

Chapter – I

INTRODUCTION

Background of the Study

Mathematics is an essential subject for the school curriculum. It is taught as a compulsory subject each level of school education and an extra optional mathematics subject can choose at grade IX and X. Mathematics directly deals with home life. It is believed that the development of mathematics and development of human civilization go together. Mathematics is created to fulfill the human need. It helps to exact interpretation to her ideas and conclusion. People have been utilizing mathematics to solve the difficult arisen due to the natural climate. The knowledge of mathematics is an essential tool in our society (Baroody, 1987). It is a tool that can be used in our daily life to overcome the difficulties faced by us. This study concerns with optional mathematics which is related to gender based learning that how the girls participation on learning optional mathematics and which factor are responsible for their participation in learning optional mathematics.

Participation means involvement of people in many activities for certain purpose of mathematics education. Student involvement creates and model inclusive environment where student find opportunities for personal and professional development. We integrated in class and out of class learning to provide positive experience through programs (Devkota, 2017). Class participation is an important aspect of student learning. When students speak up in class, they learn to express their ideas in a way that other can understand. Ask question, they learn how to obtain information to enhance their own understanding of a topic. Student participation is an assessment of a student's performance in a course outside of their assessments.

Participation is defined in the term of class attendance regularly, classroom interaction with teacher and other student and extra activities like as homework, classwork, class test etc, of girls students in optional mathematics. Mathematics is a technical subject which needs more time to practice and high attention to learn but by nature such qualities are found in very few girls. Because girls don't get enough time to practices such as they have to look after their household work. So that in context of our country girls are not encouraged for study by their parents and society, so few girls get chance to participation in mathematics (Devkot, 2017).

Optional mathematics is closed related to our practical life, this implies that it is not only the subject for formal schooling but also related to every activity of human beings. So its area is not bounded but has been adding several new concept with the evolution of human society. It is not a compulsory subject and its extra subject of our education system. Optional with related to alternative, arbitrary, elective and extra (Neupane, 2015).

Optional mathematics is the left to one's choice; not required or mandatory subject (John Simpson, 2017). In British Dictionary Optional mathematics is possible but not compulsory, left to personal choice. Optional mathematics which always fastens its speed for development. It helps to creative thinking, decision making and active and also helps to the study for higher level mathematics but low participation in optional mathematics in the secondary level. Optional mathematics is a easily subject but many people say that its rigorous subject. So that low participation of girls in optional mathematics, there needs much time to practices but most girls do not get enough time to practices it. They have to look after their household work. Most of the girls don't get opportunities and few girls are not interested in optional mathematics.

In context of our country, Mathematics is taken as male domain subject, so that most of the girls student at secondary level do not like to select optional mathematics as major subject due to the possibility of failure in examination. Girls do not study to optional mathematics has become a great problem of education in our Nepal. Many student is felling difficulty dissatisfaction and fear in this optional mathematics subject. Especially participation of girl's student in optional mathematics at rural public school in very low etc are the present problem of Nepal toward mathematics as well as optional mathematics. On this content it is necessary to study the causing factor to choses mathematics as optional study is to improve the girl's participation in optional mathematics.

In the context of Nepal, girl's participation is low in optional mathematics. There are some causes of low participation such as poor economic condition, early marriage, household work, care of little brother/sister, grazing cattle, wage earning activities and gender discrimination are major factor to girl's education. So that girls are less encourage then boy to participation in optional mathematics in their parents, so its present problem of girls participation in optional mathematics.

Statement of the Problem

This study is related to the girl's participation in optional mathematics learning in Kalikot district. Therefore the researcher tried to search the answer of the following question.

-) What is the recent situation of girl students participation in learning optional mathematics?
-) What are the major factors affecting the girl students participation in learning optional mathematics?

Objective of the Study

The main objectives of the study are;

-) To identify recent situation of girl students participation in learning optional mathematics.
-) To find the major factors affecting the girls participation in learning optional mathematics.

Significance of the Study

The significance of the study is a part of the introduction of the thesis/research. It should determine who benefits from the study and how that specific audience will benefit from its findings. Essentially, the selection on significance of the study provides information to the reader on how the study will contribute.

The study of the significance for the reason for the result of this study would help to identify some of the factor that can affect the girls' participation in optional mathematics at secondary level. And also every research work has some significance, therefore the significance of this study are as;

-) It helps to identify the girls participation in optional mathematics learning.
-) This study would help to encourage to the girls students to the study of optional mathematics learning.
-) It helps to bring positive attitude in equal opportunity in learning optional mathematics.
-) It helps to the parents which discourage their daughters in learning optional mathematics.
-) It helps to the found major factor affecting the girls participation in learning

optional mathematics.

) This study helps to increasing the average participation developing the habit of discovering the problem related to the teaching process.

) This study helps for future researcher in similar areas.

Delimitation of the Study

Each study is not rigorous, perfect and free from limitation. All studies will have some short of limitation and the other hand they can overcome the problems of every field. This study also will have some limitation which is pointed as below. Thus this study will have following limitation:

) This study was only limited in Kalikot district at only one public secondary school.

) This study was limited only Pancha Kalika Secondary School at Kalikot District.

) This study was limited only girl students.

Definition of Related Terms

Participation: Participation is define in the term of class attendance, classroom interaction (with teacher and other students) and class activities (like as, homework, classwork, lass test etc) of girls students in secondary level.

Secondary school: The school based on the class one to ten is known as secondary school. In my study secondary level indicate 9 to 10.

Public school: The school that supported by the Government of Nepal.

Optional mathematics: Optional mathematics is left to one's choices; not required or mandatory subject.

Learning: Learning is the process of obtaining or acquiring knowledge through different experience. Knowledge or skill through education is known as learning.

Factor: One of the factors that affect the efficiency of learning is the condition in which learning takes place. The term factor indicates detrimental thing on girl's student in including optional mathematics.

Homework: Homework is a set of task assigned to students by their teacher to be completed at home.

Classwork: School work that is done in class.

Class test: A test or examination (informally exam or evaluation) is an assessment intended to measure a test taker knowledge skill, attitude in class.

Parent's education: Parents education refers to the academic qualification awareness moral and good characters of by whom children learn.

Interaction: Interaction may be within individual or in group, within student interaction refers to the mental activities with her mind and soul.

Chapter – II

REVIEW OF RELATED LITERATURE

A literature review is search and evaluation of literature in our given subject or chosen topic area. It helps the researcher to know carried out in the area of his/her research proposal. The main purpose of review of related literature is to develop some temperature in one's area to see what new contribution can make and receive some idea for developing a research design. A literature review is an important source of the future research study. It helps to researcher better perspective and essential for guidance for the research plan. In this study researcher reviewed the following literature.

Empirical Review

Mahato (2015) did the research on “Cause of low participation of girls in mathematics education” at higher level. The objectives of his study was what are the causes of low participation of girl's in mathematics education and why parents do not give equal opportunities to their daughter as son. The design of his study was case study type and use the tools interview schedule, observation from and focus group discussion of girls. His study was done in the campus of Rautahat district and sample of the study contained five girls' students studying at Bachelor level. Home environment influence of study, early marriage due to dowry, Gender discrimination between son and daughter and less home study opportunity for girls. The finding of his study show that participation of girls in mathematics education is lower than boys because girls are not free to get education rather than boys. In Yadav society must of the parents are uneducated and they think high dowry. Most of the people interpret negatively regarding the higher education of girls. There is low participation of girls

at higher level education due to social environment, poor economic condition, illiterate parents and higher dowry system.

Joshi (2010) did a research on "Attitude of girls" students toward optional mathematics at secondary level this main objective were to find out the attitudes of secondary level girls students towards optional mathematics and compare the attitude of urban and rural girls toward optional mathematics. A set of opnionnaire and interview were used tools for the data collection. The sample size was taken 60 girls student at Kailali district from 5 urban and 5 rural schools. He found that there was a positive attitude towards optional mathematics and there is no significance difference between attitude of urban and rural girls toward optional mathematics.

Neupane (2016) did a research on "Participation of Dalit student in mathematics learning in secondary level at Rukum district. The objectives of his study were to identify the participation of Dalit students in mathematics learning and to find the major factors affecting the participation of Dalit students in mathematics learning. The design of his study was qualitative with case study approach and use the tools interview and observation form. Sample of his study was five Dalit students, their parents, one mathematics teacher and one head teacher chosen for the study as sample and use purposive sampling. The factor affecting the participation of Dalit student in mathematics learning are poor economic condition of the family, negative social belief and tradition, household work load, cast of education, lack of motivation and distance of the school were the problem of participating the Dalit student in mathematics class. To improve the learning capacity of Dalit student in mathematics, they should be motivated to be regular in school, necessary materials should be provided to them from the school, there should be discussion between Dalit students, parents and mathematics teacher about their student, there should be discount in tuition

class and hostel fee.

Pokharel (2010) did a research on “Girl’s participation in optional mathematics in Dolpa district”. The objective of the study is to find the factor that affect the participation of girl’s in optional mathematics. There are fourteen secondary schools in Dolpa district. Among them the researcher selection three urban schools and three rural area schools for study. Researcher used the interview schedule and opinionnaire from for data collection tools. He was found that the home environment, gender bias at home, parent’s education, practice time give to solve problem, economic condition of family influence in the girls participation on optional mathematics. In that, research the researcher used the qualitative research design.

Sharma (2011) did a research on “Factors influence the choice of optional mathematics at grade IX” with the main objectives to find the factors influencing on choice of optional mathematics at grade IX students and to find out the students ration in optional subjects. The study was small-scale. Survey type with the design both quantitative and qualitative. The student questionnaire from was the main instrument with students background and attitude scale. Hundred and twenty students (60 taken from optional mathematics and 60 taken from other optional subject). 8 head teacher and 8 optional mathematics subject teacher of 8 public secondary school of Parbat district percentage and chi-square test were used to analyzed data by attitude scale and data gained by interval and questionnaire related to the students background was analyze by qualities way.

This study concluded that the students choice of optional subject is by product of family background students self-derive and neighboring factors concern with peer influences social influences school environment such as school administration teacher behavior in classroom effect on choice of optional mathematics so it concluded that

school environment is very essential for increasing the student to choice optional mathematics.

Burdon (2004) did study on "Gender Equality in Education". He wrote while 30 million more children had been sent to school globally since 2000, there were still 72 million children, most of the girls which remains out of school. While girls participation had increase to 89% from 84% a few years back, Burdon said more needed to be especially for disadvantaged girls are countries like Nepal. "Half of Dalit (low caste) girls droop out in grade eight percent make it to grade five", he said adding that strong political leadership in this areas in important. The problem of infrastructure also continuous to the educational system in Asia pacific now, a lot of school had no drinking water, toilet and electricity. Teachers were also ill-trained and poorly motivated. Other problems included the lack of test book, teacher, classrooms and proper medium of instructions. Discrimination based on caste, ethnicity, religion or disabilities also needed to be seriously addressed.

Janwali (2007) studied on topic "Causes that affect mathematics achievement of girl students" determine the correlation between affecting factors and mathematics achievement. The researcher adopted the survey method in this study. The sample of the study was determined by convenience sampling from Rupandehi district. Researcher selected 25 sample students from different school of district situated in rural and urban area. In this study one set of questionnaire was developed and three point likert scale for theconvines of the respondent were developed for the collection of needed information which was used for students. The conclusion of this research work was effective classroom teaching such as planning environment, less use of instructional materials, appropriateness to teaching participation on discussion, activity have strongly positive effect on mathematics achievements of girl students. It

conclude that the effective classroom teaching is very essential for increasing the mathematics achievement of girl's students so it should be improved. The teacher behavior and family background are also have positive effect so that the teacher and parents have equally responsible for the girls' students learning activities in school and create good environment at home for learning and improve the mathematics achievement of girl students.

Wilkson and Marrett (1985) reported that if girls that their teachers hold lower expectations for their mathematic performance, that may develop lower expectations for their own potential achievements in mathematics courses and may not to participate in mathematics courses studies have suggested that boys especially those for whom the teacher hold high expectations, get more rewards or praise for academic performance in school.

Tiwari (2002) has reported the both farmer and non-farmer parents had positive attitude toward the school mathematics, farmer and non-farmer parents had positive attitude towards their male child and female child about the school mathematics, however educated parents had positive towards daughter education rather than non-farmer parents.

Raymajhi (2011) conducted a research study entitled "Case of low participation of girls of rural community in optional mathematics". The case study design was attempts to identity the cases of low participation of girls students of rural community in optional mathematics at secondary level and concluded that girls students are equally capable in achievement view point but due to the school as well as out of school related factors their participation is low in optional mathematics and some of them are as follows:

-) Parents expected less from girl's education and so cared less about it.
-) Teachers failed to link girl's practical experience with theoretical knowledge.
-) Girl's were confined to domestic chores and hence could not give enough time to mathematics.
-) Girl's is fear that mathematics subjects are difficult considering it as the boy's domain only.

Concisely, social factors such as discrimination behavior, economic condition, and lack of time for hard work are the responsible factor for making low participation of female in study of mathematics. To increase the girl students participation in learning mathematics, mathematics intensive fields of study and science and technology oriented professions, pedagogical as well as policy consideration should be focused in these variables. After analysis and interpretation of data, the finding indicates that girls students are equally capable in achievement view but due to the school as well as out of school related factors their participation is low in optional mathematics.

Theoretical Literature

In dealing with the study, there is suitable theories which could be more applicable.

Vygotsky Social Constructivism Theory

Vygotsky has developed socio-cultural theory and he believed that children are active seeker of knowledge. In this theory, rich social and cultural context deeply affect children's cognition knowledge is constructed in social situation of discussions rather than being the reflection of the objective reality, which is known as social constructivism. In social constructivism theory, each human being makes sense of the

world in a unique way. According to Vygotsky, the children's development can be understood by studying the individual that it needs to examine the external world. Child can capture every kinds of information which is needed from the context to construct the knowledge. The role of experienced person is to assist the child providing the structure and questions that provide the assembly of the information and organizations. To social constructivism, knowledge is also a human product is socially and constructed (Earnest, 1997).

According to Vygotsky, child is completely dependent on other people during the early stage as the social environment. Especially these people could be the parents who instructs the child on what to do, how to do it, as well as what not to do, initiating the child's action. The theory emphasize the importance of what the learner bring to any learning situation as an active meaning maker and problem solver (Turuk, 2008) It acknowledges the dynamic nature of the interplay between teacher, learner and tasks provides a view of learning as arising from interactions with other. Social interactions influence on the nature of knowledge that is constructed and process of individual use to construct the knowledge. Thus, the constructions are socially centered and involve process of understanding, constructing meaning and making sense, children construct knowledge not only from individual but also from the context and the interaction with others who have more knowledge. The child needs some mediator like parents, teachers, adults or peer to uplift his knowledge from the knowledge s/he has.

According to theory, reality and knowledge are constructed through human activity as well member of a society either male or female. Every learning whether it is related to mathematics or other areas is not possible without social behavior which implies that in society. Therefore, it helps to develop self-confidence and encourage

them to actively participate in mathematics classroom.

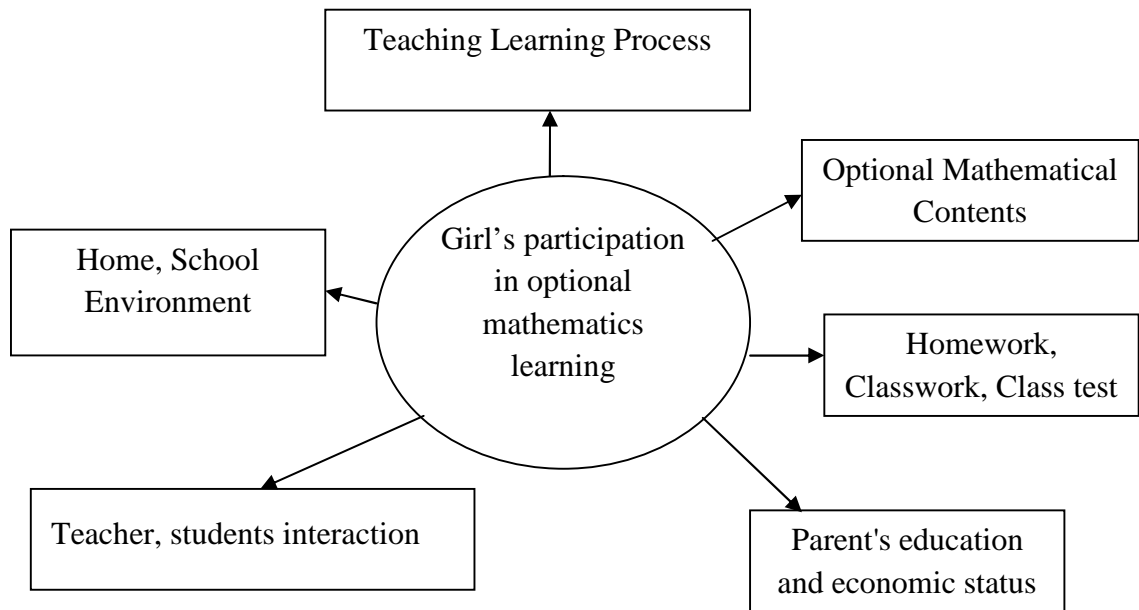
Walber's (1981) Theory of education productivity explains the student's personal influences comprise such variable as gender, age prior achievement, motivation, attendance in the school and home. The variable included in the three types of environmental factors are:

-) Learning environment at home: Parent's education and support in education and parents education pressure upon children.
-) Learning environment at school: Teacher's academic certification, teaching experience, instructional quality, class size and location of school.
-) Peer environment: Peer interaction in and outside the school.

Conceptual Framework

A conceptual framework is used in the research to outline possible courses of action or to present a preferred approach to an idea or through. It is explains the part of the research.

This study intends to found girl's participation in optional mathematics at secondary level may depend under different variables. Generally girl's participations in optional mathematics at secondary level, Specially in girl's influence from teaching learning process, home environment, school environment, parents education and economic status and teacher student interaction. Under teaching learning process teacher's qualifications, interest of learner, expectations of teacher views and beliefs of teacher's about girl's participation will discuss. Home is regarded as the first school to every individual. The students learned how to behave other, how to respect the elder, how to co-operate to each other etc.



(Devkota, 2017)

Figure 1: Conceptual Framework

Home environment plays a vital role in learning. The teaching activities and extra- curricular activities conducted in the school come within the school environment. Parent's education refers to the academic qualification awareness moral and good characters of parents by whom children learn. Culture is the base of human civilization which shapes the psychology of the individual and the society. Man is the social animal so every activities of society affect him. Interaction is the social activity. Interaction may be within individual or in groups, within person interaction refers to the mental activities with her mind and soul. Optional mathematics is very closely related with our practical life, this implies that it is not only the subject for formal schooling but also related to every activities of human being so its area is not bounded but has been adding several new concepts with the evolution of human society new it is being the composition of different branches of mathematics concepts.

For my research proposal, I went through different books, researches and

journal which carried out in relation to girls participation in learning optional mathematics for my literature review and most of them. I found that they have low participation in learning optional mathematics. The above model is developed by the researcher from the related literature, previous thesis and supervisor. As I know that very researches have been carried out on the participation of girls in mathematics learning in the qualitative paradigm but almost researches in quantitative paradigm. They have not discussed in this area. I found the gap between the reviewed literature and my purpose title of study. Thus to fulfill the gap, I would like to study on this topic. So, I believed the topic for the dissertation is suitable for carrying out a research.

Chapter-III

METHODS AND PROCEDURES

Methodology is the scientific approach, which deals with the systematic procedures of collection data and use of appropriate research method. It presents the logistics of the study. It describes the design of the plan and the procedure of the study, which are able to be carried out to achieve the objective of the study. Research methodology is the process of arriving at the solution of the problem through planned and systematic dealing with the collection, analysis and interpretation of facts and figure. Research is a systematic method of finding right solution for the problem whereas research methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objective in view. This chapter delineate design of the study, study size, sample of the study, tools for data collection, data collection procedure and data analysis procedure.

Design of the Study

Research design is the way and path of the research that guides the researcher to reach the goal of the research. Its main importance is to help researcher to collect data interpret and analyze it. The research design of this study was based on qualitative with case study approach and descriptive nature

Study Site

My study related to the participation of girls students in optional mathematics learning. This is qualitative inquiry. So, the sample size in this study is small. Size selection is also a very important to find the information. So, I have chosen Shree Pancha Kalika Secondary School, Shubha Kalika-7 Kalikot is the study site of my study.

Study Respondents

The purpose of this study focus on the school in Shubha Kalika Municipality of Kalikot district. It was focused only girl students. I have selected only Shree Pancha Kalika Secondary School by purposive sampling Because, this research focused to the participation of girl students in learning optional mathematics. The researcher have chosen five girl students, their parents, one optional mathematics teacher and one head teacher from sample school of Kalikot district for in-depth interview

Tools for Data Collection

One of the most important parts of study is data collection. There are many tools for qualitative research to get the information from the participation about their experience, ideas, and believes. Classroom observation form and in-depth interview guideline will the main tools used for the dada collection.

Class Observation Form

Observation is one way to collect primary data. Observation is a purposeful, systematic and selective way of watching and listening to an interaction or phenomenon as it take place. The class observation form were developed to observe the girls participation in classroom practices. The researcher used observation to record the activities of the selected key respondents in their class using observation form. The observation was also necessary to fulfill the objective of the study. So, the researcher used observation form the collect necessary information to find out the participation level of selected girls student in which observation form contains homework, classwork, class test, in interaction level (with teacher and other student) of these students. The researcher five days class observation of the girls student.

In-depth Interview Guideline

Interviewing is a data collection procedure involving verbal communication between the researcher and responder either by telephone or in a face to face situation. Interview is a process of communication or interaction in which subject. Interview is encouraged to respond towards the question after building a better rapport. Interview, especially in-depth interview was conducted with clients in this study. It is also the method which most commonly used to collect data. It means to express internal through, interest, concept and thinking of a person. So the researcher used to this tool as required to the five girls student, their parents, one optional mathematics teacher and one head teacher for in-depth interview.

Data Collection Procedure

Data collection procedure is a techniques or process to collect data to full fill the research objective. The primary and secondary data are necessary for reliable and valid output. After selecting the sample secondary school purposively, researcher was visited the related or selected secondary school with instrument to collect data. Then meet the head teacher and subject teacher then, I explained the purpose of the study in detail. The head teacher of the secondary school agree to allow the study to be carried out, for classroom observation. First of all, I observed, Listen, interact and record the essential data from the information on the basis of observation form homework, classwork, class test and classroom interaction will be carefully observation. In this research data collected by conducting classroom observation. After then, interview was be taken with focus five girls student, their parents, one optional mathematics teacher and one head teacher.

Data Analysis Procedure

This study was based on qualitative approach. Data analysis of the study was deal with the help to collect information or data collection procedure. The collected information at first will categorized according to the category of the respondents and them according to given the text of the interview note. The data analysis included creation of the field text consisting of field notes and finally public text. When I start to analyze the field information, the researcher to understand the whole information in the form of the themes. First of all researcher to put the information in the number of the categories.

I took an interview to find the factor affecting the girls participation in optional mathematics. Researcher pointed out in Nepali during interview and translate in English. The researcher obtained many views from interview on the basis of that factor affecting participation in optional mathematics of girl's students. The information would collect from classroom observation, in-depth interview would summarized into the categorical form, coding and integrate similar coding and make the theme. Thus the various themes would be generated using triangulation and theoretical framework.

Chapter-IV

ANALYSIS AND INTERPRETATION

This is a qualitative study related to the “participation of girl’s student in optional mathematics” learning. The research was conducted at Shree Pancha Kalika Secondary School Shubha Kalika-7 Kalikot related upon five girls student. The main objectives of this study were to identify the participation of girls students in optional mathematics learning and to find the major factor affecting the girls participation in optional mathematics learning. The main tools used for this study were class observation from, in-depth interview paper and related school documents. The main respondents of this study were five selected Girls student, their parents, mathematics teacher and head teacher of this related school.

This chapter includes the analysis and interpretation of the collected information obtained from the study. The in-depth interview were taken to the focused on girl's student, their parents, mathematics teacher and head teacher. The responses of respondents during face to face in-depth interview were carefully noted. There were no limitation to responses for respondents. They were able to expresses freely whatever they have in their mind. The recorded interview data were translate and coding and make them. The data obtained of the study are presented in terms of following topics personal details of respondents.

Analysis of Students Class Attendance According to School Record

The number of class cases school opening days and girl student's attendance day under grade ix and x attendance percent from the schools record are presented in the following table.

Table 1: Class Attendance of Girls Students

S.N	Grade IX (2074)			Grade X (2075)			
	School opening days	Students attendance days	Students attendance in presents	School opening days	Students attendance days	Student attendance in presents	Participation level
A	220	166	75.46	220	170	77.28	4
B	220	126	57.28	220	128	58.19	3
C	220	152	69.1	220	156	70.9	4
D	220	120	54.56	220	126	57.28	3
E	220	124	56.37	220	126	57.28	3

Excellent (5) for (80-100) %, good (4) for (60-80)% , normal(3) for (45-60)% , poor (2) for (32-45)% , very poor (1) for (0-32)%, (Neupane, 2016).

The findings record in table 1 shows that out of 220 school opening days of grade IX in 2074, the attendance days of girls students A, B, C, D and E have 166,126,152,120 & 124 respectively and out of 220 school opening days of grade X in 2075, the attendance day of Girls students A, B, C, D and E have 170, 128, 156, 126 &126 respectively attendance percentage of student. A has 75.46 in grade IX and 77.28 in grade X, B has 57.28 in grade ix and 58.19 in grade x, C has 69.1 in grade ix and 70.9 in grade x, D has 54.56 in grade IX and 57.28 grade x and E has 56.37 in grade ix and 57.28 in grade X. From the attendance percent of IX and X , research find out participation level of A has 4 which is good B has 3 which is normal C has 4 which is good D has 3 which is normal and E has 3 which is also normal.

The finding recorded in table 1 shows the, low attendance of girls student in classroom. Because they are poor economic condition in their family, parents are non-

educated. They are some of low attendance like as: poor economic condition, early marriage, load household work, care of little brother/sister, grazing cattle are major factor affecting to girls attendance in classroom.

Analysis of Student Classroom Interaction according to Classroom Observation

Five selected Girls student classroom interaction with teacher and other students are presented in the following table.

Table 2: Interaction Position of Girls Student

S.N	Interaction with teacher	Interaction with other student	Participation level (in average)
A	3	4	3.5
B	2	3	2.5
C	3	4	3.5
D	2	4	3
E	3	3	3

Excellent- 5, good 4, normal-3, poor-2 very poor-1, (Neupane, 2016). Any the 5 days class observation.

The findings recorded in table 2 shows that interaction level of girls student with teachers are. A has 3 which is normal B has 2 which is poor, C has 3 which is normal, d has 2 which is poor and E has 3 which is normal. Interaction level of these student with other student are. A has 4 which is good, B has 3 which is normal C, has 4 which is good D, has 4 which is good and E has 3 which is normal. The result of table 2 show that the participation level of A and C was satisfactory and participation level of B, D and E were not satisfactory. Finally, above table 2 shows that less

interaction/no proper interaction with teacher and other students. Because they are afraid to teacher and them afraid ask question with teacher.

Five selected Girls student's participation level in class activities (i.e. Homework classwork class test was presented in the following table.

Table 3 Class activities of Girls student's

S.N	Participation			In average
	Homework	Classwork	Classtest	
A	4	3	3	3.33
B	3	3	3	3
C	4	3	4	3.67
D	3	2	3	2.67
E	4	3	2	3

Excellent -5 good-4, normal-3, poor-2, very poor-1, (Neupane, 2016). Any the 5 days class observation.

The findings recorded in table 3 shows that participation level; in HW of selected Girls student are A has 4 which is good B has 3 which is normal, C has 4 which is good, D has 3 which is normal and E has 4 which is good. The participation level in CW of selected Girls students are A has 3 which is 3 normal, B has 3 which is normal, C h as which is normal, D has 2 which is poor and e has 3 which is normal soon participation level in CT of selected Girls students are A has 3 which is normal, B has 3 which is normal, C has 4 which is good, D has 3 which is normal & DE has 2 which is poor in average the participation level of A has 3.33 which is normal, B has 3 which is normal, C has 3.67 which is good, D has 2.67 which is normal & E has 3

which is normal. Finally low class activities of girls student in optional mathematics learning. Because they are busy in household work, so they did not regular homework and they are busy in house.

Analysis the Girls Student Participation in Learning Optional Mathematics

According to Interview Report

Interviewing is a data collection procedure involving verbal communication between the researcher and responder either by telephone or in a face to face situation. Interview is a process of communication or interaction in which subject.

Respondent A

Respondent A was 16 year old. She was studying in grade X. She live in Kalika rural municipality-7, Kalikot District which is 15 minute far from the school. There were 8 members in her family having one sister, two brother, father, mother, grandfather and grandmother. Her parent's occupation is farming. She is interest in her study but due to the lack of economic condition of family. Her father busy to earn money in India.

According to school record she is regular student and her attendance in class nine and ten must be good. In extracurricular activities she likes dancing. She does her homework regularly and she has not failed any of her class test. She is an average student according to her class teacher and head teacher. About the own study she said,

“Main occupation of my family is farming and father and mother are illiterate. My father is going to earn money in India, So I help my mother house work, so I could not give sufficient time for the mathematics at home”.

About her study her mother told:

"I am illiterate, I didn't understand about her study. Hence she does her homework but give not enough times to study. Due to the poor economic condition it is very hard for us to arrange the food and clothing. So her father earn some money in India".

From The above view of parents and student I concluded that parents are economically and educationally backward. She had no enough time to study at home but homework does regularly. Her family member are not educated to give feedback for her further study.

Respondent B

Respondent B was 15 years old. She was studying at grade X. She was born at Kalika rural municipality-8, Kalikot District. Her family is joint family with 8 family member having two young sister and one elder brother, father, mother, grandfather and grandmother. Her parents are farmer, so their income depend upon farming. Both father and mother are illiterate. She helps her mother household work, so she could not give sufficient time for homework and study. She said,

"Due to poor economic condition my parents could not buy our homework copy, pen, school dress and bags etc. And I help my mother like as cooking food".

She is interested in reading and writing, further she said,

"My father said to me farming is our occupation, so you should help cooking food, care little brother/sister and grazing cattle".

She is irregular in class because she does the household work. She does not have good family environment to study. About her study her parents told,

"We are the people of passing our life by working in daily. The main problem is that we are economically backward of lack of knowledge and education. We have

not capacity to help for student, so children could not get good facilities for education”.

These statement concluded that most of the parents are economically and educationally backward which play the main role of low participation in mathematics classroom.

Respondent C

Respondent C was 15 years old studding in grade X. She lives in Kalika rural municipality-8, Kalikot District. Her family has six member. Her father and mother both are uneducated Home environment for learning was not so effective in her family. There was economic problem in her family. Her father worked in India. Her family think that mathematics is a very hard subject, Girls can't read mathematics, so daughter most do house work. Her house far from the school approximately 1:30 minute. So that she is not regular attendance in school classroom. Her family occupation is farmer, so she didn't have more time to homework, study and practices when she come from school. She helped her mother at house.

About the own study she said,

“I have not enough time for doing homework and practice the extra problems of mathematics”.

About her study her father told,

“I don't know any more about education but I have providing expensive for education. Teacher said me that my children are doing better that of past year”.

According to these views, researcher concludes that the lock of education o presents affect the education status of their children. Children busy of house work. The role of teacher in learning process is no sufficient, present's awareness, their

education way of handling and guiding the family members are also most effective factors if the parents have to enable their children academically.

Respondent D

Respondent D is one of the Dalit Girls student in grade ix. She was born in kalika rural municipality – 7 Kalikot district. She was 16 years old in her family there were five members with one sister one brother and parents. She is elder children of her parents. In comparison with other Dalit family her family seems to be small. Her family speaks the Nepalese language. Her family occupation was agricultural work. The distance between her house and school is nearly 20 minutes. They following Hindu religion. They are very poor so they difficulties to manage daily life. Her father was skillful farmer for making halo, jawa, kuto etc instrument of agriculture. Her mother is housewife. She has not awareness about the education of her children. She did not homework at home. And she did not like go to school. She said,

“I am always late because due to household work and dominated by other students of my class. And I often did not homework, so I did not like go to school. I were afraid to asked question with sir and other friends. I have no sufficient time for mathematics learning at home due to household works, so I am not regular participation of class test and class work.

Above these statement included that his family was very poor economic condition his lack of study time at home teacher doesn't familiar with girls student. So she were of afraid to ask the question with teacher and classroom.

Respondent E

Respondent E was 15 years old studding in grade x. His house is located at kaliak rural municipality -8 kalikot district and it takes 15 minutes to go the school.

There are six member in his family. She has one sister, father, mother grandfather and grandmother. Her parents are farmer so their income depends upon farming there was economic problem in her family she hobby is singing and dancing and his aim in life is to be a good singer and dancer. She is known as a good student of the class she does always homework and class works, But she were afraid too asked question with teacher. Her house environment is no good for study optional mathematics. In her family no senior are school educated. Her optional mathematics practices is irregular. She feels bored to study optional mathematics.

From the above case studies, researcher had made same conclusions, like as poverty and uneducated are playing crucial role to less girls participation in optional mathematics learning. The main occupation of the girl's parents were farming and parents are uneducated.

Researcher observed the classroom activities such as classwork performance and participation, class test performance, homework completion and attendance from the school record of the girl's student. It was found that low performance and participation of girl's student in optional mathematics with compared to boys student. According to the optional mathematics teacher shows the low participation of girls students with compared to boys students.

Major Factor Affecting the Participation of Girls Student's in Learning Optional Mathematics

Factor that discourage the Girls student from learning mathematics can be related to school environment or their home environment. Today's student's strongly need to know the uses of mathematics that thought in their practical life they could not see any connection of their life with different part of mathematics. This is due to the fact that the process of information and their motivation for learning does not

correspond with traditional method of classroom teaching. According to mathematical abstract lecture method is still commonly used to teach mathematics. Parents are illiterate and lack of economically condition.

Every teacher should be capable to teach the subject matter effectively. But most of the teacher in school level are untrained with low qualification. Parents negligence plays the favorable role to reduce the children's self-confidence weak relationship between teacher and student's destroyed the creativity many student who are weak in study are interested to sit with weak student's and it is difficult to create the learning environment. They copy the guide and talent student's note for doing homework but do not devote time for related to the seriously school environment is directly related to the effective learning there should be rule and regulation knower by the teacher and student's in the school, student should be regular in the school for good achievement discipline of the student's is also responsible for the good learning. Teacher behavior towards girls students peer behaviors with their friends, collaboration sharing of knowledge question answer to the teacher and student and role, responsibilities and opportunities given by school and teacher to the girls students are main determining factors for girls participation in optional mathematics.

With the help of related literature theory interview with student's, their parents, mathematics teacher head teacher, observation and related document school it was assumed that there were different factor at teaching the participation of Girls students in optional mathematics such as follows.

Home Environment

Home is considered as a foundation of education home is the first school to every individual. The student spend most of the time in the house. The children learn many things from their parents. Home environment plays vital role for learning. The

study includes occupation of the family economic condition and learning opportunities. The economic status of the parents directly affects the participation of Girls student.

Home environment is the search components other education related behavior. It is crucial of components which is directly associated with learning of student's the participation of children depends not only on the part played by teacher but also on the parents awareness interest and knowledge about handling and guiding their children at home researcher has asked question and noted them their respected voice as below.

We sit together with our family members. We don't have proper home environment in our home we can't concentrate our mind to study so we cannot solve all homework properly. [Student view]

I work at home and sometime irregular in the school but I could not give more time at home. [Student view]

Our family occupation is family our parents forced us in farming and house hole works. [Student view]

I have to help in the work at home and I could not give time to my study. So I did not participate in mathematics learning. [Student view]

Our occupation is farming and we are not educated we don't know about education our economic condition is very poor so we have no give good environment at home for study of our children.

[Parents view]

But home environment is very essential part of learning most of the student are from poor economic back ground so that they don't good home environment.

[Head teacher view]

Home environment is crucial part of learning so that it helps to boost up their learning they are busy with their field in their surroundings.

[Math teacher view]

I found from the above statement that environment is essential part of learning. It help to learn every one. But Girls student were worried about their home environment. Due to poor economic home condition and parents are on educated they couldn't learn at home one of the basic of the above response it can it can be said that the work load in the home hamper their study. Student have to be irregular in the school because of the work at home so student not give enough time for mathematics practices at home. According to Walber's, (1981) theory of educational productivity, learning environment has great role in girls participation. Parents education and their support to children. Form the observation and interview home environment was not good parents it was found that most of selected Girls student were very poor economically and educationally so they could not get the good environment to their children. Parents weren't educated they earn money working in other fields.

Teaching Learning Process

Teaching learning process of learning in the mathematics classroom it is a science and art of providing and gaining knowledge via different method. It includes the method of teaching process of motivation opportunity to learn in classroom activities interest of learns is also an important determining factor in student's participation mathematical problem can be solved by different process in mathematics. The teacher directly effects on the mathematical learning of student's it is better to use student's centered approach while teaching mathematics.

The role of teacher most important and parents are careful about girls interest teacher's should be manage scholarship of poor girls student to motivate to read. To only and find the suitable solution in the area of low participation in mathematics. Social constructivism becomes one of the possible theory to solve the problem on the topic of participation of Girls student's in mathematics learning. Every student learns from society from social contact with home family and universe According to them knowledge can be constructed from society.

I asked the question to student's math teacher, parents and head teacher and noted then below.

The school has provided extra class in the morning at minimum cost but number of student are some as previous class teacher don't followed student's oriented method so it is difficult to study.

[Studen view]

Teacher does not give the special attention to us.

[Student view]

Our occupation is forming, we are uneducated and we did't know education. School environment is good but teacher don't encourage the girls student and we say that teacher are not qualified the subject Mater".

[Parents view]

Most of the parent are very poor so the Girls student are irregular in class they are not interested in math learning.

[Head teacher view]

They are interested in singing, dancing, listen song folk music and game. They are also interested in visiting and less of them are interested in studying.

[Math teacher view]

According to the responses. The school provided the extra class to supports for learning but teacher does not give the special attention for Girls student. Teacher used. not problem solving method and don't followed student central method. The main problem of the family occupation in participation of Girls student. Most of the parents are poor non- educated so that the Girls student gave not enough time to practices. They are irregular in class so they feel each problem hard as they not interested in mathematics.

Above this argue teacher is passive in teaching learning process. We always use tradition method to teaching Vygotsky, (1978) state that, teacher should always encourage to develop ZPD in classroom we also said that left the student free in classroom to gain new knowledge, student create solve their problem by their own activities. It shows that learning is the process which obtain from interaction with peers, teacher, other. But the above discussion shows there were lock of interaction between teacher and student.

Optional Mathematical Contents

Optional mathematics is the left to one's choice not required or mandatory subject. It is not compulsory subject for all student. It is closely related with our practical life this implies that it is not only the subject for formal schooling but also related to every activities of human being. So its area is not bounded and its contents are hard of the girl's student. It is a fundamentals part of school curriculum. Content is the information of the course, traditionally optional mathematical content would edited and tailored context putting in the optional mathematics content. The present include in optional mathematical content are; Algebra, Matrix, Limit and continuity, Coordinate geometry, Trigonometry, Vector, Transformation and Statistics are present. The researcher asked about the optional mathematical content to the student,

parents, head teacher and optional math teacher. The revied version in own word as below.

Optional mathematical content are very hard, because contents are no linkage one chapter to another chapter. I can't understand the symbols, theorem, using the formula and solving the problem.

[Student view]

Algebra is most difficult chapter for us. We can't understand the relation function and algebraic symbols with their arrow diagram.

[Student view]

We face difficulties while learning Co-ordinate geometry the axiom and theorem is most difficult and their application too. We don't know to prove that theorem. So we felt bore in coordinate geometry class.

[Student view]

We don't know about the optional mathematical content. We are uneducated so we don't know quality of optional mathematical content. So we are unaware about the optional mathematical content.

[Parent view]

The government has made the syllabus satisfactory. But the linkage of one chapter to another chapter is different, so it is hard subject for the student.

[Head teacher]

Optional mathematical content are both new and outdated. In algebra and coordinate geometry class they are less participation and they are boring. I think the curriculum should be design according to student capacity.

[Math Teacher view]

The above views indicate that algebra and coordinate geometry are more difficult chapter. For this chapter, students need more time for practice and repetition. So the researcher conclude that optional mathematics is considered a difficult subject by most girl's student. Optional mathematical contents are no linkage of the one chapter to another chapter. Here according to the Vygotsky constructivism teacher motivation is most important thing for learning difficult topic.

School Environment

The school environment play the important role to decide the future position of the student's and the life of student. The teaching activities and extra- curricular activities conducted in the school be rule and regulation followed by the teacher and student's in the school student should be regular in the school for the also responsible for the good learning there should be good relationship between teacher student head teacher, parents and school administration but student are not so close to the teacher and head teacher of the school. The researcher asked about the school environment, to the students, parents, head teacher and math teacher. The received version in their own word as below:

School environment is peaceful but not provided physical facilities in school.

[Students view]

School did not manage all teaching material for learning mathematics.

[Student view]

School did not encourage and motivation of girls student for the participation.

[Parents view]

School environment is very good and peaceful environment. All physical facilities are available in the school like playground building of two floor with a lot of classroom is canteen is available in boundary of school.

[Head teacher view]

School is located in the peace and beautiful place were no out sound are coming to disturb and no pollution is here. But no sufficient facilities of the Girls student.

[Math teacher view]

While analyzing the above version, it was found school environment is peaceful. School is located in the peace and beautiful place. Physical facilities are available in the school like play Ground building of two floor with a lot of classroom, canteen is available. Where not sound coming to disturb no palliation. There but not physical facilities of Girls student's student. Like as toilet, top rest room etc. are not sufficient available for girls and not create. The positive environment of Girls participation. It was found that did not manage all the leaching materials for learning mathematics. There was no library to develop the reading habit of a student's. Teacher did not suggestive to motivate student to study mathematics. There was no environment to the help each other is study mathematics.

Parent Education and Economic Status

Home is the first school for the children and father and mother is the first teacher of the children elder brother and sister are transferring the knowledge to the child. If the parents are literate and have good moral and character then their children also imitated the sane behavior. If the parents have bad behavior and are illiterate their children learn that behavior from parents elder brother and sister. Hence the poor parent education is another factor affecting the participation in optional mathematics

of Girls student's. Student, parents head teacher and math teacher are their respected voice:

Main occupation of my family is faming I am busy every time in household work, so I could not give sufficient time for the mathematics learning at home. I couldn't understand the mathematics problem and I felt very difficult in learning mathematics.

[Student view]

Due to poor economic condition my family couldn't buy our copy, pen, school dress, bag, etc.

[Student view]

My parents are illiterate and my family condition was very poor economic condition, so I helps my mother household work.

[Student view]

We have not enough time for doing homework and practices. Because our family occupation is faming and parents are illiterate so very low economic condition our family we are not regular participation in classroom.

[Student view]

We are economically back word of knowledge and education. We have not capacity to help for her study. So children could not get good facilities for education.

[Parents view]

Economic condition and parent education depend on the Girls participation in mathematics learning. They are very poor and knowledge of education their parent. So Girls student give not enough time to participation home they are irregular in class. Their irregularity makes more difficult to pass in mathematics. They could not tuition and coaching class.

[Head teacher view]

Parent's gives not opportunity for their study. Because they are non – educated.

[Math teacher view]

While analyzing the above version it was found that Girls parents are illiterate non- educated poor economic condition and farming is the main occupation of their parents Girls parents can't guide their children at home due to the lack of education parents engaged. On different house work and they had traditional belief. Parents are very poor and no- knowledge of education. So they give not enough time to practices at home. So that they are irregular in class parent's education and economic condition are most factor affecting the girl's participation. According to Walber's theory of productivity, parents education enhance learning environment at home and they create pressure and support their children in education.

Teacher Student Interaction

Interaction is to communicate with some body especially while in the work or teaching learning activities. It is social activities and all the human continuously get the any of interaction. Teacher-student interaction is the engage to know or to understand the subjects to encourage students them into investigate and solve mathematical problem by discussing each other and with the teacher. The four episode of classroom activities was as follows:

Episode-I

The first class observation the teacher went to the classroom along the researcher. All the students stood up and said good morning. Then the teacher told them to sit down. This should that the students were well disciplined and the school

have taught them to respect the teacher. There were total 12 student in this class and six student are Girls. Desk and bench were sufficient in the class. The white board was kept at the right place. The teacher check the homework. The teacher started to teach indices. Teacher wrote the topic "Matrix" on the white board and started to teach. The teacher did not review previous lesson. Teacher wrote down a definition, method and problem on the white board and started to solve each steps. Teacher asked the student whether they understood or not, Sum of them say yes sir. Mainly the student on the first branch were active most of Girls student were passive. Again the teacher wrote another problem explain step by step asking them at least he did the problem in the white board. Then teacher told them to do the exercise at home.

From above classroom activities, it indicated that there was no proper interaction between teacher and Girls students in mathematics classroom. The teaching method was lecture and practices and Girls students of the class were no active. The cooperation between teacher and the student couldn't established .Social constructivism theory emphasis on the classroom, but not transmitter of knowledge, teacher should help the learner to get to his or her own understanding of the content, and Teacher should provide guidelines and creates the environment for the learner to arrive at his or her own conclusions. But in case school it couldn't found.

Episode -II

The second class observation of second day. The teacher just entre in the class with daily Use Teaching materials. Research also entered in class with mathematics teacher. Teacher started to teach. He wrote the topic "Determinant". He wrote some rules on white board. He didn't review the previous lesson there were 10 student in the class some of Girls student were absent then he wrote a problem on the white board and solve if explaining then he gave a same kind of problem to the student to

do. All of the student were busy to solve that problem. After some time teacher asked," any confusion? One girls asked it is completed sir other student discussed themselves to solving the question. He check one copy from one girls but he didn't give feedback him student teacher interaction is normal the class was over.

From above classroom activities, it seems that class was no effective for learning. The teaching method used by the teacher was lecture method and some of the Girls student were absent. The teacher not motivation of the student and he did not give feedback him fully teacher centered method is used to teach.

Episode -III

The third class observation the teacher was just enter in the classroom together with researcher. He had started to teach he wrote the topic "Determinant" on white board. He did not review the previous lesson then he wrote some rules and problem on the white board and solved it explaining. There are no proper interaction with student and teacher in this classroom. The teacher did not used teaching materials and follow only teacher centered method. The classroom was silent because the was angry. The teacher was problem solver but did not motivation of the students.

The above classroom activities, it seems that class was no effective for the learning. The teaching method used by teacher was lecture method. The teacher did not motivation of the students and he did not give feedback.

Episode -IV

The fourth class observation. The teacher went to the classroom along the researcher. He hadn't any kinds of teaching learning materials. He wrote the topic Cramer's rules on the white board and started to teach. He did not review previous lesson. He does check the homework. He had done two question on the board and go to the office after 15 min he come to the class and asked the student were there

understand one student said that I could not understand completely sir. The teacher becomes angry and said. You must be serious to learn and understand the lesson from my teaching most of the student seemed afraid with the teacher said the student to do remaining exercise as the homework. And he said the class was over.

The above response shows that the classroom is teacher dominated and student's oriented class was totally deductive the cooperation between teacher and student couldn't be established. Thus it is concluded that there is no proper interaction between teacher and Girls student. The teacher did not review previous lesson.

Episode - V

The fifth class observation the teacher was just enter in the class together with researcher. He had started to teach he wrote the topic "Trigonometry" on white board. He did not review the previous lesson then he wrote some formula and problem on the white board and solved it explaining. On that day one of the Girls student asked the question not to be the teacher directly but to her friend sitting hears to her both are discussed the problem. The teacher was angry and asked the student not to disturb. Teacher did not care that problem. The teacher used fully teacher centered method to teach the teacher gave homework regularly but not check regularly Girls student poor interaction with teacher the teacher gave homework form exercise and the class was over.

From above classroom activities it indicated that there was no proper interaction between teacher and Girls student teacher always dominated the student because they were not did mathematics homework regularly and they become absent in school it seems that class was not method is fully teacher centered method is used to teach and the was just problem solver teacher gave the homework and classwork regularly. Yygotsky (1978) contstructivism they emphasis on the teacher should work

as a facilitator in the classroom the teacher should help the learner to get to his or her own understanding of the content, teacher should provide guidelines and creates the environment for the learner to arrive at his or her own conclusion but in case school it couldn't found.

Chapter – V

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary, findings, and conclusions of the study some recommendations based on the finding are made for future study.

Summary

This is the case study of Shree Pancha Kalika Secondary School. The purpose of the study was to identify the participation of girl's students in optional mathematics learning and to find the major factor affecting the girl's participation in optional mathematics learning. The design of the study as qualitative as well as descriptive in nature. The major tools of the study were class observation and in de path interview. The respondents of the study were girl's student parent math teacher and head teacher of case school.

The researcher categorized the collection information according to their respected as different themes were considered is a code. And there developed observation form and interview schedule. Then the similar code versions of the respondents were collected together and explained in their perspectives triangulation was adopted to maintain the validity and reliability of the information.

Findings

The main research objectives of this study was to identify the girl's participation in optional mathematics learning and to find out the factor affecting the Girls participation in optional mathematics learning. After analysis and interpretation of different data the researcher found that girls student have not enough time for home study and to do at home because of household work problem. So, they sometime irregular in school presence. The presences of girl's student in classroom was low, I

found that the class was less interactive with teacher and other student. The teacher did not use teaching materials only used teaching style was traditional.

The teacher did not encourage the student for learning. Student's parents were illiterate. So, there was lack of economic condition, lack of education, teaching learning process, school environment, home environment, parent education and economic condition and student teacher interaction are main factors affecting the girl's participation in optional mathematics. The findings of the study were mentioned below.

-) Less girls participation in learning optional mathematics. The teacher did not encourage for girl students.
-) Teaching learning activities were traditional not used teaching materials and not effective such as the teacher did not review the previous lesson did not motivate the student did not use modern technologies.
-) Work load that directly disturbed to study at home and participation in classroom.
-) Parents were illiterate farming was main occupation of parents so there was lack of economic condition and lack of education lack motivation from home.
-) Home environment directly affected the girl's participation in optional mathematics.
-) Optional mathematical contents are difficult for the girls student, Because they can't understand the relation function, algebraic symbols, theorem, using the formula and solving the problem.
-) Less interactive with teacher and other student.
-) School environment was good. But not physical facilities for girls student. Such as toilet top etc, was not facilitated in the case school.

-) Parent economic condition and education was very poor they was not knowledge of education so that they gave not enough time to home at study.
-) Hence the major factor affecting the participation girls student were poor economic condition, teach learning process, home and school environment, parents education and economic status etc.

Conclusions

Form the above finding of study the girl's participation in optional mathematics was not excellent it concluded that minimum participation of girl's students in homework, classwork and class test having less attention in classroom and being less interactive with teacher and other friends. The teacher did not encouraging for girl's student, teaching leaving activities were traditional, not used teaching materials and classroom was not effective. The factor affecting the participation of girls student in optional mathematics learning are seen which are teaching learning process home environment, school environment parents education and economic condition and teacher student interaction etc. the finding of the study show that girls parents were illiterate. The main occupation parents was farming they was very poor condition of education and economic condition. They was not now knowledge of education. School environment was good but not physical facilitated of girl's student. There were no proper interaction between teacher and students.

Although mathematics education has been given an important place in curriculum of all level of school and the university education. These responsible factors should be manage properly. Student center method should be implemented rather than traditional method and teacher centered method to modify the teaching learning. The teacher did encouraged of the girls students. Co-operation between teacher and girls student was been excellent participation in mathematics. The girls

students should be encouraged from parents and there should be provided sufficient time for study at home. Similarly, from the school and mathematics teacher of the girls students. Economics based programmed should be lunched as girls students by giving scholarship, discount in extra period and their tuition fee and so on.

Recommendations

From the above findings and conclusion, the researchers would like to suggest some implication for the improvement of participation in mathematics learning in this study it could help other to know some ideas and apply them in the time they need in a particular kind of situation. This research helps to improve the pedagogy of the teacher. This research future helps for such marginal student condition at other subject and other district. The recommendation are:

-) To encourage the girl's student to be regular in the class, girl's student should be awarded and irregular should be diagnosis.
-) Student centered teaching learning method and techniques should be emphasized.
-) Similar study can be carried out in higher level.
-) Similar study can be carried out in same level but in other subject.
-) Similar study can done in other district of Nepal as well as.

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Appendix- A
Classroom observation Note

Teacher Name:

Date:

Number of students:

Class:

School:

The classroom observation note prepared on the basis of following indicators being participant with mathematics teacher during teaching learning activities.

1. School Environment

-) Rules and regulation of the school.
-) Extra-curricular activities.
-) Discrimination among girls student and other student.

2. Classroom activities (like as, teacher students interaction, homework, classwork and class test)

3. Teaching learning activities

-) Creates and maintains a physical setting that promotes learning.
-) Reviews and relates new learning to previous learning.
-) Raises level of interest in the lesson.
-) Check students understanding of objectives.
-) Uses motivational techniques to maintain interest and involvement of students.
-) Provides guided and practices.
-) Encourages relevant discussion.
-) Provides corrective feedback.
-) Check homework, classwork and class test.
- Integration of teaching materials

) Applies the materials.

) Student's attractive materials.

) Sources of teaching materials, hand- made, local or bought.

➤ Closure of lesson

) Relates lesson to objectives.

) Reviews the learning of the day to set the stage for the next leaning.

) Check the understanding of students.

Appendix-B

Guidelines for In-depth Interview with Girls Students

Name of student:

Class:

School:

Roll No:

Position of Class:

Address:

The interview with girls students will take on the basis of following main topic.

-) Environment of home:
-) Opportunity to learn at home:
-) Opinion on facilities of the school:
-) Opinion towards mathematics learning in classroom:
-) Parents' economic condition:
-) Relation with teacher:
-) Class room practices:
-) Encouragement to girls students by teacher:
-) Teacher use teaching materials in mathematics class.

Appendix-C

Guidelines for In-depth Interview with Head teacher

Name of head teacher:

Qualification:

Subject:

School:

Teaching Experience:

Address:

The interview with head teacher will take on the basis of following main topic.

-) School facilities:
-) Learning environment in the school:
-) Classroom management:
-) Teacher use teaching materials in mathematics classroom:
-) Opinion towards home environment:
-) Opinion towards mathematics learning in classroom:
-) Relation between teacher and girls students:
-) Economic condition of parents:

Appendix-D

Guideline for In-depth Interview with Optional Mathematics Teacher

Name:

Qualification:

Teaching Experience:

School:

The interview with optional mathematics teacher will take on the basis of following main topic.

-) School facilities:
-) Teaching strategies:
-) Classroom practices:
-) Opinion towards home environment:
-) Opinion towards mathematics learning in classroom:
-) Students interaction with teacher:
-) Opinion towards parents education:
-) Teaching materials used in mathematics class.

Appendix-E

Guidelines for In-depth Interview with Parents

Name of parents:

Address:

Occupation:

Qualification:

Family size:

The interview with parents will take on the basis of following main topic.

-) Activities of the girls students at home:
-) Education and economic condition:
-) Opinion towards school facilities:
-) Opinion towards teaching method:
-) Education and monthly income:
-) Opinion toward relation between teacher and student: