4	10	9	22.5	3	7.5	3.6	Yes
2	11	27.5	15	37.5	6	15	2	5	6	15	3.57	Yes
3	17	42.4	16	40	6	15	1	2.5	0	0	4.2	Yes
4	8	20	6	15	8	20	11	27.5	7	15.5	2.9	No.
5	14	35	12	30	10	25	3	7.5	1	2.5	3.88	No.
6	15	37.5	12	30	8	20	5	12.5	0	0	3.93	Yes
7	16	40	14	35	6	15	3	7.5	1	2.5	4.0	Yes
8	14	35	8	20	8	20	4	10	6	15	3.4	Yes
9	31	77.5	6	15	3	7.5	0	0	0	0	4.7	Yes
10	32	80	5	12.5	3	7.5	0	0	0	0	4.72	Yes
11	4	10	6	15	8	20	5	12.5	17	42.5	2.4	No
12	11	27.5	10	25	9	22.5	8	20	2	5	3.47	Yes
13	16	40	14	35	7	17.5	3	7.5	0	0	4.07	Yes
14	8	20	7	17.5	6	15	12	30	7	17.5	2.93	Yes
15	14	35	8	20	8	20	2	5	8	20	3.44	Yes
16	11	27.5	8	20	7	17.5	7	17.5	7	17.5	3.2	Yes
17	3	7.5	8	20	6	15	8	20	15	37.5	2.9	No
18	11	27.5	9	22.5	4	10	8	20	8	20	3.16	Yes
19	4	10	7	17.5	3	7.5	8	20	18	45	2.28	No
20	24	60	12	30	4	10	0	0	0	0	4.5	Yes
21	15	37.5	12	30	9	22.5	4	10	0	0	3.94	Yes
22	11	27.5	10	25	9	22.5	8	20	2	5	3.5	Yes
23	14	35	10	25	5	12.5	8	20	3	7.5	3.6	Yes
24	11	27.5	9	22.5	4	10	9	22.5	7	17.5	3.78	Yes
25	6	15	8	20	6	15	11	27.5	9	22.5	2.78	No
26	14	35	7	17.5	7	17.5	5	12.5	7	17.5	3.4	Yes
27	14	35	10	25	5	12.5	8	20	3	7.5	3.6	Yes
28	8	20	6	15	4	10	6	15	16	40	2.6	No
29	14	35	10	25	5	12.5	8	20	3	7.5	3.6	Yes
30	9	22.5	7	17.5	7	17.5	11	27.5	6	15	3.06	Yes
31	6	15	8	20	6	15	11	27.5	9	22.5	2.78	No
32	15	37.5	12	30	4	10	5	12.5	4	10	3.72	Yes
33	11	27.5	10	25	9	22.5	8	20	2	5	3.5	Yes
34	4	10	6	15	8	20	5	12.5	17	42.5	2.3	No
35	16	40	14	25	6	15	3	3.5	1	2.5	4.0	Yes
36	14	25	10	25	5	12.5	8	20	3	5.5	3.56	Yes
37	4	10	5	12.5	5	12.5	8	20	18	45	2.23	No
38	15	37.5	12	30	6	15	4	10	3	7.5	3.8	Yes

Where, U=Undecided, S.A=Strongly Agree, A=Agree, D=Disagree,

S.D=Strongly Disagree