

Chapter I

INTRODUCTION

Background of the Study

Mathematics has been developed through the human endeavors in the different eras and has come to this height of development and will still in the process of development forever. Today, mathematics is used in very activities of humankind. Mathematics is so much significant to human life that no one can away from its use. Mathematics is one of the main subjects, taught all over the world in school education that is considered as essential for all citizens and the usefulness of mathematics it perceived in different. Form the contribution of mathematics for the development of other disciplines, mathematics is taken as the science of all sciences and art of all arts. It also regarded as queen of all sciences. Realizing the importance and need of mathematics for everywhere, education of young generation, teaching of mathematics is done in every school in the sense that everybody has to do something with mathematics in their daily life.

Learning is one of the most important themes in mathematics. According to the Skinner "learning is a process of progressive behavior adaption". Similarly Words defines "learning is the process of acquiring new knowledge and new response". In fact, learning mathematics is essential for changing the human behavior in mathematical field, so in order to change human behavior, it is essential to find the main challenges and problems emerged in teaching learning mathematics. Without good and appropriate environment of classroom, all endeavors of teaching may be failure. Therefore, the researcher has tried to identify the problems in learning mathematics in classroom management.

Generally, the term management refers the controlling and making decision in a business or similar organization or process of dealing with or controlling

people or things. Therefore, management refers to the procedure, strategies and instructional techniques that teacher use to manage student behavior and learning activities. Effective classroom management creates an environment that is conducive to teaching and learning.

According to Stoner (1995), "Management is the process of planning, organizing, leading and the controlling the work of organizational members and of using all available organizational resources to reach the organizational goals".

According to Taylor (1911), "Management knows exactly what you want people to do and them seeing that they do it in the best and cheapest way different meaning and scope of management".

From above concept and definition of management given by different writers, we can conclude the management is the process of getting things done through others. There are different types of management like Educational management, industrial management, financial management, physical management, and personal management.

Drucker (1999), states that the number of school has been increasing day by day in each country. Then management becomes a great issue. School management has different aspect; they are physical, disciplinary, management and personal management. When, these aspects are not properly managed, the schools are called under managed school.

A well classroom management is very important to effective teaching learning process. A proper classroom management makes easy to develop personality of students and also to achieve the national goals of education. Teaching learning process takes place inside classroom and it is the place of acquiring knowledge for students. So the environment of classroom must be inviting, exciting and peaceful to facilitate the teaching-learning process. Progressive education is related with well classroom management and which concerned with providing

every pupil with the facilities that encourage learning and opens the avenue for it. The school is looked upon as the agency of society to provide these opportunities. A well managed mathematics classroom also makes the students to appreciate the value of time upon which his\her future success depends. Thus, effective teaching and learning is possible only in a well managed mathematics classroom.

According to Agrawal (2005) defines "Classroom management is the way of organizing the resources, pupils and helpers in the classroom so that teaching and learning can proceed in an efficient and safe manner".

Classroom management means how the teacher works, how the class works, how the teacher and students work together, and how teaching and learning happen. For students, classroom management means having some control over how the class operates and understanding clearly the way the teacher and students are to interact with each other. For both teachers and students, classroom management is not a condition but a process.

Mathematics classroom management refers to the operation and control of classroom activities related with teaching and learning mathematics. It is relatively confined to the more mechanical aspects of teaching learning activities. Most of the discussion of classroom management assumes that its main purpose is to save time and energy. Some of the things a teacher should consider in planning classroom management are regulation on seating and attendance, the handling of instructional material, equipment and the control of activities during the class period.

Good classroom management implies not only that the teacher has elicited the co-operation of the students in minimizing misconducts and can intervene effectively when misconduct occurs, but also that worthwhile academic activities are occurring more or less continuously and that the classroom

management system as a whole is designed to maximize student engagement in those activities, not merely to minimize misconduct.

In fact, classroom management is an environment of classroom which includes preparation of plans and materials, structuring of activities into time blocks, direct teaching of skills and subject matter, pupil involvement and motivation and adequate control of pupil behavior, plans for transition period as: changing from one activity to another or from one place to another.

In Nepalese context, no national research about problems of learning mathematics in classroom environment has been undertaken in the secondary level students. It is already felt that, it is necessary to study the problems in learning mathematics related to classroom management and classroom environment to learn and teach mathematics effectively and practically. So in this study the researcher has tried to find the problems in learning mathematics in secondary level students related to the classroom environment.

The class room management plays a crucial role in mathematics learning activities. Good class room environment is essential to have a good teaching learning activity otherwise the goal is not fulfilled. The researcher has taken related factors on class room management which have direct influences over learning mathematics. These factors include: physical environment of classroom, methods, materials, roles of teacher, roles of student, teacher-student interaction, student-student interaction and assignment technique in classroom. Physical environment is an important factor of classroom management which has a big influence on learning mathematics. Basically, physical environment of classroom comprises of factors like classroom size, availability of proper desk and bench, temperature of the classroom, lighting facility, quality of white board etc. If proper management is not taken over these aspects of classroom, there appears negative effect over the learning process. Teacher's role is another major factor of classroom management. Teacher should act as a facilitator, as a mentor, as a model providing equitable

environment in the classroom. Moreover, role of students is another important factor. Students should actively participate in the classroom discussion and learning process rather than staying idle. Responsibility and discipline are the fundamental qualities that each student should possess. Teacher-student and student-student interactions are other important factors that can have impact over teaching learning process. Through classroom interaction, students get to know the things that they were unaware of. At last, assignment technique in classroom is considered which also have influences over learning process. Therefore, good class room management helps to maintain good learning of students.

Chitwan district is developing district of Nepal. There are not sufficient infrastructures of development. From the record of S.L.C. examination, the academic standard or level of secondary schools of the district is average result in comparison of the district of other developed district. According to the history of S.L.C. result, there is average result in S.L.C. According to record of S.L.C. examination of 2069, around 45 percent students have passed in S.L.C. examination. Moreover, most of the students have failed in mathematics, which is the main and great challenge of secondary schools of Chitwan district.

It is necessary to identify the causes of the poor result in mathematics. These problems or causes may concern with home environment, classroom environments, psychological factor, geographical factors and so on. Thus to identify these problems, the researcher will done this study. For this study he will select a public school. For this, researcher has studied about classroom environment of the class ten of the school.

Statement of the Problem

The study was concerned on the problems of classroom management in learning mathematics at secondary level students of Chitwan district. The study was seek answers to the following research question.

-) What are the problems of classroom management in the classroom learning?

Significance of the Study

It is scientific and technological age. It is the cause of development. It is clear that no countries can survive without development. But, each aspect of development is concerned with mathematics. In the world, all infrastructures of development are existed by mathematics. Therefore in each field of development, mathematics is associated. Thus mathematics is the backbone of all sciences and technologies. So that any scientific invention and technology is not possible without mathematics. It is essential for daily life as well as for the higher studying the field of science and technology. Therefore mathematics is one of the most important tools for development.

The study was concerned with the problems in learning mathematics in secondary level students relating to the classroom environment. Without identifying the problems in learning mathematics in classroom management or classroom environment, the teaching process may not be effective, so the mathematical knowledge may not be transferred to the students easily. So it couldn't help to every field of development. Mainly the research based for the further study and research related to the topic.

The main significances of the study are:

-) To find out the problems of classroom management in learning mathematics.
-) To make aware to the teacher for this problem.
-) To provide new technique to the teacher in classroom for motivating the students.
-) To facilitate those students who are facing the problems.

The study played the vital role to develop the existence of mathematics in our local society.

Objective of the Study

The main objectives of the study were:

-) To identify the problems of classroom management in learning mathematics.
-) To analyze the problems related to classroom management.

Delimitations of the Study

Each study has some limitations, so this study also has following limitations.

-) This study was limited in Chitwan district.
-) The study was based on only secondary level school.
-) The study was based on the mathematics class of grade ten.

Definition of Related Terms

Different words give different meanings according to the content in which they are used. Hence, the investigator has felt it is necessary to define or explain the following terms, which have been frequently used in this research work.

Problem

The term "problem" has restricted only those challenges created in mathematics classroom, which was related to physical environment, roles of teachers and students, assignment technique and interaction in classroom.

Secondary Level

Grade IX and X in the school system of Nepal are secondary level.

Teachers

The teachers who teach mathematics at the secondary level in Chitwan district were considering as teachers in this study.

Students

The students who study mathematics at the secondary level in Chitwan district were considering as students in this study.

Public Schools

Public schools are there schools, which receive regular logistic and financial support from the government.

Teacher's Role

Teacher should act as a facilitator, mentor and model for students providing equitable environment in the classroom.

Roles of Student

Active participation in the classroom discussion with discipline and responsibility is essential for good learning.

Classroom Management

In this study, classroom management defined as. "Physical environment of classroom, method, materials roles of teachers and students, interaction in classroom and assignment technique in classroom by which teaching learning process.

Chapter II

REVIEW OF RELATED LITERATURE

Introduction

Research in any field of knowledge requires an adequate familiarity with the works which have already been done in related areas. A researcher must have deep knowledge of already established theories and researchers which are closely related to the problem chosen by the researcher. Review of related literature provides the knowledge of what has been established, known or studied and what has been attempted yet. It helps and guides the researcher to meet the method of the study.

The researcher has attempted to find out the literature related to problems in learning mathematics in secondary level students in the classroom environment. For this study, the researcher had studied a number of books, research reports, journals, articles etc. The researcher had reviewed some related literature as follows:

Empirical Literature

Pathak (1986) did his research on "the problems faced by the teacher in Kathmandu district in the implementation of mathematics curriculum for lower secondary school". He took sixty-five teachers as the sample. He administered a set of questionnaire to the lower secondary mathematics teachers, who had faced problems regarding the mathematics curriculum, teaching method and evaluation techniques. He concluded that most of the teachers of Kathmandu district have been facing problems in the selection and use of instructional materials but they are facing problems in selecting proper evaluation devices.

After studying overall literature, the researcher found that there was no exact research on the "Problems in Learning Mathematics in Classroom Environment". Most of the study and research were on the problems on existing curriculum of math, problems faced by teacher and students in teaching learning mathematics. But no study was there on the problems in learning mathematics in classroom environment.

Bennett (2001), did a research on topic 'The relation between classroom climate and student achievement'. The purpose of this study was to determine the relationship between sixth grade students' academic achievement levels in math and their perceptions of school climate. Student characteristics of socioeconomic status and gender were used to identify groups for the purpose of data analysis. Data was gathered using the five independent variables of the My Class Inventory (satisfaction, friction, competitiveness, difficulty, and cohesiveness) and the dependent variable of the Stanford Achievement Total Math scores. The results of the data collection were tested using a Pearson product-moment analysis and a backward multiple regression analysis. A univariate analysis of variance was also used to compare the five independent variables of the My Class Inventory as well as to compare socioeconomic status and gender with the Stanford Achievement Total Math scores. The schools selected for this study were from a city in Texas with a population of approximately 100,000. The sample consisted of 262 sixth grade mathematics students. The findings of this study are as follows: (a) The Pearson product-moment correlation analysis revealed little, if any, correlation for any of the five subscale predictor variables; (b) the multiple regression analysis revealed that all five classroom climate indicators combined together could explain only 10.5% of the variance in Mathematics achievement; (c) the univariate analysis of variance revealed that there is a significant relationship between the climate factors of friction and difficulty when compared to mathematics achievement; and (d) the univariate analysis of variance also revealed that mathematics achievement scores vary significantly as a function of economic category membership, but there appears to be no relationship to gender.

Subedi (2005), He did a research "Mathematics learning management in an effective school: A case proactive in Nepalese school". The main objective of this study was to describe the learning environment for mathematics learning, to analyze the teacher and students works in the classroom, to identify the instructional strategies promoted for the mathematics learning and to investigate the type of additional support to low performers on mathematics learning in an effective school. He had selected 10 effected school of Kathmandu district. He has utilized the interview schedule, observation form and school document related to the study in this research. Subedi study concluded that the school environment need to be more simulated for mathematics learning with adequate building and compound scrounged by locals

having sufficient classroom as well as sufficient desk and benches for the student. School has provided more qualified and experienced teachers for mathematics teacher. There is a good tradition of making the parents aware about the mathematics examination results and parents gets student progress in mathematics. This overall concerns and management is the most supported atmosphere for promoting mathematics learning in the school.

Thapa (2005) had a research on a topic "classroom management is primary level of Kathmandu metropolitan". After complete this studies, he found that the management of classroom didn't have appropriate arrangement of desk, blackboard, and classroom space. There are overcrowded classroom because of the size of the room, leaking roofs, problems clean drinking, a lack of provision of problems of primary schools. The most of the teacher create discipline problem with physical punishment. The most prevailing ways of punishment was use of students up down and standing outside the classroom. Some teacher way of dealing on them have negative attitude the relationship between teacher and students is like a governor and governed. The uncivilized discipline may not suit the multicultural crowd and Impart of hidden curriculum on the life in classroom to be taken in to consideration for promoting democracy in classroom practice.

Bogati (2007) he did a research on a topic "A study on mathematics classroom management at primary level in Hetauda Municipality". He collected the data from the observation, questionnaire, for mathematics teacher, questionnaire for the student's class four and five interview schedule. He took five schools for the sample space. The collected information from observation, questionnaire and interview schedule yields the following results as the findings of the study. The observations showed that there is lack of number of mathematics classroom in primary public schools of Hetauda Municipality. Each mathematics classroom had sufficient number of blackboard or white board but not in appropriate size and condition. There was the real difference between the teacher and students in the concept of "discipline violence" activity. There was contrary on the problem as coming late to class, not doing homework. Most of the schools had cracked blackboards, broken benches and dirty floor but only 16.66 percent schools didn't have such problems. The mathematics achievement of disciplined students was better than that of the discipline violence students.

Dauncey and Vokes (2012), did a research on 'case studies into classroom management'. The main aim of these studies is to look into how these themes (teacher's behavior, practical strategies and interventions and rules) appear in two classrooms in America. They used case study methodology by taking observations and writing up field notes showing evidence of what they have seen and how this relates back to the background research they have found. They used two classes (preschool and grade 1) for collecting data. They found that there at student centered approach is crucial in the management of the classroom.

Theoretical Understanding of the Study

There are so many theories which can be used to understand the problems in learning mathematics such as Piaget's cognitive development theory, Vygotsky's social development theory, and Glasser's choice theory on classroom management etc.

Piaget's (1983) cognitive development theory states that, there are four stages of cognitive development which are sensory motor stage, pre-operational stage, concrete operational stage and formal operational stage. Piaget's formal operational stage relates with the secondary level's students. He believed that abstract thinking, deductive reasoning and logical begin during this stage. Consequences and outcome fall under consideration and that starts to determine course of action. Methodical problem solving replaces trial and error problem solving. According to this theory if teacher does not teach by the method of problem solving and student centered method, then students will not develop and gain the knowledge. Thus teacher's method and strategies play the vital role for creating the problems in learning mathematics. Piaget focuses that in order to teaching, teacher must understand the students' psychology, he must follow the problem solving method, moreover, students centered method.

Vygotsky's (1978) States that learning occurs through teacher - student and student - student interaction in the classroom. Thus by the lack of teacher student and student-student interaction in classroom, the teaching learning activities may not be good. Thus, teacher should provide good environment of interaction in classroom.

William Glasser (1986) is the developer of choice theory. Choice theory states that a person's behaviour is inspired by what that wants or needs at that particular time. Glasser states that all living creatures control their behavior to fulfill their needs for

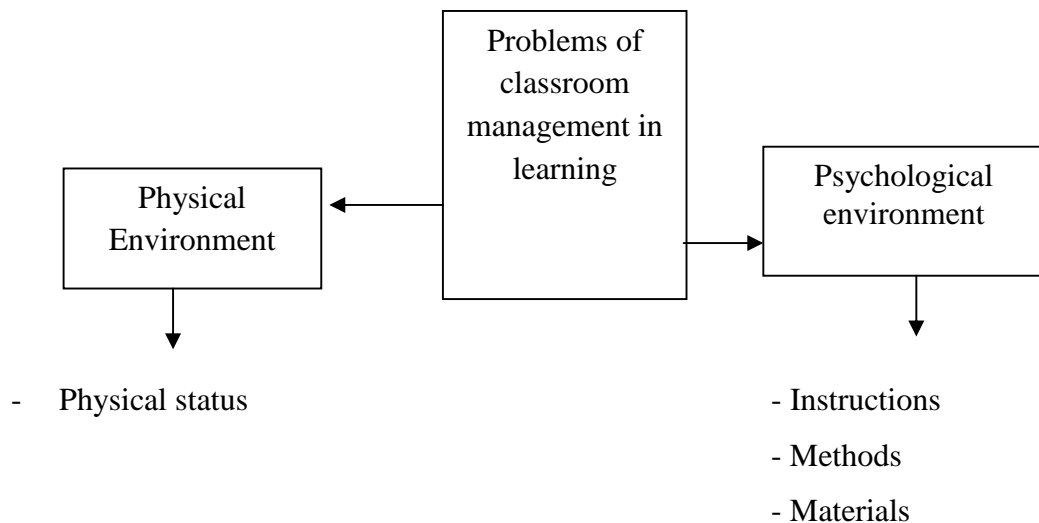
satisfaction in one or more of these five areas: survival, to belong and be loved by others, to have power and importance, freedom and independence, and to have fun, A person can make a proper choice and take greater responsibility for their actions by asking themselves the following questions. What do you want? What are you doing to achieve what you want?, Is it working ?, What are your plans or options ?

According to the choice theory students must have a choice and if they choose their curriculum and decide on the rules in the classroom, they have ownership of their learning, have pride in their participation, have higher self-esteem and exhibit greater levels of self confidence and higher level of cognition.

According to the various theories related to the classroom teaching environments. Student-student interaction, student-teacher interaction, students participation, students role in learning, teachers' role in teaching, teacher's strategies etc. are the main factors decreasing the mathematical problems created in learning in classroom. Thus, this study was concerned with the Piaget's theory, Vygotsky's and Glasser's theory.

Conceptual Framework of the Study

This study tried to identify the problems of classroom management in learning mathematics. From the already described different empirical and theoretical literature, the following conceptual framework proposed for the survey study.



The researcher has taken the Zurich (2004) model for classroom management and disciplinary problems in the classroom. The availability of the physical facilities and

their condition in mathematics classroom were checked with the indicators of the Zurich model (2004).

There are six criteria to study the physical facilities of the school in Zurich model (2004). Which are furniture, students involvement, Students activeness teaching resources, instructional materials and centers. The size of classroom should be 15×18 sq ft and 12 sets of benches & desks. In a school have should be library with sufficient books journals and teacher's guide of mathematics subject. The school should have one mathematics lab with geo-boards, circle boards, abacus, ten gram scale and other geometrical instruments related to subject matters. Each school should have one-one library and laboratory of science and mathematics.

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Chapter- III

METHODS AND PROCEDURES

This chapter describes in detail the procedure and the methodology of the study. Design of study, population of study, sample of study, development of research tools, technique of data collection, and analysis of data.

Design of the Study

The research was survey type as well as mixed model. Data was collected from questionnaire, interview and class observation. The interview was taken from math teacher, head teacher and students by researcher himself.

Population of the Study

The population of the study consisted of all the students and teacher of grade X of Chitwan district studying in the academic year 2071.

Sample of the Study

Ten secondary government schools were selected by random sampling method and from those secondary schools, 20 students studying grade X and two teachers from each schools were selected that is 200 students of grade X and 20 teachers were included in the study.

Tools of the Study

Classroom Observation Form

For this study researcher used the class observation form. Pre-determined frame of classroom observation form was used to collect information. The researcher also observed such aspects of classroom which was not included in observation form. To collect information about physical environment of classroom, method and materials, teacher's role, student's role, teacher-student interaction and student-student interaction, assignment technique is included in the observation form. It was prepared

on the basis of Zurich's (2004) model of physical management of mathematics classroom.

Questionnaire

Two types of questionnaire were developed, one for teachers whereas seven questions and another for students whereas seven questions. The questionnaire was based on the Likert scale. The use of questionnaire was to find out the problem related to the classroom management in learning mathematics.

Interview

Unstructured interview was taken for teachers to find out the current problem of classroom management.

Validity and Reliability of Tools

The validity and reliability are the necessary qualities of research instrument, for the semi-structure interview, validity was established by subject expert and supervisor whereas the reliability of the interview was established by taking the interview with the same individual after certain duration. For the questionnaire used in this study was adopted from the research paper done by Sapkota (2012) and Joshi (2014).

Data Collection Procedure

To fill the classroom observation form the researcher himself observed the class of sampled school. In this form the researcher observed different aspects of classroom management. Researcher observed the classroom for one week.

For the interview, researcher himself took interview using interview schedules and he also used open question on the basis of situation of the classroom. Mainly the interview was taken from math teacher and head teacher of the selected school.

With the help of open interview scheduled, the interviews were taken with the focused teachers and head teacher. The interaction with the respondents was carefully listed and noted properly.

Scoring procedure

For the analysis of the items, weightage of 5, 4, 3, 2 and 1 were assigned to statement "strongly agree", "agree", "undecided", "disagree" and "strongly disagree" respectively.

For the negative statement opposing to this point of views, the items were scored in the opposite order i.e. one for "strongly agree" and five for "strongly disagree". Mean weight age of total score of five points Likert scale is 15. Thus its average score is 3. If the mean calculated value is greater than or equal to 3 than it is concluded that the statement is problematic. If the mean calculated value is less than 3 then it is not a problem.

Data Analysis Procedure

To determine the Problems of Classroom Management in Learning Mathematics Secondary Level, all information and data collected from primary sources by the researcher himself. The data collected by questionnaire, interview, open questions, and observation of classroom.

As a Primary data, the researcher visited the sample schools and got the data from administration of school. After that, the researcher distributed the questionnaire to the students of the grade 10 of Sample school. Then after researcher collect all the questionnaire form from the schools. Again the researcher distributed the questionnaire form to the teacher. With the help of obtained data from the questionnaire form of the students, the researcher separated the sample data by using random sampling technique. The researcher selected 20 students from each school of grade 10 i.e. 200 students from 10 sample school. The researcher also collected the questionnaire from 2 mathematics teacher from every school i.e. 20 teachers. The information received from questionnaire form from students and teachers were tabulated by suing Likert scale, each positive items receives the sores based on points. Fire points for strongly agree, four points for agree, three points uncertain, two points for disagree and one points for strongly disagree and the scoring for each negative item would be reverse.

The obtained data were analyzed and interpreted with the help of following statistical techniques and explanation methods.

-) Mean weightage was used to find whatever the statement is problematic or not.
 - It users to locate the central position of the response to the statement of teachers as a whole in the rating scale.
 - It the calculated index is greater than 3 then it is concluded that the statements is problematic. If less than 3 then it is not a problem.

-) The information through observation and interview are analyzed in descriptive method.

-) The statistical data analyzed statistically in term of χ^2 -value at 0.05 levels, percentage and mean score.

Chapter- IV

ANALYSIS AND INTERPRETATION OF DATA

The collected data were analyzed for the collection of data, the questionnaire, class observation form and interview schedule were used by the research for the purpose of the study. The collected data were tabulated and analyzed according to the objectives of the study. They were analyzed and interpreted by arranging them into the following sections.

Physical Status of Classroom

Most of the school except Kiran Ma. Vi. which was established in 2017 B.S. were established offer NESP (1971-1976). However studied schools have their own building and room's builds by the government. The buildings were found to be made up of cemented walls road woods etc.

It was found that mostly all the remaining physical facilities were managed by the local people and government. All the building toilets, desk, benches, and other felicities which were highly necessary were provided by the donation of local community. Labour fund and some financial support were given by the V.D.C. room-two- rid, British oil fair etc.

After analyzing observation form the researchers found that, according to Zurich's (2004) physical model of classroom management the sampling school were not good; Mostly of all the sampling school have enough desk bench for the students but the school Himalayan Ma. Vi., Durga Ma.Vi, Shree Ma. Vi. and Sharada Ma. Vi. doesn't found to be having sufficient bench and desk according to the number of students. The students were forced to sit tightly in a bench. So that the classroom seems to be crowded and noisy at the teaching time.

As like other common school of our country, Nepal, in these sampled schools also there were not any teaching materials for mathematics classroom. For the name of materials only black board or white board were found. In Durga H.S. School and Himalayan H.S. School, there were teaching materials like, Graph board, Geometrical box and only few Concrete materials but they were not is good condition to

demonstrate. Besides this there were no any teaching materials for teacher to demonstrate while teaching.

The students have to bring themselves the rulers, papers, scissors, pencil sharpeners for their personal use. This kinds of facilities doesn't seem to be provided by the school. There were not any fixed placed for students to store or kept their project work papers like chart paper, bulletin etc. The researcher found that in none of these school the students record were kept. The classroom seems to be dirty, everywhere torn papers were scattered, there were no any dustbin in class.

Classroom Space

Ideally classroom should be opening large and proper in order to involve the students in teaching, hearing activities by creating suitable environment. There should be kept some space for teachers also in order to move front to back of the classroom to reach nearer to the students. The researcher's observation showed that the space of studied schools varied from 0. 38 sq. m. to 1.003 sq. m. The following table presents its picture.

Table 1
Available Classroom Space for Per Students

School	Per students area (sq. M.)	B.P.E.P. 0.75 sq. m.
Kiran Ma.Vi.	0.45	0.75
Himalayan H.S.S.	o.38	0.75
Narayani Vidya Mandir H.S.S.	0.88	0.75
Rampur MA.VI.	0.76	0.75
Durga H.S.S.	0.39	0.75
Arunodaya H.S.S.	0.78	0.75
Shree Ma.Bi.	0.58	0.75
Sharada Ma.Vi.	0.40	0.75
Shreepur Ma.Vi.	1.003	0.75
Annapurna H.S.S.	0.85	0.75

It is obvious from the table 1 that Narayani Vidya Mandir H.S.S., Rampur MA. VT. Arunodaya H.S.S. ,Shreepur Ma. Vi. And Annapurna H.S.S. have the adequate space given by BPEP. But remaining five schools Kiran Ma. Vi. Himalayan H.S.S. Durga H.S.S Shree Ma .Vi. and Sharada Ma. Vi have the less space given by BPEP which is 0.75 SQ. M. In mathematics teaching hour student were seen attached tightly in the benches. During observation it was seen that the teacher could not pay attention towards all the students. Sometimes the students were found to be pushing to their front bench student due to the lack of space between benches. In sharda Ma. Vi. this case was seen. When the teacher was teaching, the students were disturbing each other.

Under this topic the researcher has analyzed the views of teacher obtained from discussing with teacher on various aspects related to classroom management.

After discussing with teachers, the researchers found that almost all the schools have enough desk and bench in the classroom but in the Shreepur Ma. Vi. and Rampur Ma. Vi., the number of bench according to the students were less. The students were forced to sit tightly. The classroom in Himalayan H.S. school and Durga H.S. School were more crowded than the other schools classroom due to lack of classroom spaces. In most of classes, there is not fan, not well designed desk & bench, dirty room, no teaching materials, black boards condition is not good etc.

All teachers supported that due to lack of classroom management the teaching learning process can't be done effectively. The classroom should be well managed for effective learning.

Many teacher said that there is no any teaching or instructional materials for mathematics is available in the school. They should fully depend upon the daily using materials like chalk, duster and board whereas in Durga H.S. School and Himalayan H.S. School teachers said that, there were teaching materials in school like, Graph board, Geometrical box, Concrete materials etc but they were not is good condition to demonstrate.

According to most of the teachers, the classroom which is well-lighted, flow of fresh air, enough desk and bench, spacious for students and teachers, neat and clean,

equipped with teaching materials, students shouldn't be more than 30-35 etc said to be managed classroom.

All the responses described above were the answer given by mathematics teachers, lack of furniture, no provision of clean drinking water, inappropriate blackboard, no provision of toilet, lack of adequate space in classrooms, narrow classroom, insufficient furniture, no space to demonstrate teaching materials, dark classroom and teaching roofs are the main facing problems in mathematics classroom and effective teaching mathematics is very important subject it should be taught in peaceful environment but the above problems were making disturbance for the mathematics teaching at secondary level.

Problem Related to Mathematical Instructions, Methods and materials

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

For the understanding of the problems in classroom management the researcher raised 12 questionnaires for students and 7 questionnaires for teachers regarding instruction, methods and materials. The researchers tried to elaborate the following problems in detail related to mathematics instruction, methods and materials.

Table 2
Analysis of Students Questionnaire

Z.N	Statements	SA	A	U	DA	SD	t ² Value	Concl usion	M.S
1.	Teachers always take class period on time.	123	67	4	6	-	291.75	S	4.53
2.	Teachers always help the students in practicing.	107	83	6	4	-	259.75	S	4.46
3.	Teachers taught lessons regularly in the class.	133	55	10	2	-	320.45	S	4.59
4.	Teachers explain their lessons with the help of suitable examples.	132	52	12	-	4	307.20	S	4.54
5.	Teachers always complete the course work in time.	87	61	26	18	8	108.85	S	4.0
6.	Students are encouraged by teachers during their question and answer sessions.	123	40	8	7	22	233.15	S	4.17
7.	Mathematics teacher check students home work at the end of each lesson.	87	70	21	15	9	126.40	S	4.08
8.	There is good teachers and students relationship in the class.	117	50	19	10	4	216.65	S	4.33
9.	Teachers provide guidance to students in solutions of their	124	46	20	8	2	249	S	4.41

	various problems.								
10.	Teachers always use teaching Materials in classroom teaching	95	45	39	13	8	120.10	S	4.03
11.	Teaching materials is available in school	87	61	26	18	8	108.85	S	4.0
12.	Teachers treat equally to all the students.	106	67	8	11	8	199.35	S	4.26

The statement no. 1 was significant with χ^2 -value 291.75 at the level of 0.05. It indicates that 95% of the respondent agreed 2% uncertain and 3% disagreed with the statement that teachers take class period on one. While 4.53 mean score was between then levels of strongly agree. Hence the respondents supported the statement.

The Statement No. 2 was significant with χ^2 value 259.75 at the level of 0.05. it indicates that 95% of the respondents agreed, 3% uncertain and 2% were disagreed about the statements that " Teachers always help the student's in practicing". The mean score 4.46 was been the levels of strongly agreed. Hence the respondents supported the statement.

The Statement No. 3 was significant with χ^2 value 320.45 at the level of 0.05. It indicates the 94% of the respondents agreed 5% uncertain and 1% were disagreed about the statement that "Teacher Math teach lesson regularly in the class". The mean score was 4.59. Hence, the statement accepted from the respondents.

The statement no. 4 was significant with χ^2 -value 307.20 at the level of 0.05. It indicates that 92% of the respondents agreed, 2% were disagreed and 6% of respondents uncertain about the statement that "Teachers explain the lessons are with the help of suitable examples." The mean score 4.54 which is in the level of strongly agree. Hence, the respondent has supported the statement.

The Statement No. 5 was significant with χ^2 -value 108.85 at the level of 0.05. It indicates that 74% of the respondent agreed, 13% uncertain and 13% were disagreed

about the statement that "Courses are complete on time." The mean score 4.00 which is in the level of strongly agreed. Hence, the statement accepted from the respondents.

The Statement No. 6 was significant with χ^2 -value 233.15 at the level of 0.05. It indicates that 81.5% of the respondents agreed 4% uncertain and 14.5% were disagreed about the statements that "students are encouraged by the teacher during their question answer session" the means score was 4.17 which shows that all the respondents were strongly agreed with the statement.

The Statement No. 7 was significant with χ^2 -value 126.40 at the level of 0.05. It indicates that 78.5% of the respondents agreed 10.5% uncertain and 12% were disagreed about the statements that "teachers check student's home work at the end of each less on". The mean score 4.08 which is in the level of agreed. Here most of respondents supported the statement.

The statement no. 8 was significant with χ^2 -value 216.65 at the level of 0.05. It indicates that 83.5 % of the respondents agreed, 7% disagree and 9.5% were uncertain about the statements that "there is good teacher and student relationship in the class" while mean score 4.33, which is in the level of agreed. Hence respondents supported the statement.

The Statement No. 9 significant with χ^2 -value 249 at the level of 0.05. It indicates that 85% agreed respondent 5% disagreed and 10% uncertain with the statements that teacher provide guidance to students in the solution of the various problems. While the mean score 4.41 which is in the level of agreed. Hence respondent supported the statement.

The Statement No. 10 was significant with χ^2 -value 120.10 at the level of 0.05. It indicates that 70% agreed 19.5% uncertain and 10.5% disagreed with the statements teacher provide always used teaching material in classroom teaching while the mean score 4.43 which is in the level of agreed. Hence respondent supported the statement.

The Statement No. 11 was significant with χ^2 -value 108.85 at the level of 0.05. It indicates that 74% agreed 13% uncertain and 13% disagreed with the statements

teaching materials in available in school while the mean score 4.0 which is in the level of agreed. Hence respondent supported the statement.

The Statement No. 12 was significant with χ^2 -value 199.35 at the level of 0.05. It indicates that 86.5% agreed 8.5% uncertain and 4.2% disagreed with the statements teachers treat all the student's equally while the mean score 4.26 which is in the level of agreed. Hence respondent supported the statement.

Table 3
Analysis of Teacher's Questionnaire

S.N	Statement	S A	A	U	DA	SD	χ^2 value	Conclusion	Ms
1.	Difficult in completion whole course if taught by using teaching material	7	10	3	-	-	19.50	S	4.2
2.	Boredom felling in Mathematics teaching	9	9	2	-	-	21.50	S	4.55
3.	There is a lack of proper space to demonstrative instruction materials	1 0	7	3	-	-	19.50	S	4.35
4.	There is lack of Teaching machine and computers in Mathematics classroom	6	6	6	-	2	8	U	3.7
5.	I make daily lesson plans	8	10	-	2	-	22	S	4.2
6.	Marking of Students assignments is done regularly.	4	12	2	2	-	22	S	3.9
7.	Teaching strategies like group discussion are used during teaching learning process.	6	12	2	-	-	26	S	4.2

The Statement No. 1, was significant with χ^2 -value 19.50 at the level of 0.05. It shows that 85% of the respondent's agreed and 15% were uneaten about the statement that "Difficult in completion whole course if taught by using teaching material". While the mean score 4.2 which is in the agreed. There responded supported the statement.

The first statement was focused on completion of the whole course when taught by using teaching material. The interests of students and experienced of teachers, most of the teachers couldn't completed of the whole course the mean weightage was 4.2. This showed that there was a great problem to complete the whole course. In this regard the teachers were respond as:

“Due to the political instability, school and students are affected by the different strikes so that class cannot be run regularly. On the other hand students were utilized by political parties. It was being problem to complete the working days academic sessions. You can ask with students. They want to solve only important question; it was also the responsible to not complete the whole course in a time” (Teacher).

From the above view it is concluded that teacher should be careful towards the future of students. They should know about” Unless the child learns teacher has not taught”. A good teacher is also guardians of the students, so he should responsible about him/her. Now a days, students are included in a political parties they are busy in political program. So that association of teacher parents and school administration should be active then avoid these programs the school area. The government and local political parties should also be aware in the education of the child. In this statement, the respondent of teachers is positive, they were saying that, if we used teaching material properly, the course wouldn't complete. But I had found in this statement is contradictive views of teachers, because the students of the sampled school were wanted to learn important question. The teachers were also agree on this statement in the in depth interview. I also asked to the students about this statement, they responded with me, teachers couldn't finished our total course, because we are only concentrate on the important and easy questions. Thus they teach only this topics which we want. It is our cooperation. In this class observation teachers weren't using any teaching materials on their own teaching. Thus I concluded that this statement is not problematic.

The Statement No. 2, was significant with χ^2 -value 21.50 at the level of 0.05. It indicates that 90% of the respondents agreed and 10% were uncertain about the

settlement that "Boredom feeling in Mathematics teaching". While the mean score 4.55 in the level of agreed. There the respondent's accepted the statement.

The second statement was focused on boredom feeling in teaching Mathematics. It was a problematic, because poor background of student's participation and teaching methods of teachers were responsible for this statement. The mean weightage of it was 4.55.

Teachers responded mixed view, some teachers have agreed about this statement and some have not. But in classroom observation, I had also found the mixed response. Generally in the urban area, the students had wanted to learn more but in rural area, they hadn't emphasis on Mathematics class, they were busy in outside of the class on Mathematics periods. Thus I have concluded that the teachers and students both were feeling boredom on rural area, because of the few numbers of students. In urban area, students were serious on learning mathematics. But the teachers' and administration was not focused of the student's desire. Thus, I concluded that this statement is problematic for the teachers.

"At any cost students should pass in the examination otherwise we should defense to the administration and the parents. So we have in more tension than students in the case of exam result. The job security depends upon the percentage of the students obtained on the examination" (Teacher).

The above view of the teacher suggested that Mathematics teaching was found difficulties to the teachers in the sense of result oriented system. In some extent, the lack of consciousness was playing vital role in the above view of the teachers. This was not problems of the Mathematics teacher but found problem in the school educational system.

Administrative cooperation and supervision in Mathematics teaching is being crucial aspects for the achievement of the students. As response of the teachers, no friendly relation, no supervision, no support our problem, no instructional materials etc. was found in the school. The sincerity of Mathematics subject could not be found by the school administration. The teaching materials, methods like

mathematics lab and other facilities were not managed by the school administrations caused the problem to the lack of economy and lack of students' participation on Mathematics. If students failed in the examination the administration and parents use to blame the teachers, they didn't want to concern about the background of students, school environment, physical facilities and others factors. Thus it was the bitter truth of the school Mathematics teachers.

The cause of above problem are economic crisis of administration to add materials for the Mathematics teaching, lack of moral education, lack of students participation, lack of proper teaching/learning environment, lack of extra reference book, lack of experience to use teaching materials, lack of students positive behavior, lack of students unawareness. Hence there lack of classroom management for Mathematics teaching due to physical, economic and environmental crisis. The community participation should be encouraged to build up good educational environment.

The Statement No. 3, was significant with χ^2 -value 19.50 at the level of 0.05. It indicate that 85% of the respondent agreed and 15% were uncertain about the statement that "There is a lack of proper space to demonstrative instruction materials". While the mean score 4.35 in level of agreed. There the respondent supported the statement.

In this statement, all sampled teachers responded that it is not our problem, because there are a few numbers of student's participation, and on the other hand we don't use any teaching material. It is clear that, this statement is not problem for the Mathematics teacher. I had also found that there is not any problem of space to demonstrate material. How will it be problematic, if they didn't use teaching material?

The Statement No. 4, was insignificant with χ^2 -value 8 at the level of 0.05. It indicate that 60% of the respondent agreed, 10% of the respondent disagreed and 30% were uncertain about the statement that "There is lack of Teaching machine and computers in Mathematics classroom" while the mean score 3.7 in level of agreed. There the respondent supported the statement.

It indicates that there is a genuine problem in teaching Mathematics in the absence of teaching machine such as calculator, computer, projector etc. in the 21st century Mathematics has been handicapped without machine and computers. So that is also a tedious subject for the teachers.

In this statement, all sampled teachers responded that there is not any teaching machine and computers in Mathematics classroom. In many observation class on the urban area, there was a lot of computers, but these computers were in another classes, these didn't use in Mathematics class. At that time I was asking to the mathematics teacher about the use of computers in Mathematics classroom, but he told me, I don't have a knowledge on computer, how can I use in Mathematics class, he laughed with me. Thus I have concluded that the available of computer is not so much problem, but how to use it was main problem of the teacher in teaching Mathematics.

The Statement No. 5, was significant with χ^2 -value 22 at the level of 0.05. It indicate that 90% of the respondent agreed and 10% of the respondent disagreed about the statement that "I make daily lesson plans" while the mean score 4.2 in level of agreed. There the respondent supported the statement.

This statement about the lesson plan that they have known to make lesson plan but they don't make it. They said that is higher level. There is no need to make it, because it is not practicable, and having teaching loads.

The Statement No. 6, was significant with χ^2 -value 22 at the level of 0.05. It indicate that 80% of the respondent agreed, 10% of the respondent disagreed and 10% were uncertain about the statement marking of students assignments is done regularly while the mean score 3.9 in level of agreed. There the respondent supported the statement.

The Statement No. 7, was significant with χ^2 -value 26 at the level of 0.05. It indicate that 90% of the respondent agreed and 10% were uncertain about the statement teaching strategies like group discussion are used during teaching learning process while the mean score 4.2 in level of agreed. There the respondent supported the statement.

Chapter V

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATIONS

Summary

This study is entitled "A Study on the problems of classroom management in learning mathematics at secondary level in Chitwan district" not only identify the problem of classroom management in learning mathematics and analyze the problem related to classroom management.

This study was divided into five chapters. The first chapter includes general background of the study, its objectives, significance, statement of the problem and some words that were described in this study.

In the second chapter of the study, the researcher mentioned some literature that was related to the study. The previous study of research reports were critically described and linked to the study. The research reports and journals were guide to the study. The international studies were also reviewed for the strength of the study, so secondary data was also was of the sources of the study. The methodology design was mentioned in the third section of the study on the basis of information from previous study. The researcher adopted some ideas to accomplish the objectives. The descriptive survey research design was adopted for the analysis as the study. The nature of the study was quantitative as well as qualitative, but this study focused on quantitative nature. So in this methodology section different components like design of the study, population of the study, sample of the study, source of the data, tools, data collection procedure, scoring procedure, data analysis procedure were clearly described.

Findings

The collected information from the observation, questionnaire and interview schedule yielded following results as the findings of the study.

-) the observation showed that there is appropriate number of mathematics classrooms in secondary public schools of Chitwan districts
-) Almost 50% school adequate space determined by BPEP (0.75 Sq.m. per student) was available in sitting arrangement of student's desk.
-) There was lack of teaching materials in mathematics classrooms and teachers less interested to use teaching materials.

-) Each mathematics classroom had sufficient number of blackboard or whiteboard but not in appropriate size and condition.
-) Most of the students disagreed with frequent visit in the classes to check the learning activities.
-) Most of the teachers were found not to be used appropriate teaching methods as well as concrete materials in mathematics teaching.

Conclusions

It is concluded that the mathematics teaching and learning is not satisfactory at grade ten in Chitwan district. The availability of the physical facility in schools of Chitwan district we found inappropriate and inadequate in comparison with Zurish (2004) model so it can be concluded that these ten schools have no sufficient physical facilities. Moreover, lack of teaching materials, teaching machine and computers in mathematics classroom. Almost teacher were not to used appropriate teaching method and they were less interested to used teaching materials in mathematic classroom.

Recommendations for Improvement

Some of the recommendation is as follows.

-) Mathematics laboratory should be well managed and most be in each school.
-) Teachers should be understands the psychology of the students, encouraged and motivated students teaching mathematics.
-) Student centered should be applied during teaching learning process.
-) Materials rewards should be given to students.
-) Modern technological tools are needed to be used in classroom.
-) All the teachers should keep in mind about the mental level of students.
-) Teachers should give attention on the change of student's behavior.
-) Teachers should maintain couple to discipline in the classroom during teaching.
-) Headmaster should visit every class.

Recommendations for Further Research

-) A comparative study of classroom management in mathematics teaching at secondary school between public and private schools.
-) This study can be conducted in different level.
-) This study can be conducted in rural areas.

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Appendix I
List of the Schools

S.N.	Names of the Schools
1.	Shree Kiran Madhyamik Vidhalaya, Sharadanagar, Chitwan.
2.	Shree Himalayan Higher Secondary School, Geetanagar-2, Chitwan.
3.	Narayani Viday Mandir Higher Secondary School, Geetanagar-2, Chitwan
4.	Shree Rampur Madhyamik Vidhalaya, Rampur, Chitwan.
5.	Shree Durga Higher Secondary School, Bijayanagar, Chitwan.
6.	Arunodaya Higher Secondary School, Geetangar, Chitwan.
7.	Shree Shreepur Secondary School, Phoolbari-3, Chitwan.
8.	Shree Sharada Madhyamik Vidhalay, Sharadanagar, Chitwan
9.	Secondary School, Gangangar, Patihani-8, Chitwan.
10.	Shree Annapurna Higher Secoandary School, Parbatipur, Chitwan.

Appendix II
Questionnaire for Students

S.N	Statements	SA	A	U	DA	SD	t²- Value	M.S
1.	Teachers always take class period on time.							
2.	Teachers always help the students in practicing.							
3.	Teachers taught lessons regularly in the class.							
4.	Teachers explain their lessons with the help of suitable examples.							
5.	Teachers always complete the course work in time.							
6.	Students are encouraged by teachers during their question and answer sessions.							
7.	Mathematics teacher check students home work at the end of each lesson.							
8.	There is good teachers and students relationship in the class.							
9.	Teachers provide guidance to students in solutions of their various problems.							
10.	Teachers always use teaching Materials in classroom teaching							
11.	Teaching materials is available in school							
12.	Teachers treat equally to all the students.							

Appendix III

Questionnaire Mathematics Teachers

S.N	Statement	S A	A	U	DA	SD	t ² value	Conclusion	Ms
1.	Difficult in completion whole course if taught by using teaching material								
2.	Boredom felling in Mathematics teaching								
3.	There is a lack of proper space to demonstrative instruction materials								
4.	There is lack of Teaching machine and computers in Mathematics classroom								
5.	I make daily lesson plans								
6.	Marking of Students assignments is done regularly.								
7.	Teaching strategies like group discussion are used during teaching learning process.								

Appendix IV

Observation Form

Name of Teacher:

Date:

Name and Address of School

Number of Student

Class

S.N.	Physical Recourse	Quantity	Description
1.	Furniture		
	a) Desks		
	b) Benches		
	c) Circular Desk		
	d) Book Services		
	e) Tables		
	f) Cupboard		
2.	Activity Centers		
	a) Place To Store Tools and Material		
	b) Place Of Post Instructions		
	Students Daily Use Material		
	a) Rulers		
	b) Papers		
	c) Scissors		
	d) Pencil And Sharpner		
3.	Teaching Materials		
	a) Chalk Board/Marker Board		
	b) Geometry Solid Figures		
	d) Chart Papers		
	d) Abacus		
	e) Circle Board		
	f) Geo Board		
	g) Geometry Box		
4.	Students Work		
	a) Collecting And Storing Students		

	Mathematical Works		
	b) File To Record Students Activity		
	Various		
	a) Shape Of Classroom		
	b) Size Of Classroom		
	c) Walls		
	d) Doors		
	e) Windows		
	f) Roof		
	g) Electricity		
	h) Drinking Water		

Appendix V

Interview Schedule

Name of the School:

Date:

Teacher:

- 1) Do you feel are there any lack of physical resources in your classroom?
- 2) Do you think classroom management affects the teaching learning activities?
- 3) Are there sufficient teaching material in the classroom?
- 4) What typed of classroom you think is managed classroom?

Appendix VI

Statistical Techniques used in Study

The following statistical techniques were applied.

$$1) \text{ Mean score} = \frac{\text{Total rank score of statement}}{\text{No. of teacher's response}}$$

$$2) \quad \chi^2 = \frac{\sum fo Z fe'^2}{fe}$$

$$df = (r - 1)(c - 1)$$

Where, fo = Observe frequency

fe = Expected frequency

d.f. = degree of freedom

r = no. of rows in contingency table

c = no. of column in contingency table