

Chapter I

INTRODUCTION

Background of the Study

Participation means involvement of people in many activities for certain purposes. Student Involvement creates and models inclusive environment where students find opportunities for personal and professional development. We integrate in class and out of class learning to provide positive experiences through programs, services and events. Participation Involvement of girls in Mathematics is low in comparison to boys in higher studies. 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. In context of our country, girls are not encouraged for study by their parents and society. Less number of girls gets chance to involve in Math education comparatively.

There are some causes of less participation of girls in mathematics. Mathematics need much time to practice but almost girls don't get enough time to practice it. They have to look after their household work. Most of the girls don't get opportunities of higher study with subjects relating to math so girls are not interested in math. They only try to pass SLC. Girls continue their study with other easy subjects. So, participation of girls in higher study is almost less. This is poor and very bad aspect of our country.

Participation of girls in Math must be increased in our country. For this, every parent should know that girls also can be very important manpower in this world and they should provide their daughter opportunities of good education. Society and

country must encourage girls for higher study to take mathematics subject by providing scholarship and other facilities.

The patriarchal value system and prejudices towards girls' education are still creating major barriers to girls' opportunities for education. The growth of private education is an added force for discrimination, with boys far more likely than girls to be supported by their families at private school.

Girls are less encouraged than boys to participate in and learn about the social, economic and political functioning of society with the result that they are not offered the same opportunities as boys to take part in decision making processes in school. For example textbooks often make girls and their lives invisible. History often describes the action of men in society. Women and girls are often not included in active and positive ways. In some countries, girls have fewer chances to plan and make decisions about process and programmes. Therefore, we need to face this problem right from the beginning and to ensure equal opportunities for boys and girls.

Girls are for example, rarely the ones sent to the shop to do shopping neither are they allowed to play outside the home for long periods of time as boys often do. This denies girls the opportunity to explore and experiment with diverse activities and situations outside at home which could be useful to them. Boys when they go to shopping get to practically use the knowledge and skills acquired in mathematics,

Gender disparity has been a chronic problem in education ever since Nepal launched planned efforts for development of formal schooling. People are born free. A mother bears some pain whatever she is giving birth so; a boy or a girl but with the passage of time discrimination starts, treatment differs and separate responsibilities is given. A girl's periphery starts to limit where as a boys starts to expand. Providing

education to a girl is thought useless because she would go to her husband's house after marriage. All these have affected the literacy rate of girls in the country. The 2001 census places girls' literacy rate at 42% and boys at 68%. Girls who are set to school have to do household work, take care of younger and help parents in their work. As a result, they are not able to do well in their school. It is very difficult for them to complete the primary education. The socio-economic condition also affects their education. Due to lack of educational awareness in parents, girls are deprived from opportunities of education.

Poor economic condition, early marriage, household works, care of siblings, grazing cattle, engagement in wage earning activities and gender discrimination are the major discouraging factors to girl education. Considering the lower participation of girls even at primary level, the Ministry of Education has introduced various incentive programs during the course of time. The main objectives of these programs are to enhance girls participation in schools. These programs are:

- i. Primary school scholarship (1997)
- ii. Primary school girls scholarship (1996)
- iii. Free textbook distribution (1978)
- iv. Nutrition program in primary schools (1996)
- v. Dalit student scholarship (1990)

In comparison, the literacy rate of male is higher than the female. The low rate of female education is due to many reasons. First, women are treated as second class citizens of the society and they are supposed to be home keepers. Their main duties are to serve home and male members in the family so their achievements in any field of education are very low. The extent of female access to education tends to be more

limited than man. In our society, cultural restrictions for the education of women confine them to the domestic and limit their participation in education at activities. We should increase the participation of girl in educational field. Government should seek to create awareness of the importance of girls' education, issues surrounding their education in target area. The Government should focus on the importance of mathematics education for girls. Therefore, it was very important to undertake a research on topic.

Introduction of Yadav

According to CBS (2011A.D.) there are 26,494,505 population of Nepal. Out of total population the Yadav population is 1,054,458. The percentage of Yadav among total population is 4 %. The literacy rates of female and male are 57.4 and 75.1 percentage respectively. The highest literacy rate is in Kathmandu (86.3%) and lowest literacy rate is in Rautahat (41.7%). They belonging to this ethnic group are scattered in Terai regions. The Yadav castes live in joints as well as nuclear families. They speak Maithili , Bajjika, Abadhi, Bhojpuri languages as related their places and occupation of this ethnic group. They are educationally disadvantage community. A small percentages of their children complete school education.

Today, in Nepal 20% to 25% of their population consists of Yadav's. They are politically and socially very well established in Nepal . Most of the Yadav's live in the Terai region of Nepal. In terai region of Nepal, there are 28 -30 Districts whose total population is about 80 lack out of 80 lacks the Yadav's population is about 40 lacks, which is 50% of the population of the 28 -30 districts.

The Yadav participate in the local traditional and socio-religious festivals. They have expertise in oral traditions and group singing in praise of the god Vishnu,

Krishana or one of the many other gods that they worship similarly they are good in musical dance and wrestling. In India in some places they are also known to do some mock-fighting with swords but in Nepal that is known (as far as we know).Boys are favored for formal education. They are known to have more faith in astrology and talisman rather than in other services like doctor, engineer etc.

Yadav is mostly found in Rautahat, Bara, Parsa, Kapilbastu, Saptari, sarlahi, sirha and banke etc districts. In Rautahat districts, the total population of Yadav is 1054458. Their main profession is agriculture. Their facial feature is middle a little high nose, with long boarded and moustache, skin pigmentation. It has been greatly influenced by various languages such as Bhojpuri, Bajjika,Abdhi,Maithli etc.

Most of the Yadav marries their children when they are quite young. Most of the Yadav children get married at the age between fifteen and seventeen. They marry their children with unknown person by helping their own relatives and knowing all the background of boys.

Yadav celebrates different festivals. The festivals include Dashain, Tihar, as well as a Chhath. Chhath is the greatest festivals of the Yadav community. The women of Yadav celebrate Chhath by fasting three days. Nobody eat the things that uses at Chhath puja. Chhath puja is celebrated in two days. In first day, people pray for sun in the evening and in second day morning, they pray for sun. After Chhath puja, they invite their relatives to eat different delicious foods together.

Relation between Yadav Culture and Mathematics Learning

Since the ancient period, Yadav community has been involved in some sort of business or activities provided according to their culture. Those activities also help to

learn mathematics. According to their culture, they have been involved in keeping pet animals like cows, buffalos and so on. In the ancient time, when they used to take out their cows and buffalos for grazing, they used to take out one cow and draw a line on wall and again draw another line for next cow. In this way, they used to draw a line for each cow which is also related to mathematics learning. It teaches them to count the animals and to know the right numbers of cows. It helps them to know how many cows have been left and how many cows have already been come at home. In the same way, they used to draw line while selling milk. They also use different types of pets in order to sell the milk and its items. They also use 'Pauwa', 'sher', 'kilo', 'paseri', 'man' and so on which are related to mathematics. Thus, in Yadav culture, there are so many activities provided by their culture to help people learn mathematics either knowingly or unknowingly.

In the same way, there are so many games played in Yadav culture which is also related mathematics learning. The games such as 'Tika mosa', 'Kabbadi', 'Gidhwa gurkan' etc are played by which they learn to count people that how many are playing in totality , how many are out and how many should be out. Because of these activities, they can calculate or count the people. Thus, they learn mathematics with the help these types of games. In the same way, Yadav culture people are also involved in buying and selling animals. They buy animals from one person and again sell to another person. Through these activities, they are able to calculate and know about the profits and losses. They learn very well about profits and loss which is also related to mathematics learning.

Finally, we can assume that, in Yadav culture, there are so many activities and games which teach them to count the animals, people and calculate about their profits

and loss. And the activities of counting, measuring and calculating are the parts of mathematics which are also learned by the activities found in Yadav culture. So, Yadav culture and mathematics learning are related to each other.

Usually, most parents are uneducated. They are no more interested to give education for their daughters. Yadav parents also think the girls are transit member to another family, so it is no importance to take education. Usually, the parents think the work of girls are only in the home i.e. cook food for their family members, respect her family members as well as her husband etc. Hence, there is negative concept for taking education for girls, but nowadays, this negative concept has been breaking to give education for girls. Finally, we say that the girls are no freedom for her life so that they cannot take higher education in their life. Thus, the researcher has attempted to find out the causes of low participation of girls in mathematics education at higher level in Rautahat district.

Statement of the Problems

Mathematics is an essential component of school and higher education. The need of mathematics is apparent for everyday life as well as for higher studies in the field of science and technology. Previous studies established that the overall picture of girls' participation in mathematics was low. Lower achievement and the participation of girls in mathematics reflect their position in society, poverty, social aspect; Education develops the human resources which are interpreted as a process of increasing the knowledge, skills and capabilities of all people in the country but in the context of Nepal, all people don't get the chance of education due to social, economical and cultural barriers. It is necessary to understand the role of gender in family, community as well as school learning environment in mathematics. While we

observe the position of girl's students in higher education, there is a few numbers of girls involved in teaching and learning mathematics. We are also talking about the female teacher. The female mathematics teacher and lecture are sporadic. We cannot see female Mathematics teachers in our University campus in comparison of other subjects. The enrollment of girl students in mathematics at higher education is low. Due to economic, social and other related factors, girls are not given higher education. Girls marry at earlier age and transmit to another family and the education is broken. Mathematics is considered as hard subject and the girls take other subjects at higher level. Some experts said that the lower participation of girls in mathematics education is due to the cultural as well as economic reasons. Some said that due to education, change in economic status, foreign employment etc, people are being aware and they are giving education to girls at higher level. So, only few girls can be seen in universities. Most of the girls who participate in higher education are married. Hence, from the above issues the following research questions crop up:

-) What are the causes of low participation of girls in mathematics learning?
-) Why parents do not give equal opportunities to their daughters as son?

Significance of the Study

Every country wants to serve quality education to their public. It is believed that desire has not been fulfilled. The Nepalese Interim constitution of 2063 B.S. has forecasted different policies to Nepal has accepted the universal motto "Education for All" to tie up the prevailing different castes and their religion, culture and traditions.

For the sake of better life, everyone should study mathematics and gain better achievement. For the better achievement as well as participation in mathematics, there should be positive attitude from every aspect towards mathematics. Mathematics is the essential part of the education curriculum. Ever since the school of ancient Greeks, over

2000 years ago, mathematics has been accepted as an integral component of formal education system since the vedic period. Now mathematics is taught to secondary level as a compulsory subject and at higher level as optional subject.

Legally, there are not any barriers of gender in learning mathematics education in Nepal but due to social cultural, laboring capacity and other environments the participation of girl student at Bachelor level are low. The main objective of mathematics teaching and learning is to develop the understanding, communication and application of mathematical skills with reasoning ability in students. In our context, the gender and other environments affects participation of girls in the math education in Nepal. This study plays a vital role to seek the causes of low participation of girls in mathematics education at Bachelor level and its further significances are:

-) This study would help the researcher to improve teaching and learning situation when it is taught to different ethnic groups of girl students.
-) This study would help to bring positive attitude in equal opportunity in learning mathematics.
-) This study would help to motivate for encourage to the girls students to the study of the mathematics or participation of girls in mathematics learning.
-) This study would useful for NGO, INGO and related community.
-) This study would help to find factor that affects in participation of girls in mathematics learning.
-) This study would help for the government to formulate policy and take right decision.

Objectives of the Study

The expectation of certain outcomes from the case study is reflected in the objectives. These are stated in short, clear form and are achievable. The primary objective

of this study is to describe and analyze the causes of low participation of girls in mathematics at Bachelor level. More specially, the study intends to accomplish the following objectives:

-) To explore the causes of low participation of girls in Mathematics.
-) To analyze the behavior of parents towards their daughter.

Delimitations of the Study

Each study is not rigorous, perfect and free from limitation. They have some sort of limitation and on the other hand they cannot overcome the problems of every field. Thus, this study has some limitations, which are pointed below:

-) This study was limited in Rautahat district.
-) This study was limited for Yadav girls (students).
-) This study was limited for girls only who study mathematics in higher level.

Definition of Terms

Participation: Participation in this study is defined as the number of girl student who Study at Bachelor level by taking Mathematics.

Literate: People who are able to read and write and also the people acquiring school education below SLC standard.

Illiterate: People who are unable to read and write.

Yadav: Yadav refers to a grouping of traditionally non-elite, pastoral communities or caste and ethnic group of Nepal.

Case: Yadav community in Rautahat district for participation of yadav girls in mathematics learning.

Chapter II

REVIEW OF RELATED LITERATURE

Every significant study must be firmly based on relevant thinking and research that has already done. A research must have deeply knowledge of already established theories and researches which are closely related to the problem chosen by him or her. A review of related literature provides the knowledge of what has been established known or studied and what has not been attempted yet. Acquaintance with the related disciplines and their trends helps to update the researcher's knowledge. As well keeping this view in mind of such importance of review an effort is made here to present some valuable and important statements in mathematics achievements, mainly the achievements of Bachelor's degree students in Education which have certainly helped to exploring its relevance have found in some books and thesis paper. This chapter also describes review of literature and theoretical or conceptual framework of this study.

Review from related studies

CERID (2004), in a study report concludes that children's participation and continuation on education depend upon parents attitude towards education. How children continue their education was totally depends upon the attitude of the parents. When parents realized the need of their children and education both father and mothers discipline affects their children to improve their personality.

Timilsina (2004) did his research" A study of achievement in Bachelor's level Mathematics by the students graduated from 10+2 and PCL concluded that the students graduated from 10+2 HSEB has greater achievements in B.Ed. first year

mathematics than the students graduated from PCL of T.U. The difference in mean achievements score of the two groups was significant. The further concluded that the students graduated from 10+2 of HSEB have greater achievement in B.Ed. second year mathematics than the students and graduated from PCL of T.U. The difference in mean achievements score of the two groups was significant. He further concluded that the students graduated from 10+2 of HSEB and graduated from PCL of TU have no significance difference in third year B.Ed. Mathematics achievements score. The difference in mean achievements score of the two groups was insignificant.

Neupane (1985), did his thesis for master's Degree on "Achievements in mathematics by location and sex". A study of the achievements of eight grade students in mathematics is selected schools of Kaski districts with the aims to compare the achievements of urban students with ruler students in mathematics in the four level of the cognitive domain and to determine whether the sex of students influences their achievement in mathematics in the four levels of the cognitive domain. He prepared the achievements test of 50 items. He selected three hundred students from six schools achieved better in mathematics than the students in ruler school in each of the four levels of cognitive domains and boys achieved better than girls in mathematics in each of the four levels of cognitive domains.

Ghimire (2006) did his research entitled "factors affecting students achievements in mathematics" with the objective to find out the determinants(variables) that affect students' achievements in mathematics applying survey design and purposive sampling 416 students representing 12 schools were selected as a sample from Kathmandu valley. A student questionnaire from was developed as the tools and using flagon and Rule formal to establish the reliability of

the tools. Researcher visited each of the sample schools to collect the data statistical analysis, t-test, correlation coefficients, ANOVA and regression education were used to conclude the following results:

- The peer interaction in mathematics study had an effect on improving the achievement in mathematics.
- The father's education, mother's education and number of students in class have an effect on increasing students' achievements in mathematics.
- Age, qualification, teaching experience and training of math teacher are influencing factors for positive improvement on students achievements in mathematics

Tharu (2004) did his research entitled "Impact of socio-economic status on Mathematics Achievement" with the objective to find the level of Mathematics achievement of students with respect to their socio-economic status and mathematics achievements by gender. The tools for study were administered to the sample of 140 students of Bardiya district and multiple regressions were applied to conclude the following results:

- i. Mathematics achievements of students were found to be strongly associated with the father's education and father's occupation where as family income variable had the low relationship that positively affect the children's mathematics achievements.
- ii. Mathematics achievements status of boys and girls were found consistently positives associated with three variables father's education , father's occupation and family income that positively affected on boys and girls mathematics achievements and family size and birth

order of child had negatively correlated that adversely affected boys and girls achievements.

In a study carried out by CERID (1999) entitled “Assessment of learning achievement of lower secondary children (6-8)” it was concluded that the mean achievement of girls in grade 6 mathematics was slightly less than that of boys. Similarly, the mean achievement score of girls in grade 8 mathematics was slightly less than of boys.

Jnawaly (2007) did a research on the topic “causes that affect mathematics achievements of girls” with two objectives to determine the correlation between affecting factors and mathematics achievements of girls students in terms of school related factors and out of school related factors. For this research researcher has been selected 50 girls students from 10 public schools of sampled students students was obtained through the students questionnaire from and achievements from school record. Various statistical techniques such as mean, correlation coefficient and regression analysis were used to analyze the collected data.

Wilkson and Merrett (1985) reported that if girls that their teachers hold lower expectations for their mathematics performance, they 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.

Karki (2011) did a research the topic “Factors causing low achievement in Mathematics at secondary level” with three objective to determine the correlation between causing factor and mathematics achievement at ineffective school of Surkhet

district. For this research researcher has been selected 20 students from each ineffective and effective by taking Interview schedule and Observation form to find out factors of low participation. The researcher found the factors are Gender, Motivation, Personal factors, Attendance and study at home. The researcher has used to description method to describe factors of low participation.

This study shows that different situation (home related and school related) of the case respondent affect their achievement due to engagement of household work, farm work, labor work and the interaction between the member and society. It was also concluded that teacher and teaching method are not main factors to affect their achievement learning mathematics. Different situation of home, society, friends and parents affect them in mathematics. So that researcher concluded that the poverty, social belief, social tradition, cost of education, household, workload, problem of health, psychological effect, lack of motivation all these factors affected the respondent mathematics learning.

Conceptual Framework

In this section, the researcher introduced the theoretical discussion, which is relevant for the interpretation of the findings of the study. This study tries to test what causes low participation of girls in mathematics learning. This is mainly based on the sex role theory, principle of feminist pedagogy and Walber's (1981) theory of educational productivity.

Sex role theory defines the process through which people adopt the attributes of cultural gender roles. Most psychologists attribute gender difference and gender role development to environmental and developmental effect in conjunction with small biological condition. Many have reached the conclusions however that the

social environment has more practical impact than the underlying biological factors in the development of gender related stereotypes(Unger,1994). Emmerich and Shepard(1982) used preferential measures for detecting a same sex-bias as well as traditional gender stereotypes.

Sex role theory shows that being biologically different boys and girls does not affect in participation in mathematics learning. According to this theory, the difference between boy and girl is created by society and cultures. So, society and culture design the works of boys and girls by birth. Society has strong belief that girls can not participate in mathematics learning and loose the confidence of doing well in mathematics.

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

- i. Learning environment at home: Parent's education, parental support in education and parental educational pressure upon children.
- ii. Learning environment at school: Teacher's academic certification, teaching experiences, instructional quality, class size, type of school and location of school.
- iii. Peer environment: Peer interaction in and outside the school.

Principle of Feminist Pedagogy:

In feminist pedagogy: Identifying Basic principle, Myria W. Allen, Kandi L. Walker, and Lynne M. Webb devise a comprehensive overview of feminist pedagogy and identify its six principles:

1. Reformation: This way of teaching offers reformation of the typical relationship between instructor and student, where the teacher is perceived to be an omniscient and authoritative figure and student as the passive recipient of knowledge. Feminist pedagogy is displayed when power and control becomes shared between the teacher and student. It is an active, collaborative classroom where risk-taking is encouraged, where intellectual excitement abounds, and where power is viewed as energy, capacity and potential rather than domination.

2. Empowerment: Empowerment is said to be the primary goal of feminist pedagogy. Empowerment involves the principles of democracy and shared power. Feminist pedagogy challenges the view that education is a neutral cognitive process. Education either functions as an instrument facilitating student's integration and conformity into the logic of the present system, or it becomes "the practice of freedom" teaching men and women to deal critically and creatively with reality and to learn to participate in transforming their world. The practice of freedom emerges through empowerment, yet the patriarchal model generally neglects issues such as empowerment, feelings and experiences.

3. Building community: Feminist pedagogy is concerned with building community and cooperation within the classroom as well as between the classroom and its broader environment. Developing a community of growth and caring is a key to critical/ feminist education. Since feminism values community and equality, building a trusting environment in which all

members are respected and have an equal opportunity to participate in at its core.

4. **Priveleging voice:** Feminist pedagogy views knowledge as constructed and culture-bound. It fosters multiple authorities, which allows different classroom dynamics and voices to emerge. An authority shifts from instructor to the student, students can interact and ask questions as their feedback is actively sought and incorporated in the classroom dynamic. The relationship of student and instructor is less intimidating and more equitable.
5. **Respecting the diversity of personal experience:** A community of students and teachers who work closely with one another and respect one another's sociohistorical development challenges hierarchical relations of schooling and involves social bonding within more democratic relations fundamental to schooling as a forum for critical democracy. Feminist theory privileges personal lived experiences as the basis for analysis, theory generation activism and research. Thus, a feminist pedagogy involves an emphasis on personal experience and validation, such a perspective results in several positive outcomes that including increased respect, enhanced empathy, better critical thinking skills, and broader understanding of truths.
6. **Challenging traditional pedagogical notions:** Feminist pedagogy challenges the notion that knowledge and teaching methods can be value free. Schools reproduce and reinforce the social construction of gender through dichotomization of nurture and autonomy, public and private, and masculine and feminine. Further, Feminist teachers challenge the origin of ideas and

theories, the position of their promoters, and the factors influencing how knowledge comes to exist in its present form.

A Conceptual framework is made to find out the Girls participation at higher level in Mathematics education. This deals with directly or indirectly to school and college enrollment as well as their parent education. The causes of low participation of Girls at higher level in Mathematics education are related as follow:-

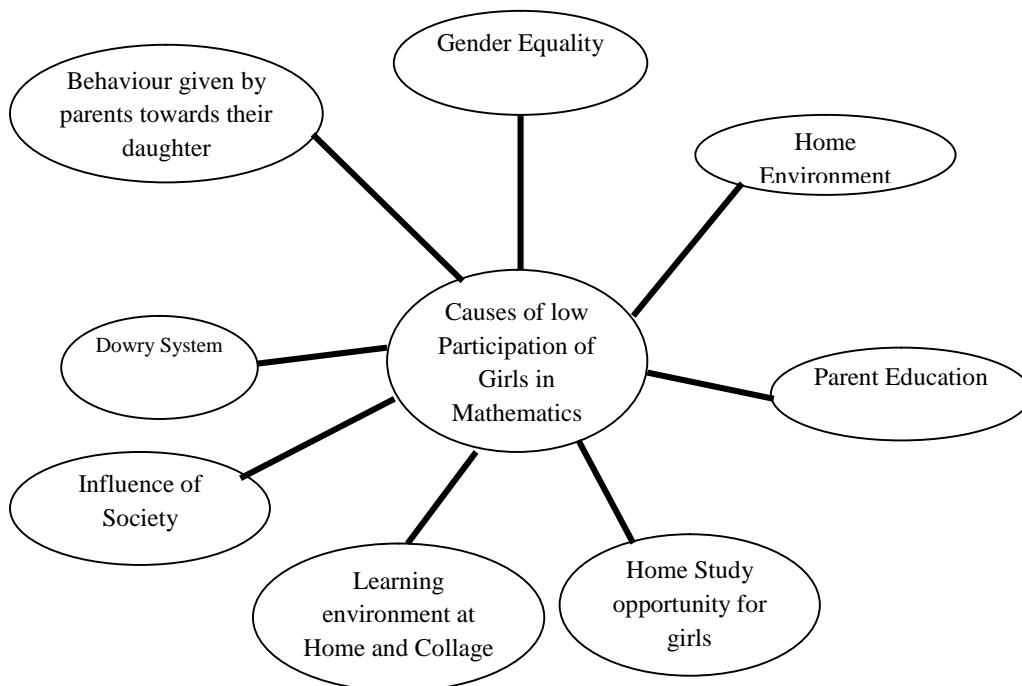


Fig. A model of causing factors for low participation of girls in mathematics.

Home Environment

Home is regarded as the first school to every individual. The students learned how to behave other, how to respect the elders, how to co-operate to each other etc. home environment plays a vital role in learning. Home environment refers the occupation, economic condition and learning opportunity of the students at home.

Parent Education

Parent education refers to the academic qualification, awareness, moral and good characters of parents by whom children learn many things. There is not only the role of teacher in learning process but also of the parent's awareness, education, environment, interest etc. The parents teach the basics knowledge of life, practical aspects, skillful concepts, right vision, appropriate norms and values to their children. If the parents have good education, they too try their best to enable their children academically. So, they can live easily in society and inspire them to the right use of life's every potentiality and opportunity.

Home Study Opportunity for Girls

Opportunity for girls to study at homes enables them to study hard and support their academic progress. Girl's engagements in household affairs have very much adverse effect in their educational development. Encouragement that is given to girls from home helps to take their higher education.

Learning Environment at Home and School

Environment is the totality of the educational atmosphere in home and school. Home is regarded as the first school to all individuals. They learn how to behave, how to respect elders, how to cooperate to each other. Home environment plays a vital role in learning. Home environment refers the occupation economic condition and learning opportunities of the student at home .School is the second home of any child .The teacher students and parents are the components of the school. School environment reflects belief and tradition of the school community delineating the relation among

parents, students and teachers. Scholarship to the student, extra-class provided, and dominance of language culture are the major aspects of school environment.

The economic status of family influences to the achievement of the students. The high economic status can get better chances to buy books, copies and to take tuition and coaching classes. Mathematics needs more labor and effort than other subject.

Influence of Society

We live in a society. We do different activities in our society. People have different attitude in the society. Some old people do not realize the importance of education but only few modern people give importance of girl's education. If the majority of society does not encourage the girl students, they participate less in education. They show poor interest in learning. Social cultural beliefs, practices and attitudes often do not favor of girls in their pursuit of education to the same extent as boys. Discriminatory values and norms against girls and women are deeply rooted in Nepali culture and society. A tradition of early marriage, social norms and values that undermine the importance of educating girls on an equal footing with boys, preferential treatment of the male child, perceived dubious benefits of educating girls.

Dowry System

Dowry is the money, goods or estate that bride brings to groom home in her marriage. It was designed to provide newlyweds security and basic needs but its meaning has changed. Dowry is now, can be defined as forced financial and material arrangement to be given by the parents of the bride to the parents of the groom as an

essential condition of the marriage. It is one of the social evil but still practiced in our society as a culture.

Gender Equality

Gender equality is the equal treatment of boys and girls in the same environment to provide education and other opportunity. Women should receive equal treatment and should not be discriminated against based on gender, unless there is a sound biological reason for different treatment.

Behavior given by parents towards their daughter

The prevalence of son preference and its implications for family behavior in developing countries have received a great deal of scholarly attention, the parents thought towards their daughter is conservative thinking, daughters were not go out of walk by leaving household works.

The above factors are causes of low participation of girls in mathematics education. Parent education as literate or illiterate, they don't force to higher study. The behavior showed by parents at home and teacher at school also dominance low participate in mathematics learning Dowry system is also another factor of low participation because in terai region, high education creates high Dowry so parents don't give higher education to their daughter. In Yadav culture, if a girl goes to take higher education, then the society member interpreted about their daughter who go alone and talk to unknown persons at the time of going to campus.

Chapter III

RESEARCH METHODS AND PROCEDURE

Methodology is a scientific approach, which deals with the systematic procedures of collecting data and use of appropriate research method. It presents the logistics of the study. It describes the design of the plan and the procedures of the study, which are able to be carried out to achieve the objective of the study. This chapter explains research design, selection of study area and case respondents, tools for data collection, data collection procedure and data analysis and interpretation analysis.

Research Design

Here, case is yadav community and causes of low participation of yadav girls in mathematics learning at higher level is a case study. A very low number of yadav girls could be seen in the college rather female population is high. This study was a qualitative research. The research design was based on the descriptive interpretational approach because there was no any quantitative data for the study

Rationale of the Selection of the Study Area

The rationale of selection of yadav community is being ethnic group with its own culture. This community is somewhat backward having poor economic condition and below the average rate of literacy. In this community, the no of girls were more but while selection of mathematics, the researcher got very few girls. Another rationale of selecting this community was being researcher's home district and it would become easy to reach there.

Selection of Case Respondents

The respondents of the study were Yadav girl students, their parents and mathematics teacher who were selected purposively. The total number of case respondents was five from which three girl students were studying mathematics at higher level and two girl students were studying other subject but studied math at PCL level.

Tools for Data Collection

One of the most important parts of the study is data collection. Every aspect of the study can be analyzed and studied on the basis of data techniques. The outcomes and validity of this study depends upon the techniques of the data collection. There are many tools for the `qualitative research to get the information from the people above their experiences, ideas and believes. Data was collected from case campus, written document and previous research but the primary data was collected from target students, parents and teachers by using interview, observation and focus group discussion. The following technique was applied in this study.

Interview Schedule

Interview is also the method which is most commonly used to collect primary data. It is the means to express internal thought, interest, concept and thinking of a person. It is tool to find out experience internal though of person according to their acting, looking and facial expression.

The interview schedule was developed in semi structured form which has been shown in appendix I, II and III. The interview was conducted among 5 girl students, mathematics teacher and parents of sampled girl students to find out the participation of girls at higher level education. The interview schedule was help to find factors of causes of low participation of girls at Bachelor level Mathematics education.

Observation Form

The class observation form was 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 of this study was took on the natural setting researcher watched, asked, listened and interacted the essential data from the informants in the natural setting using the observation form shown in Appendix IV.

Focus Group Discussion

A focus group discussion is a small group discussion guided by a trained leader. It is used to learn more about opinions on a designated topic and then to guide future action.

Firstly, Parents and teachers are separated in two groups and in different place. The focus group discussion was conducted in different days with teachers and parents. Researcher went to the respondent's house and tells to their parents to gather at school when school is off. Researcher start to discuss about case and asked questions and noted himself answers replied by parents. Researcher also called teachers in different college to gather at Madhya Rautahat College to discuss about case and noted answers given by teacher researcher himself. The agenda formed by researcher with the help of expert was disseminated to the teachers and parents separately. The view of participants were (collected) noted by researcher himself.

Data Collection Procedure

After selecting Yadav community at Rautahat district purposively, the researcher visited the sampled yadav girls' students, their parents and mathematics teacher with instrument to collect data. Before administration of tools, researcher met the concerned people and explained the purpose of the study in detail. Once they agreed to allow the study to be

carried out the researcher arranged the date and time for administering the tools. The data was collected by administering the interview schedule, observation form and focus group discussion among the sampled students, their parents and mathematics teacher.

With the help of unstructured interview schedule, the interview was conducted with yadav girl student, their parents and mathematics teacher at their home.

With the help of observation form, the researcher had observed the class for 10 days regularly. For this purpose, the researcher took permission letter from the central department of education, TU, kirtipur and handed over the letter to the principal of selected college.

Focus group discussion was carried out collected the information by group discusses with parents and mathematics teacher separately. Then the information was noted by the researcher himself.

Data Analysis and Interpretation Procedures

The study is concerned with participation of girls at Bachelor level. The collected information at first was categorized according to the category of respondents and different themes were given in the text of interview, observation notes and focus group discussion. These themes were considered as a code and the similar code version of respondents were collected together and explained in their perspectives. Home environment and other details were obtained by observing home and school environments, interviewing girls students, their parents and mathematics teacher, focus group discussion and their themes were analyzed and interpreted by using descriptive method.

Chapter IV

ANALYSIS AND INTERPRETATION OF DATA

This is a case study related to the causes of low participation of girls in mathematics education of Yadav caste of Rautahat district. The main objective of this study is to explore the causes of low participation of girls. The main tools used for this study are interview schedules, observation form and focus group discussion. The main respondents of this study were the Yadav girl students at Bachelor level and their parents and mathematics teacher of the sample campuses. This chapter includes the analysis and interpretation of data.

Cultural Background of Yadav Castes

Culture is the most distinctive attribute of human race. Today human beings are able to protect and transfer the cultural traits as per necessary. Culture is not a pre-constituted object but must be created through human intention and action. The human is the main actor beside the creation, manipulation, and interpretation of the culture. By virtue of human cognitive, today's civilization is possible. Culture is the human creation and use of symbol. Culture may takes as constituting way of life of an entire society, and this will include code of manners, dress, language, rituals, norms of behavior, system of belief. Sociologist also stress that human behavior is primarily the result of nature rather than nature (Dictionary of sociology). Culture is all that which is non biological and sociological transmitted in a society, including artistic, social ideological and religious patterns of behavior and the techniques for mastering the environment (Dictionary of Anthropology).

Yadav is the oldest ethnic group of Tarai. The Education of Tarai is low but the Yadav boys' education is high inspite of girls' education. Yadav casts are rich and medium in the tarai. The major post of Nepal i.e. president, Nijamati karamchari, Loksewa Aayog, politics and so on are covered by Yadav castes which are only men but not women or girls. Many lectures are in campuses. So, the researcher found some girls students studying Mathematics at Bachelor level. To find the causes of low participation of girl at Bachelor level, researcher took 5 girls students studying different campus of Rautahat district as sample of research. The detail of girls students were as follows:

Respondents A

Respondent A was Pinki Kumari Yadav and she was 20 years old She was studying in B.Ed. 2nd year. She was born at pothiyahi ward no. 5 of Rautahat district. Nowadays she is living on the same place where she was born. She has eight members in her family having 1 brother and 4 sisters. She is smallest daughter. Her mother and father are middle in age. Her parent's occupation is agriculture.

She said "before going to college, I get up early in the morning and fresh myself and go to college. I return my home at 10 o'clock. I also help my mother in kitchen. We have difficult to manage time to study at home and extra classes i.e. tuition".

Her house is situated at the pothiyahi V.D.C. of Rautahat district. House is medium with 5 rooms. She doesn't go to tuition due to lack of economic condition and also lack of time. Her family members don't sent alone at the town and also college. She go to college with her friends. Her family thinks girls are prestige of other and their family.

The people of Rautahat district use Bajjika, Maithaly, and Bhojpuri. Out of them, her family use Bajjika language at home. She said “I speak Bajjika language at home as well as college. We usually use Bajjika and not nepali. So, Nepali language is little difficult. Therefore, language also affect in learning mathematics. It is very difficult to go to college. She is alone girl student. She is studying at Bachelor level in Mathematics education. The researcher asked if the campus is not near of her house then she would get her higher education or not . She said that she didn’t know and it would depend upon the decision of father. The chance of going to college is less. The researcher concluded that the concept of giving higher education towards girl is conservative.

Respondents B

Respondent B is Archana Kumari Yadav of 21 years old studying at Bachelor 1st year. She was born on Aakad pathar ward no. 2 of Rautahat district. Her family has 7 members out of 2 brother and 3 sisters. Her sister is reading at class x. Her father is literate as well as her economic condition is rich. She has got married at the age of 20 years old when she was studying +2 level. It seems that her father won’t want to give more higher education. They follow Hindu religion. Now days, she lives at Garuda with her husband. When researcher asked to her father “why did you marry to your daughter soon?”. Then he said ‘ Hami le jati badhi padhayo taitinai badhi tilak dinu parcha’. It seems that cause of girls in higher education is due to dowry system.

She is interested in study and other activities as sewing clothes and dresses. She is laborious and curious student but she has no time to study extra class or extra tuition because she works at her house and care of all things of her husband and her father in-law as well as her mother in-law etc. She said “Mathematics is difficult but if

I have more time to practice then it will be easy". She does her home work and attends the class regularly. She said, "I understand mathematics and can't remember long time due to lack of practice and extra classes".

Researcher concluded that girls are weak in mathematics due to lack of extra time or not free as boys. Also, by the concept of traditional culture, the participation is low or high.

Respondent C

Respondent C is Madhu Kumari Yadav, 22 years old, studying at Bachelor level 2nd year. She was born at Gaur in Rautahat district. Her family is joint family. Her father is a primary teacher. Her father education is PCL. Her mother is housewife. She works for her house. She has two uncles and aunty. Both are farmer. They depend on the farm only. She has got married when she was studying at Bachelor 1st year. Her father's economic condition is medium.

She is interested in study but she is not free from her father in-law house. She works all work of her house with the help of aunty so she has no time to study at home. She has only time to study at college. She uses Bajjika language at home. She said, "our home culture makes hesitation to communicate with teacher and other friend at college also". She doesn't talk to her friend at home. She doesn't go to out of house.

At last she said "my friends were Sehrenaj and Sabanam Khaton. They were studying mathematics at PCL level but when I got married then they left study". Her study was limited at PCL level only. Then researcher concluded that girls are backward from higher education because of their culture attitude.

Respondent D

Respondent D is Sunita Kumari Yadav of 20 years old studying at B.Ed. 2nd year. She was born at Garuda Bairiya, 5 of Rautahat district. She has 10 members in her family. Her father is a business man and her mother is a housewife. She has 4 sisters and 2 brothers. Out of them, all are studying. She is an elder daughter. Her economic condition is medium. There is no difficult to pay school fee and also college fee. She was very laborious but she didn't have time to practice more. When she came from college, she helped her mother at house then she went to her Kirana Pasal to help her father. Her family follows Hindu Religion and use Bajjika language at home. She said,"There are many Yadav castes, but no more girls are studying at Bachelor level so my father doesn't want to give more education to me".

At last, the researcher concluded that due to lack of time, she couldn't get more education and practice more. Her father said that he was managing his daughter's marriage in this year. He justified that if he gave more education to them, then at the time of marriage, he should have to pay more for dowry.

Respondent E

Respondent E is Priya Kumari Yadav 20 years old studying at B.Ed. 2nd year. She was born at Bairiya, 9 Garuda of Rautahat district. Her family has 10 members. In her family, her uncle studied up to +2. She said that she had to do all works at home. Her mother thought that daughter must do household work because when she goes to another family, she must know to cook all type of food. Her mother said that education is not important for girls. She was very laborious for study. She studied at home by finishing all works of house.

She was very skillful as she knew how to sew clothes and make sweater as well as woolen clothes. She helped her family by sewing clothes and helping her family to generate income. She said that she liked to go to finish the work with her mother and also to work at tailor.

Researcher asked with her about economic condition. She said “my economic condition is medium so I help by sewing clothes. In our village no more girls are studying higher education. My uncle was educated so I am studying at this level otherwise we don’t”. She said “there are educated people in our family and in our village that would create the good learning environment at home.

Researcher asked about poor participation of girls at Bachelor level to her. She said that the main causes are less educated person of their family and most of person think of no necessary to give education to girls because girls to work at home with her mother.

Finally, the researcher indicated that Yadav girls were in poor as well as medium economic condition. The main occupation of Yadav castes was farming and they depended upon the agriculture. The most of time, they worked in the farm as well as household work. Due to the lack of knowledge about the importance of education, Yadav girls were backward from higher education. They were engaged on farming and household works. As a result, the children also engaged in household works so they had no sufficient time for the study at home. Yadav girls student were dependent upon the school study only. They were tied with their cultural boundary as a result they could not decide themselves as their will. They did not have sufficient time for the study due to which they could not more so they were poor in mathematics and so on. Most of Yadav girl students faced economic crisis. They were not

financially capable of affording their further education. If they have medium economic condition but the people don't want to take higher education to their daughter due to their culture. Yadav girl students learned everything in their culture which was not matched at the school culture. There was cultural discontinuity at home and school. Finally, it can be said that due to the culture of Yadav large family size, poor economic condition, illiterate family, lack of sufficient time at home for do extra activities for mathematics and dominance behavior by their neighbour created the low participation in mathematics. The main themes are as follow:

-) Home Environment
-) Parent Education
-) Home Study Opportunity For Girls
-) Learning Environment at Home and School
-) Influence of Society
-) Dowry System
-) Gender Equality
-) Motivation of Schooling
-) Behavior given by parents to their daughters

Home Environment

Home environment plays vital role for learning. Children learn how to behave, how to respect elders and how to cooperate with others. This study includes occupation of the family, economic condition and learning opportunities of sampled Yadav girls students.

Our parents forced us in farming and household works and then only to go to college.

Girl student

Parents love to son more than daughter because they think their son keeps on their house improve but girls can't as they go to other family.

Girl student

My daughter does not get enough time for study at home because she has to work and help her mother in household works.

Our occupation is agriculture and our economic condition is poor so our children must work.

Parents

There is no good environment for girls to practice at home. They depend on classroom only and hence they are weak.

Mathematics teacher

While analyzing the above versions, it was found that the Yadav girls family had poor economic conditions and their occupation was agriculture so that they had to work hard physically and hence they did not get any extra time to study. They had to look after their brothers and support to send to schools. For learning purpose too, they had to depend on classroom only. Hence, it led the Yadav girls low participation in mathematics learning.

The researcher observed home of sampled yadav girls student and found that their family was simple and their family members were working in the field. None of the family members were sitting. There was not a special separate reading room for girls.

In classroom observation, Yadav girls were not punctual because they had to work at home before coming to college. They did not show their homework to teacher as they got no time to perform at home. More than fifty percent of yadav girls were absent in the class due to their works at home. Parents did not think to give

opportunity to study rather they always tried how to marry them and would become free from their burden.

In Focus Group Discussion, parents said, “We are very poor. No one look after us. We are not able to send our children for higher education because they have to work and help us at home. They should look after their young brothers and do household works.” Another parent said, “We have no any job. We have to work in the field for survival. There is no option to work and eat. We like to give them education, but it is our obligation to ignore it for the work.”

The researcher concluded that there was low participation of girls in education due to poor economic conditions, agriculture occupation and bad learning opportunity for girls at home. Walber’s theory of educational productivity claims that good home environment increases educational productivity but yadav girl’s home environment was poor. So it leaded their low participation in mathematics learning.

Parent Education

Parent Education helps the children to get good education and make them economically sound. It also enables them to live easily in society and face challenges. This study includes parent’s academic qualification, their interest and awareness to educate daughters.

Daughter must have the knowledge of household works so that they will be able to handle their house after marriage.

We have not got any formal education but we can count money and do transaction.

Girls most know household works than education.

- Parents

My parents are illiterate and they cannot teach me.

- Girls students

While analyzing the above mentioned versions of the parents, it was known that, parents had traditional belief and primitive thoughts which was a matter of hindrance in the overall development of the girls. It was due to lack of parent's education that they had not taken formal education. Parents had not better attitude towards girls and they are not interested and aware to educate girls.

While observing the parents at home, it was not seen teaching or supporting daughters in study due to lack of education in them.

In Focus Group Discussion, parents expressed their views that they could not give higher education to their daughters because they were worried how to marry them and be aloof from their burden. Parents said, "Girls are transferrable assets so why to invest them a lot being they are not ours". Hence it can be shown that parents were not aware and interested to motivate for creating learning environment to their daughters.

From above analysis, it can be concluded that yadav girl's parents were illiterate, their interest was to marry daughters at the earlier stage and they were not aware to give higher education to their daughters. According to Walber's theory of productivity, parent's education enhances learning environment at home and they create pressure and support to their children in education hence illiterate parents causes low participation of girls in learning.

Home Study Opportunity for Girls

Girls engagements in household affairs affects very much in their educational development. The socio cultural structure like early marriage in the society has given more household responsibilities to girls than boys. In our society, girls are involved in household works. Their task is to help mother in cooking, cleaning and taking care of youngsters. Even a girl who goes to school is not free from such responsibilities. It makes girls more tired so that they cannot get up early. Due to this, they are unable to manage their study. This study includes household works, study room and early marriage status in the family.

I cook food in the evening and take care of my elders and younger.

We were also involved in household activities. In my house, there is discrimination between my brothers and me.

Son's main task at home is only to study and after school hours, they have to take their tiffin, go to play and so on but for us first work then study.

We have no separate room to study at home.

-Girls Students

My daughter is matured so it is being late to marry soon.

My daughter is already married.

-Parents

While analyzing the above versions of the respondents, the girls were found suppressed in different activities besides their studies. So, their mind was always

equipped with some kind of worries. Such worries and anxieties made them unable to pay full attention towards the study. Therefore, they were lacking behind in their performance in comparison to boys because boys sat free from the household activities so they often had leisure time to freshen their mind, which increases curiosity in study to make their performance better. The girl students do not have separate study room for study. Hence, the researcher found that there was not better opportunity to study at home for girls due to early marriage, household works and separate study room.

In the observation, the girls were doing household work. When the researcher went to Sunita's house, she greeted first and went to kitchen for preparing tea. She was looking after her young brother. There was not separate study room. In the classroom observation, she was absent. It was due to household works which she could not leave. She did not perform homework as she got no any extra time to finish it. She was unable to manage her time for study at home. It can be said that there was no good home study opportunity for girls at home which caused the low participation of girls in higher education.

In the Focus Group Discussion, parents said, "It is very difficult for us to marry daughters after they are matured. They are burden of us. They should be married as soon as possible." The parents further said, "The society has given responsibility to them to do various household works. They have to perform those works wherever they go. They do not have separate study room. All our members watch television and sleep in the same room."

From the above discussion, the researcher concluded that early child marriage, household works and no separate study room had severely affected home study

opportunity for girls and it led to the lower participation of yadav girls in mathematics learning. Feminist theory suggests equal opportunities for girls to study at home so that they equally participate in learning as that of boys. However, this theory is contradicted to this study.

Learning Environment at Home and College

Home creates a first learning environment to the students. The economic status of family influences to the achievement of the students. The high economic status family can afford high cost to buy books, copies and take tuition classes. Family with traditional agriculture always force to their children to work in the fields than to study. Parents do not provide learning opportunities to their children. Parents become happy when their children work hard to them.

College environment reflects belief and tradition of school community. Scholarship to the marginalized group helps to participate more number of students in education. The college environment should be educational and peaceful for learning. College environment should be mixture of social value, culture, friendly behavior, safety and organized structure. The college environment plays the important role to decide the future position of the students and the life of the students. The teaching activities and extracurricular activities regularity and discipline are important for good achievement of the result of the students. This study includes scholarship to the students, extra class and dominance of language culture at home and college of yadav girl students.

Parents do not invest a lot of money on our education at higher education.

We have to speak other language in college which is difficult to us.

-Girl students

Boy's main task at home is only study but girls don't study at home except college.

There is no discrimination between boys and girls in school. We encourage them equally to study.

We have not provided extra classes for weaker students.

-Math Teacher

We do not know about the scholarship for our daughter at colleges.

-Parents

While analyzing the above versions of the respondents and the Math teacher, it was found girls got suppressed in different activities besides their study. Parents didn't invest a lot of money to their daughter's education because of they thought that their daughter went to her in-law house and they should know only different household works. In colleges, there was not discrimination between boys and girls to bring learning environment but there was not provision of extra class for weaker students in college. Yadav girl students had to speak other language in college which was difficult for them. Parents did not about scholarship scheme provided by the colleges.

In the observation, it was found that there was not provision of extra classes. At home local language was used which made difficult to understand other cultural languages at college for Yadav girls student.

In the focus group discussion, parents said, "There is no special scholarship program in the college. Scholarships are given to their relatives only". Another parent said, "We cannot let our children go college everyday because we have a lot of works at home." In the discussion, mathematics teacher said, "There is provision of

scholarship for students of marginalized group but guardians do not know about it due to ignorance.” The mathematics teacher further said, “We have no special extra classes for weaker students and they have to prepare their exams on the basis of classroom study. In colleges, there are no any different behaviors between girl students and boy students. Teachers encourage girl’s students and their guardians to come ahead in the society.”

From above discussion, the researcher concluded that the college had provided scholarship for students like yadav girl but the parents were not aware about this. There was not provision of extra classes for weak students in college and also their local language brought difficulty in the college as there was another language for communication. According to Walber’s theory of educational productivity, learning environment has great role in girl’s participation. Parent’s education and their support to children, teacher’s academic qualification, scholarship and other helpful methods are useful for success of students. Hence, no scholarship awareness, no extra classes for weak students and difference in language between college and home greatly affected the learning environment that finally caused the low participation of yadav girls in mathematics learning.

Influence of Society

People in the society show poor interest in learning. Majority of society does not encourage the girl students to participate fully on education. Although the government has signed number laws to assist in improving the education of girls throughout Nepal, the implementation of laws would take time. Girls still face number of challenges to gaining social, political and economic equality with boys. Discrimination against girls starts from the moment they are born. Sons are seen as

bringing prestige and honour to the family whereas daughters are often consider only another mouth to feed. The girl is treated inferior to her brother. At a young stage, the girl is expected to perform many works. Girls are so educationally so disadvantage as compared to boys. This study includes social cultural beliefs of society.

In school and college maximum girls are from the middle class family of different cultural background so they do not get the suitable time for reading mathematics due to which they select the other subject from options.

-Math Teacher

Girls have to get married very soon so they should know the household skill than the mathematical knowledge.

Our society unequally treats boys and girls.

Female has the inferior place in the society.

No prestige is given to the female mathematics teacher.

-Girls Students

While analyzing the above expressions of Math Teacher and Girl students, it showed that our societies have most illiterate people. The illiterate people thought higher education was only for boys not for girls because the works of girls were only household. Their parents did not like to make male friends. Female were forced to engage to do household works by their parents. Her society had traditional culture. This culture created discrimination between son and daughter. Due to the discrimination behavior, female forced so many problems. It was also seen girls had no any prestige in the society.

In Focus Group Discussion, parents said, “If our daughter go outside and talk with other people, then other people start to talk about our daughters and it becomes difficult to marry them. Our daughter can’t go outside as son and they have to obey and sit inside house only.” The mathematics teacher said, “Culture of the society affects the participation of girls in education. People do not want to give higher education for girls as boys. People treat girls differently and they think girls are transferrable and whatever they are given they take with marriage. Society itself divides girls and boys. Boys are placed superior than girls.”

From the above analysis, the researcher found that there was influence of society with negative social cultural beliefs, negative practices and negative attitude. According to sex role theory, the difference between boys and girls is created by society and cultures. Girls loose confidence of doing well in mathematics and they do not take mathematics in higher education.

Dowry System

Our society is a patriarchal society. Son is given more importance in our society. A birth of female child is taken as social evil and they are made evil. Dowry system is practiced in our society as a culture. It was developed to give something with bridge to the groom during marriage. But nowadays it is being compulsion and forceful. This study involves how dowry system of Yadav community affects the participation of yadav girl in higher education.

Higher education makes higher dowry.

We should not spend on higher education inspite of we save money for her marriage.

-Parents

Due to dowry system, our parents do not give us higher education.

Parents think us zero return assets.

-Girls students

Dowry is going high day by day and it is related with higher education.

Dowry is a great cause to reduce participation of girls at higher education.

-Math Teacher

The above expressions of the parents and math teacher concluded that in her society, dowry affected girls to get higher education. The parents did not give higher education to their daughters because they would have to pay a lot of dowry to their daughter marriage like as money, furniture and so on.etc. It was believed that higher education of girls make higher dowry. So parents thought they did not invest money to girls education they saved money to their daughter marriage.

In Focus Group Discussion, parents said, “Due to dowry system, girls are married at earlier stages. If girls are given higher education, then boys demand more dowries which we cannot afford due to our low income.” Parents further said, “Whatever the education given to the girls, they should cook food, make houses clean, washes clothes and satisfy their family members. So, what is the use of higher education?” Mathematics teacher said, “Economic status of Yadav family is very low. They cannot afford high dowry with their daughters. So, they manage to marry their daughters very soon with those who demand very less dowry.

From above discussion, the researcher was clear that yadav girl students were greatly affected by dowry system. Due to demand of more dowry with more

education, parents were afraid and they quickly married their daughters with lower education to be aloof from burden economic crisis. According to feminist principle, education is a neutral cognitive process and it either functions as an instrument facilitating student's integration and conformity into the logic of the present system. This principle is not matched in college and community. Hence, the researcher concluded that dowry system caused the low participation of yadav girls in higher education.

Gender Equality

As gender equality is the equal treatment of boys and girls in the same environment to provide education and other opportunities, this study includes treatment behavior of yadav girl students as compared to boys in yadav community.

In our society girls and boys do not get equal opportunity.

Parents discriminate between son and daughters.

-Girl students

Guardians admit their sons in the school and ask about their study time to time. But they are not eager about their daughter's study.

No any guardians are seen worried about their daughter in study.

-Mathematics Teacher

Sons are our prestige and they have weightage in the society.

Girls are only fear to us and we would be light when they get married.

-Parents

While analyzing the above versions of the respondent, the researcher concluded that society did not give equal opportunity to boys and girls. Parents

discriminated girls from boys and they treated them differently. Due to gender inequality, girls did not take higher education as that of boys.

In Focus Group Discussion, parents said, “We can not give equal opportunity daughter and son because son is our prestige and they look after us but daughter go to other’s home so they can not be equally treated.” Mathematics teacher said, “There is discrimination between son and daughter in the family. Parents think their daughter should be morale and they are not allowed to go out as son. Parents are very nervous about their matured daughters and they are eager to marry them soon rather to give education.”

From the above discussion, the researcher concluded that yadav girls were treated differently and they were made backwards by emphasizing the boys to go ahead. Feminism values community and equality building a trusting environment in which all members are respected and have an equal opportunity to participate at it’s core. However, this study does not show the equality treatment between boys and girls in the same environment. This gender inequality treatment caused low participation of yadav girls in mathematics learning.

Behavior given by parents towards their daughter

Since our society is in developing phase, more preference is given to son than daughter. In this study, the researcher tried to study the behavior given by parents towards their daughters in case of education and independency.

The duty of a girl is to involve mostly at household work.

The girls’ higher education causes high amount of dowry.

The girls' bad behaviors let their parents head down in society.

Sons can go free outside and show their personality in the society.

- Parents

When our parent looks us, their face is not always smiling.

Our parents always said us why to get more education that it is sufficient to be expert in household works.

-Girls students

From the above information it can be analyzed that parents discriminated between the sons and the daughters in behaviorist. They had domination over daughters to limit them under their permissions, but they let the sons live free. They hesitated to provide higher education to their daughter but not to their sons due to more demand of dowry in future. It was also seen that if girls alone went outside home did any behavior of their own, then it would be the bad behavior and that would make the parents head down.

In the observation, it was seen that yadav girls were not given to go outside without permission of father or brother. They went outside with one male member of the family. The girls went to college with the help of one male family member. The researcher could not find yadav girl student in the society with independent activities.

In Focus Group Discussion, parents said, "We love our daughters but we cannot give higher education as they go to other's house. We make them expert in household works. We think we should give more education to sons because sons have to manage and lead the family in future." Mathematics teacher said, "There is

discrimination between sons and daughters in the family. Parents think their daughters should be morale and they are not allowed to go out as son. Parents are very nervous about their matured daughters and they are eager to marry them soon rather to give education,”

From the above discussion, the researcher concluded that daughters were dependent and they were given less priority in terms education than sons. Sex role theory provides a base for investing stereotypes and attitude of parents. Hence different and injustice behavior shown by parents towards daughter caused low participation of Yadav girls in higher education.

According to Feminist Pedagogy principle, college develops a community and equality of growth building a trusting environment in which all members are respected and have an equal opportunity to participate. Mathematics teacher said that there was no any discrimination between boys and girls students in college and they also encouraged them equally to study. From observation, it was found that girls and boys in the college received education and instructions equally. Girls were given scholarship for education.

Hence, from the analysis, the above factors generally caused low participation of girls at higher level in Mathematics. So, it was concluded that all the above discussed factors were responsible to lead the low participation of girls at higher level in mathematics learning.

Chapter IV

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATION

This chapter presents the summary, findings and conclusion of the study. Some recommendations based on the findings are made for further study.

Summary of the Study

The concept of education is the birth right of every child. Early mathematics required a partial basis for its development and such a basis across with revolution of more advanced form of society. Mathematics is essential for understanding every discipline. The development of mathematics education in Nepal goes a back to the vedic period. In the history of mathematics, we can find many male Mathematicians such as Euclid, Archimedes, Apollonius, Kepler, Pascal etc but it is very difficult to find female mathematician. Gender disparity has been a chronic problem in education ever since Nepal launched planned efforts for development of formal schooling. Poor economic condition, early marriage, household works, care of siblings, grazing cattle, engagement in wage earning activities and gender discrimination are the major discouraging factors to girls education, considering the lower participation. The literacy rate of male is higher than the female. The low rate of female education is due to many causes. Yadav casts are forward but their girls are low in higher education. This study would help to bring positive attitude in equal opportunity in learning mathematics. The primary objective of this study is to describe and analyze the causes of low participation of girls in mathematics at Bachelor level. This case study is quantitative as well as descriptive. The tools of the study are interview, observation and focus group discussion. The sample of the study is 5 girl students who are studying at Bachelor level. The Respondents said that many factors of low

participation in higher education. Out of them the researcher concluded that the factors are home environment, parent education, home study opportunity for girls, learning environment at home and school, influence of society, dowry system and gender equality which affects the participation girls in higher education.

Girls are being deprived from education due to discriminatory laws on properly rights. They begin school very late and withdraw with the on set of puberty. Parents do not see the benefits of girls' education because they are given away in marriage to serve the husband's family so, deprivation from education due to child marriage is another impact of discriminatory laws. Due to practice of child/early marriage, girls do not get education at their parent's home and after marriage they have to take care of household works at her husband's home by giving up education.

Findings of the Study

This is a case study of yadav community related to causes of low participation of girls in mathematics at Bachelor level. The purpose of this study was to identify the causes of low participation of girls for higher education. The researcher used the interview schedule and observation tool and focus group discussion for collection of data. The researcher found major findings from this study as follows:

-) Yadav girl's home environment was very poor so that their participation in mathematics was very poor.
-) Yadav girl's parents were illiterate and their interest was to marry daughters at the earlier stage than to continue study and they were not aware to give higher education to daughters.

-) Due to early child marriage, household works and no separate study room, Yadav girls could not do better in mathematics.
-) There was no scholarship fund, no extra classes for weak students and there was difference in language between college and home which greatly affected the learning environment and finally caused the low participation of yadav girls in higher education.
-) Influence of society with negative social cultural beliefs, negative practices and negative attitude caused the low participation of yadav girls on higher education.
-) The more demand of dowry with higher education caused the low participation of yadav girls in higher education.
-) Yadav girls were treated differently and they were made backwards by emphasizing boys to develop. This gender inequality treatment caused the low participation of girls in mathematics learning.
-) Yadav girl students were dependent and they were given less priority in education than boys and this biasing behavior of parents towards their daughters cause the low participation of yadav girls in higher education.

Conclusions

Society as a whole believed that female is mathematically less capable than male. Parents and teachers communicate this belief to the students. Society, home and college do not provide environment to girls to take higher education. They are capable to study mathematics but they are made incapable. Girls come to view their failures in

mathematics as evidence that they indeed fell inferior and to view their success as flunks (to fail an exam). This reinforced the belief that they are not capable of doing well in mathematics. Females stop taking advanced mathematics courses in high school or college, believing too difficulties. Girl failure to acquire the knowledge necessary to achieve in mathematics is the matter of construction of positive attitudes towards mathematics. This is due to

-) Lack of home environment where there is poor economic conditions, agriculture occupation, and bad learning opportunities.
-) Lack of parent education and their interest is to marry daughters at the earlier stage and they are not aware to give higher education to their daughters.
-) Lack of home study opportunity for girls by the earlier child marriage, household works and no separate study room.
-) Lack of learning environment at home and college as there is no provision of extra classes for weak students and different in language between college and home.
-) Negative influence of society that girls should not take more education rather they should be expert in household works.
-) Dowry system in which more dowry is demanded for higher qualification.
-) Gender inequality treatment between boys and yadav girls and they are made backward by emphasizing the boys to go ahead.

-) Discriminating behavior of parents towards their son and daughter giving more priority to son in education as different and injustice behavior shown by parent towards daughters.

Recommendations and Suggestion for the Further Study

In the context of Nepal, many students fail in mathematics and the trend is still in continue due to this, there were the less participation in mathematics. In order to ensure girls' access and participation in mathematics at higher education is low. Some measures were worked out. They include pedagogical change, tutorial support, development and distribution of model females' rosters, interaction between teachers, parents and students, gender sensitization, incentive, lab and library support, collegial monitoring and counseling and project work to accommodate practical experiences of the girls. These will contribute to making mathematics subjects more enjoyable. Besides, the study has developed an action plan to address the mathematical specific issues, identified action strategies and pointed out the responsible agency to implement intervention indicatives. These intervention initiatives includes action as well as programs to address socio-culturally oriented gender biased mindset, school based encouragement scheme for girls and those advocating girls' education, school support program and mathematical career expectation programs for girls. Thus, after analyzing the conclusions and implications of the study has made the following recommendations or suggestions for the further study to variable study's findings:

-) Awareness programs should be launched.
-) Band of dowry system.
-) All the necessary educational material should be given from the school to pre-Bachelor level to girl students.
-) There should be at least one female teacher at higher level.
-) There should be fixed free seat in boarding school and college for girl student.
-) A similar study can be done same level but in other subjects.

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APPENDIX I

INTERVIEW SCHEDULE FOR PARENTS

NAME:

RELIGION:

SEX

WARD N:

AGE:

VDC:

1. What is your occupation?
2. What is your economic condition?
3. What is main interesting area of your daughter?
4. Which type of behaviors do you have towards your daughter?
5. Why do not you give higher education to your daughter?
6. Do you think your daughter get enough time for study at home?
7. What is your view on dowry system in your community?
8. Aren't son and daughter equal to give the same opportunity?
9. Do you encourage admitting your daughter in higher level?

APPENDIX II

INTERVIEW SCHEDULE FOR MATHEMATICS TEACHER

NAME:

RELIGION:

AGE:

SEX:

VDC:

CASTE:

QUALIFICATION:

TRAINING:

The interview with the mathematics teacher would take in the basis of following main topics:

1. Teaching strategies
2. Problem on teaching between girls and boys in different castes
3. Encouragement provided to the girls students in mathematics
4. Area of difficulties in teaching mathematics
5. Discrimination between boys and girls at the time of teaching
6. Social influence on Yadav community.
7. What is the enrollment rate of yadav girls in your college?
8. Is their provision of female teachers in your college?
9. What is the grade attainment of yadav girls in your college?
10. About dowry system

APPENDIX III

INTERVIEW SCHEDULE FOR GIRLS STUDENTS

NAME:

VDC:

PLACE OF BIRTH:

RELIGION:

1. Which type of family do you belong?
2. Which type of behavior do you get from your family?
 - (i) Discriminating
 - (ii) Non-discriminating
3. How much time do you study at home?
4. Are you single or married?
5. Does marriage life affect any study in your life?
6. What is your view about your culture and language that affect for study?
7. What type of behave did you get from your mathematics teacher?
8. How far is your home from your college?
9. Who encourage you to take higher study?

APPENDIX IV

OBSERVATION FORM FOR YADAV GIRLS STUDENTS

The observation of Yadav girl students would take on the basis of following guidelines everyday:

Name of the student:

Address:

Time:

1. Teacher activities with girls
2. Teacher activities with boys
3. Behavior at home
4. Behaviors of parents
5. Home task they have done
6. Social norm towards girl
7. Thinking towards girls at society
8. Classroom management
9. Time to study at home for boys
10. Time to study at home for girls