

## **Chapter I**

### **INTRODUCTION**

#### **Background of the Study**

Education is a continuous and life long process. The complete development of individual is an essence of education. Therefore education plays a vital role in human life. The development of human resources is the primary function of education. UNO, human rights declare' everyone has right to be educated, education should be free at least for elementary and fundamental stage. Therefore the concept of education is the birth right of every child

Different people and organization define mathematics differently and there is no single meaning of mathematics. Actually mathematics is the study of quantity, structure space and change. It developed with logical reasoning, from counting, calculation, measurement and study of shape and motion of physical objects. According to Bacon, Mathematics is the gate and key of all science" it is also called the queen of all sciences. When we go over mathematic education, it is the study of practices and methods of both the teaching and learning of mathematics. Mathematics education has been a hotly debated subject in modern society.

Mathematics learning curriculum development throughout the world has been in the existence after passing many more obstacles. Mathematics learning in the context of ancient period was less number of student, lack of building, lack of text books, and lack of manpower were some of the common problem in the study of mathematics in the past year. In the same way secondary education is the most important stage in the educational life and it is a must for the progressive development of personality. Secondary education is highly acclaimed as the most essential

prerequisite for further education. So, secondary education plays a significant role in socio-economic as well as overall development of any society. When democracy was established in 2007 B.S. the new concept and vision about education emerged. In 2011 B.S. National Education commission suggested that government of Nepal should improve the system of education, and also brought a new concept that trained teacher must be needed for education. This plan determined level wise, class wise and subject wise objectives for the first time in the history of education in Nepal. In order to fulfill the objective of education curriculum, text book, teachers' guides and other instructional materials were prepared. NESP marked that most of schools have no sufficient instructional materials classroom supervisory systems were poor and text books were only sources of knowledge reference books were not used.

In Nepal mathematics has been taught as one of the major subjects from grade one to ten. In secondary level also mathematics is being taught as one of the major subjects secondary level is the foundation level of higher education. The objectives of the secondary level curriculum are to make students able;

- ) To develop appropriate mathematical skill for daily life problem.
- ) To develop basic mathematical concept of knowledge and skill for study of other subject.
- ) To help enjoy by use of mathematics and decided the important of mathematics.
- ) To develop mathematical knowledge skill and capacity for upper study.

It is necessary to achieve these objectives we have to do effective teaching. About the aspect of teaching, Bhatia and Bhatia (1986-87) said "Teaching is establishing a harmonious relationship between teacher, pupil and subject. It is

causing the child to learn, it is the stimulation and direction of learning, it is helping the child to make effective adjustment. It is guiding the pupil activity and it is training of his emotions. In this context, Stinnett (1968) said "Mental ability certainly is a basic factor in success in teaching. We do not know all the qualities needed by a successful teacher, but apparently personality social adjustment, liking for children and willingness to work are of fundamental important along with mental ability".

Further, on the qualities to be expected in a teacher, Taneja (1997) added that teacher is the leader of society. But society cannot accept easily female teacher as a leader of society so that they faced many challenges in teaching.

About the participation of Mathematics teachers in professional activities, Bhatia and Bhatia (1986-87) said "A mathematics teacher should become a member of local, state and national organization of mathematics teachers should read journals and news about the latest developments and trends in the teaching of mathematics. But female teachers are unable to engage in any recreation activities. She should be interested in arranging work-shops, seminars and meeting of mathematics teachers' to be able to share and contribute to discussions of the latest trends in mathematics teaching gather, ideas and write articles for reading and use by other mathematics teacher. Speaking about good teaching- Rammers and others said that:

- ) The teacher should analyze the individual pupils capacities knowledge, past experience, interests and needs.
- ) The teacher should analyze the pupil's goals and encourages him to receive his goals in accordance with his capacities.
- ) The teacher should harmonize the educational process with the pupils capacities and goals.

) The teacher should evaluate the pupil's progress in terms of pupil's capacities and goals.

) The teacher and the pupils working together reconsider the revised goals in light of the progress achieved and strive to correct weakness which interferes with the attainment of reasonable goals.

Pandit (2001) wrote in his articles in the "Education and Development", Mathematics teaching in Nepal is disturbed by so many factors such as lack o teachers involvement in curriculum planning, lack of efficiency to conduct teaching practice of the students are from lack of books and journals and teaching facilities and aids, students weak background in the subject matter, lack of opportunity gives to upgrade their knowledge and a hug number of personal problems of the teacher. Most of above problems are the products of financial difficulty. However some of them such as a little involvement of the teacher designing, the courses are responsible to some extent to the inefficient academic management as well. It would be logical to say that mathematics education in Nepal is essentially suffering from the above problems faced by mathematics teacher.

History of women education in Nepal is not long. The first government efforts for promotion of women education in Nepal dates back to 2037 B.S. when Nepal spear headed its sixth five year plan (2042-2057). Women development was focused in 10<sup>th</sup> plan. The role of female teacher in Nepal has been recently realized. Number of policies has been initiated. In 1971 the government lunched the 'Equal Access of women to Education' project with the purpose of increasing girls' participation in education, through the production and recruitment of female teachers. While there were not many qualified or educated women, the program tried to recruit women with

lower qualification and trained the teachers besides the government has not provided the enough facilities to the secondary level teacher. Because of h problem schools are unable to provide the facilities for the teacher. On the hands the female teachers face specific problems. Female are not safe to live alone without help of their families. But there is no arrangement of residence for them, so they cannot go to work in these schools which are far from their home. The recognition of the female teachers in promoting the status of girl's education has lead to the development and implementation the Equal Asses of women to Education project (EAWEP) with the purpose of increasing girl's participation in education through the production and recruitment of female teachers, where there were not many qualified or educated women with reduced experience or qualification to be educated and trained as teachers and be deployed to work in rural area upon completion of their education and training. Later in 1983, this program was renamed as the Education for Girls and Women in Nepal (EGWN).

In 1975, as part of fifth five year plan (1975-1980) the government launched the academic upgrading program with the main objective of upgrading of the academic level of girls of remote districts. The government constructed 14 feeder hostels in different location of the country with the support of UNESCO and NORAD to provide residential facility to the girls, who then attended a local secondary school to upgrade their academic qualifications. There was to provide secondary education and ten month long to these girls who were expected to go back to their village to serve as teacher upon completion of their education and training. Government effort to increase the number of female teachers continued through the 1980's and 1990's.

Although the policy brought new awareness about the importance of female

teachers but they cannot achieve her professionalism because of different kind of problem, social beliefs towards women, their conservative role given by society, economic status, leaderships and as well as qualification.

### **Statement of the Problems**

Since the secondary level is the base of higher education, it is appropriate to discuss the problems faced by female mathematics teacher. Many researchers have been lunched in other aspects of teaching mathematics, but none of the researcher has yet been researched about the female teachers problem in teaching mathematic at the secondary level. Since many researcher has already researched about the problems of primary teachers as well as researched about the problem of female primary teachers. But the students of the secondary levels are more critics due to their teenage. So it is more difficult to understand to them and manage their vague curiosity. Some of the students behave nonsense to the teacher mainly female teachers. As the researcher she has faced some problems while teaching at secondary level. Researcher is a just representative person faced such problem but many other female teachers are facing. So, the researcher wants to research about it. This study mainly attempted to explore and analyze the problems faced by female mathematics teacher in teaching mathematics at secondary level. Most of the people felt that the female teacher is unable to teach mathematics. This concept leads to comparatively less number of female teachers in school.

### **Research Questions**

- ) What are the current problems faced by female teachers while teaching mathematics at secondary level?
- ) Do the students readily accept the female mathematics teacher in their class?

- ) Do the school administrations help the female mathematics teacher providing sufficient facilities?

### **Objectives of the Study**

The main objectives of the study were as follows:

- ) To identify the problem faced by secondary level female teachers while teaching mathematics.
- ) To find the situation of practices and opportunities to face these problems.

### **Significance of the Study**

Mathematics is an essential part of the curriculum, so it is included compulsory subject at all level of school curriculum. A large section of the society is illiterates and ignorant in Nepal. They send their children to school but do not give proper care at home. So children cannot perform well at school on the other hand, teacher in Nepal are facing many problems in teaching. Most of the students in secondary level are weak in mathematics. In fact secondary level mathematics teachers have been facing many problems. On the light of these problems this study has a great significance.

The mathematics teachers of secondary school used textbook as a major tool to achieve the objectives of the curriculum. Although mathematics has been given an important place in the curriculum of all levels of school education of the students are weak in mathematics. However, it is felt that most of the students dislike mathematics and afraid of it. The result of S.L.C. examination shows that most of the failures are in mathematics.

There may be many factor that hinder student's progress in his/her subject. One of the main factor of this reason may be the problem of female teacher in

teaching mathematics. Most of the teachers and students take mathematics as abstract, difficult and boredom subject. Problems may arise because of confusion about subject matter, lack of physical infrastructure, teacher training, teaching materials, economically poor conditions of school and inadequate knowledge of curriculum and so on.

This study may provide some logical and valuable information about the current problems of teaching mathematics faced by the secondary school mathematics female teachers. In spite of this fact gender disparity has been chronic problem in education. Some research report shows that female teacher is far behind than male teachers in teaching mathematics. With reference to this issue, it would be useful to improve the achievement in mathematics of female teachers.

The study was significant for the following reasons.

- ) To alleviate the problems faced by female teachers.
- ) Secondary level female mathematics teachers must reap a huge benefit as they were internalize the problems faced by their fellow teacher and prepare themselves for the potential adversities.
- ) To provide information to the concerned agencies to improve the mathematics teaching at secondary level.

### **Delimitation of the Study**

Every researcher was in certain areas so it cannot be generalized in all areas.

So the major limitation of the study is:

- ) This study was concerned with the problems faced by secondary school female mathematics teachers in teaching mathematics.
- ) This study was limited to Bardiya district only.



) Only thirteen female teachers were selected in this study.

) This study was limited on secondary level.

### **Definition of the Related Terms**

**Secondary level:** The level which indicate from class Nine to Ten.

**STEM:** STEM is an acronym referring to the academic disciplines of science, technology, engineering and mathematics.

**Sufficient facilities:** These types of facilities which school provide to teacher in daily life are called school facilities. School gives different types facilities such as teaching training teaching materials, bus facilities, hostel facilities etc.

**Teaching problems:** The problems faced by female mathematics teachers while teaching mathematics like attitude of school administration, professional development of teachers and student's behavior.

**Trained teachers:** The teacher who have passed bachelor or higher level in mathematics education or have taken 10 month special training provided by MOE or NCED or FOE or other authorized institutions are defined as trained teachers.

## **Chapter II**

### **REVIEW OF THE RELATED LITERATURE**

Review of related literature is an essential part of research for the researcher because literature helps and guides research to meet theoretical way for the study. Literature provides strong knowledge. Mainly the literature is previous thesis, books and journals different sources use to site literature. The researcher has reviewed some related literature as follows:

Pandit (1999) mentioned on an article 'problem faced by mathematics teacher educator in the implementation of three year B.Ed. level mathematics curriculum in Nepal. He concluded that mathematics teacher education program in Nepal is disturbed by so many factors such as lack of lecturer's involvement in curriculum planning, lack of efficiency to conduct teaching materials and students weak background in the subject matter, lack of opportunity to upgrade their knowledge.

About the problems in teaching mathematics, Pandit (1999) writes in his one article, teaching mathematics as the mathematics teacher may face different kinds of problems while teaching further there may be problems related with mathematics education program, which directly or indirectly affect to mathematics teaching.

Thapa (2005) conducted her thesis entitled "problem Faced by Teaching Mathematics at Primary Level". The objectives of that thesis was to identify the problems faced by primary level mathematics teacher in teaching mathematics and to compare the problems primary level mathematics teachers in teaching mathematics at rural and urban schools. The population of the research was mathematics teachers at primary level of Kaski District and the sample of research was 30 teachers teaching mathematics in primary school. In conclusion the researcher claims that, must of the teaching problems at primary levels had arisen because of large class size in relevancy

of teacher guide book; in the sense of teacher need lack of instructional materials, adequacy of teacher training, lack of supervisory help and lack of physical facility, etc.

Subedi (2008) conducted his thesis entitled "Problem faced by female teacher in teaching mathematics at Primary Level in Chitwan District. the objective of this research was identify level mathematics female teachers in teaching mathematics and to compare the problems faced by primary level female mathematics teachers in teaching at rural schools and urban schools. The population was all the female teachers teaching mathematics at grade V of government schools in Chitwan district. The sample of the study was twenty primary level female mathematics teachers they were selected purposively from each of the strata (urban and rural). The questionnaire, class observation from was data collecting tools. Collected data were analyzed by using average rank score. The findings of this research were mathematics classrooms are usually crowded causing hindrance for effective teaching especially in urban areas, the female teachers do not practice individual teaching because of the large class size. The teacher's guide is not relevant to their needs, the student's mathematics background is not adequate, the teachers are of the opinion that they could not benefit very much from the field supervisor either because they are not competent or because of their rare visit.

Chhetri (2009) conducted his thesis entitled "A study on primary school female Teacher's Attitudes towards mathematics and mathematics teaching". The objective of the thesis was to investigate the female teacher's attitudes towards mathematics teaching and to explore the cause of female teacher's attitude towards mathematics teaching and to explore the cause of female teachers being behind in teaching of mathematics. The population of his qualitative research was different

primary school's female teachers of Agrakhachi District. And the sample of this study was thirteen female mathematics teachers of primary level. Out of thirteen schools, four schools were selected from urban base area; four schools were taken from semi-urban base area. The questionnaire and interview schedule was the tool for data collection and the collected data was analyzed on the research tool. The conclusion of the research was female teacher who were teaching at s level showed considerable response towards mathematics. Mathematics is an interesting subject for female teacher but they have low participation in mathematics teaching. It is not their interest but they had to face other daily life problems along with teaching.

Nepal (2010) conducted his thesis entitled "A study on the problem faced by mathematics teacher in teaching mathematics at secondary level of Palpa District". The objective of his research was to find out the problem faced by the mathematics teachers at secondary level and the cause of the problems which are faced by mathematics teachers in teaching mathematics at secondary level. The population was all the mathematics teachers who taught mathematics until 2010 in the secondary level of Palpa District. The sample of the study was twenty secondary level mathematics teachers they were selected with one teacher from each school by the methods of stratified random sampling out of twenty teachers, ten were selected from the urban ach and ten teachers from the rural area randomly. The questionnaire, class observation form and interview schedule were data collecting tools. Collected data were analyzed by using Mean weightage. The finding of this research were there are many problems that cause teacher inefficient and unenthusiastic to excel their duty properly in the classroom most of the problem faced by teacher showed lack of moral education economic crises of administration, lack of proper teaching environment lack o f motivation, lack of encouragement, lack of appropriate teaching methods,

materials and lesson plan. Irrelevancy of teachers training, lack of supervisory help, lack of physical facilities work load, large class size, trained and skilled teachers were not also implementing appropriately etc. preparedness and the level of motivation to learn mathematics are poor on the part of the students.

Rijal (2011) conducted "Problem Faced by Teacher of Chitwan District in Teaching Mathematics at Lower Secondary Level" The objective of this thesis were to identify the problems faced by lower secondary level mathematics teacher in teaching mathematics, to compare the problems faced by the lower secondary level mathematics teacher teaching at rural schools and urban school. Design of the study was survey type. The population of the study constituted the mathematics teachers at the lower secondary level of Chitwan district. Eight schools were selected randomly from each of the strata (i.e. urban and rural) by using lottery method. Major findings of this thesis were mathematics classrooms are usually crowded handling effective teaching especially in urban areas. Some of schools classrooms are well lighted and ventilated. The blackboards either shine or inadequate, especially in rural areas. Most of the units are difficult to teach. The teachers do not practice individual teaching because of the large class size. The conclusion of this research was the researcher claims that there are myriad problems that cause teachers inefficient and enthusiastic to execute their duty property inside and outside the classrooms. Most of the problems are arise because of large class size, inadequacies of text book and teachers guide, irrelevancy of teacher is training lack of supervisory help.

OSTI (2012) conducted on her thesis entitled "Problem faced by female teaches in teaching mathematics at primary level. The objective of her research were identify the problems faced by primary level female teachers in teaching mathematics and to recommend suitable solutions about the problems face by female teacher in

teaching mathematics at primary level. The research design was survey type. The population of this research was all primary level female teachers in Gorkha and the sample of this research was twenty four female teachers were selected by quota sampling. The questionnaire, class observation form and interview schedule were data collecting tools collected data were analyzed by using mean weightage. The major finding of this research were school's administration, doesn't provide sufficient learning materials for female teacher, school headmaster doesn't intend to grant leave for female teachers when they are in problem school administration doesn't give toward and punishment for their performance, the mathematics classes are assigned for male teacher only, guardians harass female mathematics teachers, the curriculum of mathematics is not relevant to student need.

Awasthi (2014) conducted his thesis entitled "Problem faced by Mathematics teachers in teaching at B.Ed. first year". The objective of this research was to identify the problems faced by mathematics teachers in teaching foundation of mathematics at B.Ed. first year. The population was all the mathematics teachers who teaches foundation of mathematic at B.Ed. first year of Kathmandu districts. The sample of the study was twelve campus teacher by census method. The questionnaire, class observation form and interview schedule were data collection tools. Collected data were analyzed by using mean weightage. The finding of this research was there are many problems that are categorized into five different areas. These were problem related to curriculum and textbook, problem related to campus administration and university, problems related to various backgrounds of students, problems related to method and materials and problems related to content. The major findings of this study were there are heavily loaded curriculum emphasizing abstract concepts created problem. The subject matters included in the curriculum are not appropriately

sequenced, course content in the curriculum is not according with the objective, lack of teachers involvement in curriculum planning, difficulties in teaching because of difference in social cultural and family environment of students, problems to construct and collect lesson wise appropriate materials, confusion on method to be used in different contents, lack of computer and overhead projectors, teachers have no sufficient knowledge about the new topics uniform distraction, binomial distribution.

A brief review of literature in the related field problems of primary and secondary mathematics teachers was studied and in almost all study descriptive survey type research design was used. Sampling procedure were stratified random sampling, questionnaires are the main tool of research qualitative and quantitative both types research. So the researcher also used descriptive survey type and questionnaire as tools and this study will be make attempt to find the problems of secondary level female teachers in teaching mathematics in Bardiya District. After reviewing above empirical literatures, I have some understanding to making questionnaire and others tools and identifying probable problems faced by female teachers corresponding to administration, physical facilities, student's behavior, her own personality and professionalism.

### **Theoretical Understanding**

#### **The Feminist Approach**

Feminist approach came into existence with the dissatisfaction toward sociological theories and subordination of woman in various fields. Feminists argue that mathematics is a male dominated subject that explains everything from the viewpoint of male behind female and feminists' perspective is must to understand the subordination and exploitation of women by men. It argues that women are excluded from the domain of mathematics, thus masculinity remains privileged. Feminists

argue that only including or adding women in the domain of mathematics does not serve the purpose of understanding women or justify the absence of women's presence in mathematics. They further claim that the biological difference between men and women do not explain their roles inside classroom rather than it needs to be understood as socially constructed (Adkins, 2005).

Research over the last decade has shown that males and females have different classroom experience because they approach learning differently. Achievement expectations for females in some subjects are usually lower, as they are for members of certain racial and ethnic groups and for poor students.

In the classroom, females prefer to use a conversational style that fosters group consensus and builds ideas on top of each other: the interrelationship of thoughts and actions is paramount. Males, conversely, learn through argument and individual activity-behaviors fostered early. Most classroom discourse is organized to accommodate male learning patterns (Ong, 1981).

Males generally had more positive attitude than females toward the subject area. Fennema and Sherman (1977) find that student's attitudes were socially constructed as opposed to biologically determined. Not only are gender gaps in achievement on the mathematics in males' favour enduring over time. More males are high achievers on the mathematics. Their probability of acceptance to mathematics related university programs over female. Boys tend to exhibit more confidence in their mathematics abilities a more positive attitude toward mathematics than girls. Females tend to show less confidence in their mathematics abilities and less favourable attitudes toward mathematics than males. These trends indicate that there is still much work to be done in order to achievement gender equity in mathematics.

There are many challenges that females currently face outside and inside the



classroom with regard to mathematics, such as stereotypical views held by parents and societal views of mathematics as being incongruent with being female gender differences determined by natural selection or are they dictated through individual captures. To answer this questionnaire will need to examine the difference between how culture affects males and females. Cultural influenced differences have been found to surface in childhood. Boys have been found to seek a separation between themselves and their caregiver, whereas, girls tend to identify themselves through their social connections. These gender differences appear to follow a person into adulthood. For example, in group situations, men tend to focus on the task at hand whereas woman focus more on personal relationships (Gabriel and Gandeer, 1999).

#### **About social dominance and about leadership**

According to John Williams and Debarah Best, Men are more dominant driven and aggressive (Johyn Wiliams and Deborah Best, 1900 a. p. 15). There is no evidence of societies where women are more dominant than men (Pratto, 1996). Gender difference are shrinking over time as women assume more managerial and leadership positions.

#### **About Leadership**

Task leadership includes setting standards, organizing, and goal achievement. Task leaders most commonly have a dictative style. One that can work well if the leader is smart and adequate enough to give good instructions or guidelines. Also, since the task leadership wants to achieve their goals, they would be good at keeping the group on track making something are getting done. Experiments done on the subject show that a mixture of detailed and perhaps tough goals and intermittent advertisement helps stimulate students' achievement.

Social leadership includes being sympathetize and on supportive, structuring

teamwork, and intervening conflicts. this is often a self- governing method. Many researcher think this type of leadership is also, good for self-confidence also when workers feel that they are in control over what they are doing, they are more likely to be motivated and therefore achieve more.

Differenced in our professional personal lives also influenced our perception of selves working within feminist research. Laura often reflected on her experiences as a daughter, sister and teacher, while Nancy and Vera referred to their experiences as mothers and professors. The responsibilities associated with conducting meaningful feminist research were balanced in relation to an scholarly academic positions and own personal life positions. For instance as mothers and educators, we felt "responsibility to the girls' parents". We recognized that the parents provided consent to have their daughters participate in the research project in hopes of enhancing their reading skills and encouraging critical engagement with gendered issues. "If we weren't doing these things (focus on comprehension skills and critical thinking) ... we would be failing the parents who are worried about their children" (Nancy).

However, while we were empathetic to parents' wishes to be informed of their daughters' response to the weekly sessions, we also respected the need to maintain the girls confidently in relation to their beliefs, opinions, activities, and behaviours while participating in the book club. We were thus especially pleased to facilitate the girls' suggestion of hosting an open house where they would present self-selected pieces of their work related to the reading of a cartoon, novel to their parents. This would celebrate the conclusion of the first book club program.

Social and cultural factors that manifest themselves as gender-based stereotypes in educational setting and outside of these institutions negative female interest in mathematics starting at a young age (Spelke, 2005, Spelke and Grace,

2007). Influential role models such as parents and teachers reinforce harmful stereotypes about who is good at math, further dampening female interest in this field (Usher, 2009).

Society as a whole believes that females are less mathematically capable than man. This belief is communicated to teachers, guardians, students. This reinforces the belief that they are not capable of doing well in math courses in high school or college. believing them too difficult. In the end the expectancies of their parents and teachers are fulfill and society has further "Proof" of females interior math ability. Thus, the number of secondary level female mathematics teachers is obviously low and guardians believe that the female teachers are less capable than male teacher.

Bornett and Rivers (2004) content that cultural forces influence interest in mathematics with socialization occurring at or young age about who should be interested in mathematics, why mathematic is useful for accomplishing everyday tasks, and which careers are suitable for which gender. Girls receive implicit and explicit messages from parents teachers, peers, and the media that math is a male dominant field that is of little use to women, who should be more interested in socially based endeavors. Indicates that the greater the math gender stereo types that girls possessed, the less likely were to indicate an interest in math (Naosak, et al., 2002).

Some of female math anxiety can be attributed to female role models such as female school teachers and mothers. Having a female teacher who says she is anxious about math leads her students to share that attitude and score lower on tests (Beilock, Gunderson, Ramirez and Levme, 2010). A female teacher's teaching ability to perform mathematical tools has also bean shown to influence a student's confidence and interest in mathematics. Faculty development efforts should be designed to

support this initiative, providing educators with information about the usefulness of math across content areas and providing training for all educators on teaching math skills. Parents should support females who indicate an interest in math-based careers and become involved in helping students select the courses that provide appropriate academic preparation for such fields. This type of behavior among parents is associated with greater retention and success in females pursuing math based careers providing access to female role models who are involved in math careers.

Practitioners who design courses and major requirements within STEM disciplines should be careful about how they emphasize the mathematical skills and abilities needed for success.

There is a common belief that females are less mathematically capable than males. This belief is not entirely unfounded although evidence from the many studies performed on gender difference in mathematics is inconsistent, small but statistically significant differences are the norm (see Feingold, 1988; Hyde, Fenema and Lamon, 1990. (Lubinski and Benbow, 1992; Maccoby and Jacklin, 1974 for some reviews of the literature).

Teachers, believing that participation is an indicator of learning, are likely to ignore females because they participate less than males. Moreover, teachers are often unaware that they are concentrating on teaching males because the process of classroom interaction is unconscious, and they respond automatically to student-demands for attention. Males demand more attention, complain more than they are not receiving enough, and their teachers and female peers expect them to get it. Analyses of classroom discussions involving children between the ages of 9 and 11 in different settings revealed that boys took three times as many turns speaking (Redpath & Claire, 1989), and a study of college age students demonstrated that men dominate

discussions even more as they get older, in some classes speaking as much as 12 times longer than women (Krupnick, 1985)

School administration can help many ways in teaching math for female. Female teacher can get equal opportunities from school administration. The school administration has not reached out to all of the affected female teachers and her association wants to see all the women consulted. School administration play vital role for female mathematics teacher in teaching. The feminism decided to set up at any school which has previously been named one of "The best school in the country", to try to tackle these issues. After a long struggle, the feminist society was finally ratified.

### Conceptual Framework of the Study

This study was focused to identifying the problems faced by female teacher in teaching mathematics at secondary level. From the collection and studies of related literature the researcher made following conceptual framework.

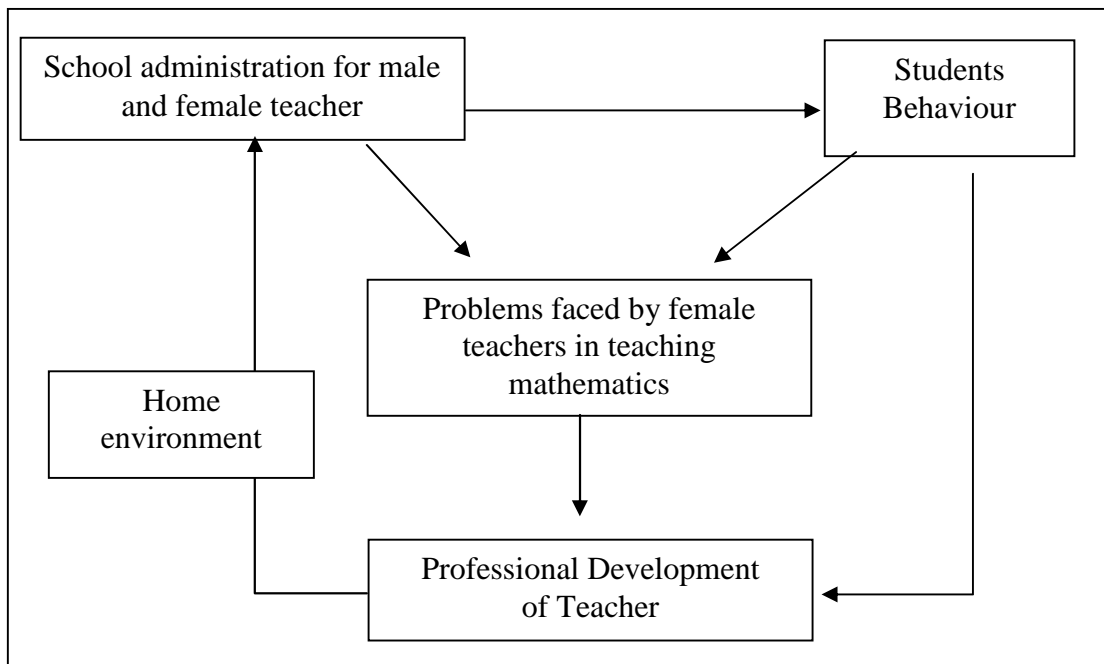


Figure 1: Conceptual Framework of the Study

In the conservative thinking there is a huge gender difference in school and home. As a result of these causes arises that there is a vast difference between achievement of boys and girls in educational area. Female teachers have no more time to spend in development of their professionalism because they have to do all household and social responsibility. Male teacher can spare more time in class preparation, training, seminars and other professional work. Thus, there is a difference between professional development of male and female teacher. In practice school administration biased for female teacher school administration presumes low achievement in their school if there is a female teacher. Because they think female teacher do not teach well as male teacher.

Society as a whole believes that females are less mathematically capable than men. This belief is communicated to students, guardians. This reinforces the belief that they are not capable of doing well in math. Thus, there is a vast difference between student's behaviour towards male teacher and female teacher. Student's behaviour towards female teacher is negligible and they think female teacher are not good in mathematics and do not teach well. In spite of doing the well job the school administration though female teachers should not be a good mathematics teacher and they do not give the opportunity for female teacher. Thus, the female teacher faced many problems. But when solve these entire problem and use policy of equity then the achievement of female teacher will be high.

## **Chapter III**

### **METHODS AND PROCEDURES**

Research presents the logistics of study because it determines how the research becomes complete and systematic. The method applied in this study is discussed in the following sections: research design, population of the study, sample of the study, source of data, tools/instrument.

#### **Research Design**

This is quantitative and qualitative study about the problems faced by female teachers in teaching mathematics at secondary level. So mixed research method was adopted to study the problem faced by female teachers.

#### **Population of the Study**

Population or the universe of the research indicates the entire mass that was observed. The population of this study consisted of all secondary level female teachers in Bardiya district

#### **Sample of the Study**

Sample is a part of research universe which is selected from population as representation for the purpose of investigation. In this study the researcher selected the sample with the minimum number of cases from wider feature of the population. The research has select thirteen female teachers by simple random sampling.

#### **Instrument of the Study**

To fulfill the objectives, Questionnaire, observation form and interview schedule were the instruments of this study.

## **Questionnaire**

Questionnaire was developed by researcher, which was categorized into five different factors. They were problem related to school administration, problem related to students and guardians, problem related to curriculum, problem related to home, and problem related to teacher. The questionnaire was prepared which consist of different problems faced by the secondary school female, teachers in teaching mathematics school administration, professional development of teachers and students behaviours, curriculum, home environment. They were structured that rating scale type of question by the help of supervisor and with reference from previous thesis. It was subtitled to supervisor for validation

## **Observation Form**

Non participant observation was adopted in this study to collect information about problems faced by female Mathematics teachers. Researcher was used peer observation form of M.Ed. an observation checklist about Appearance in the classroom, initiation of lesson, language, instructional materials, students participation, teachers' activities, closing of the lesson. The researcher observed the class till five days from each different sample schools. It was subtitled to supervisor for validation.

## **Interview Schedule**

Interview Schedule is a kind of widely used data collection method of educational research. Semi structured interview was used in this study to collect information about problem of female teachers. It is also a kind of oral questionnaire, which helps us to understand participants' perception, reactions, views and his/ her facial expression about the particular and real situation. Researcher was construct an



interview schedule with mathematics teachers including such elements as teachers background, training and opportunities to develop their profession and different kind of problems (language, social, economy etc.). It was subtitled to supervisor for validation. Interview schedule was administrated to verify the findings from questionnaire and observation form.

### **Data Collection Procedure**

This is the quantitative and qualitative research, so researcher collected data through only primary sources. For the collection of data the researcher visited each sampled schools herself one by one and meet responsible administrative staff, Head teachers and mathematics teachers of the school and asks permission for the administration of questionnaire, observation and interview on the sample teachers. After explaining the purpose of the visit, the researcher requested the sample teachers to fill up the questionnaire freely. After then questionnaire was provided to the sample teacher's. Some teacher returned the questionnaire after sometime later in that day and some teacher returned the questionnaire after some days. Observation was done by the help of observation checklist for teachers the researcher observed the class till five days from each different sample school. The researcher observed three periods of compulsory maths in class nine in three schools and two periods of optional math in class 10 in two different schools the researcher observed each and every class till 45 minutes. Interview was done by the help of interview schedule. The researcher was taken five female teachers for interview who has involved in class observation

### **Data Analysis and Interpretation Procedure**

Analysis of data means studying the organized material in order to discover inherent facts. These data was studied from as many angles as possible either to

explore the new facts. In order to analyze and interpretation researcher was used qualitative and descriptive methods through teachers' view and researcher observation with identifying and coding the data on the basis of similarities and difference which was obtained from the observation form questionnaire and interview. The data received through the questionnaire and class observation was analyzed by using descriptive and statistical methods through the rating scale. Each statement was studied in terms of whether the teacher perceived it as a problem or not by calculating Mean weightage. It would be problem for the given statement if its mean weightage is greater than or equal to 3 otherwise it is not problem.

Class observation form was analyzed as the classroom activities and classroom environment. Information from the class observation form was analyzed by including similarities. If there is a same problem in three classes in three different schools then the research perceived it as a problem otherwise not. Information from interview was analyzed by including similarities of respondent's opinion. From the interview schedule each statement was studied in terms of weather the teacher perceived it as a problem or not by majority of respondents were perceived it as a problem or not. The researcher asked extra other question, if majority of respondent teacher accepted that is the problem then the researcher perceived it as a problem and noted the solution from teacher about that problem.

## **Chapter -IV**

### **ANALYSIS AND INTERPRETATION OF DATA**

The data were collected for the study from thirteen secondary school in Bardia district. The collected data were tabulated and analyzed according to the objectives of the study. The tabulated data were statistically analyze and interpreted by using statistical tool mean weightage. This data were calculated item wise in the various problems related to community based and institutionalized school teachers.

The researcher used class observation form to presence the class randomly five days in each samples school. A non-participant observation was done every day in the classroom and the classroom behavior was carefully observed by different outlook of setting and noted. With the help of semi structured interview schedule the interview was conducted for teachers. The interaction with the respondents was categorized according to their category and then different themes were given in the text of interview or the observation note.

The whole data were categorized into five groups. There are, school administration, students and guardians' curriculum, problems related to home and problem related to teacher. Thus the collected information were analyzed and discussed under the following topics.

- ) Problems related to school administration
- ) Problems related to students and guardians.
- ) Problem related to curriculum.
- ) Problem related to home.
- ) Problem related to teacher.

## Analysis of Problems of Female Teacher which Created by School

### Administration

School administration plays vital role to construction necessary instructional materials. But if it seems to be passive and it irresponsible then female teacher may face problem many on teaching learning process.

For the understanding of the problems related to school administration the researcher raised ten questions. These ten questions and their mean weightage were tabulated as below.

**Table 1**

#### Problem Related to School Administration

S.N.	Statement	S.A	A	U	D	SDA	Mean weightage
1	School administration provides you equal opportunities compare to male teacher	1	6	1	3	2	3.07
2	School administration encourages you to take part in teacher training program	0	8	3	1	1	3.38
3	Magazines and reference books are available	2	5	0	3	3	3
4	The school administration is helpful in keeping efficiency to work for betterment	2	4	3	2	2	3.15
5	School administration gives reward for good performance	3	2	5	0	3	3.15

6	Supervisor visit frequently. If yes He/she helps you to solve professional problem?	0	9	1	1	2	3.30
7	School headmaster does not grant you leave when you are in problem	3	0	2	2	6	3.61
8	Male teacher does not support you in teaching mathematics	4	0	2	6	1	3
9	No support of administration to make materials	3	4	1	5	0	2.61
10	The mathematics class is assigned for male teacher only	4	0	2	6	1	3

From above table, the first statement was school administration provides you equal opportunities compare to male teacher. The mean weightage of their value. is 3.07 which is more than 3 the first statements is a problem for female mathematics teacher at secondary level.

The second statement was "school administration encourage you to take participation in teacher training programmed." The mean weightage is 3.38 is greater than three, it concluded that the second statement was problematic for female mathematics teacher at secondary level.

The third statement was "magazines and reference books are available." The mean weightage 3 is equal three. So the third statement was problematic for female mathematics teacher at secondary level.

The fourth statement was "The school administration is helpful in keeping efficiency to work for betterment." The mean weightage is 3.15. It is indicated that the fourth statements was great problematic for female mathematics teachers at the secondary level.

The fifth statement was "school administration gives reward for good performance." Since the mean weightage is greater than three, it concluded that fifth statement was a great problematic for female teacher mathematics at secondary level.

The sixth statement was, "Supervisor visit frequently. If Yes-He/she help you to solve professional problem." Since on other school more than half of respondent were agree and the mean weightage 3.30 is greater than three,. It indicates that the sixth statement was great problematic for female mathematics teachers.

The seventh statement was "school headmaster does not grant you leave when you are in problem." Since the majority of respondents were strongly-disagree and the mean weightage 3.61 is greater than three. It indicates that this statement is a great problematic for female mathematics teacher at secondary level.

The eighth statement was, "Male teacher doesn't support you in teaching mathematics." The mean weightage is equal to three. So the eighth statement was problematic for female mathematics teachers.

The ninth statement, "The No support of administration to male materials." The mean weightage is 2.61 which is less than three. It concluded that the ninth statement was not problem for female mathematics teachers at secondary level.

The tenth statement, "The mathematics class is assigned for male teacher only." The mean weightage 3 is equal to three. It concluded that the tenth statement was problematic for female mathematics teachers at secondary level.

There were found nine statement problem and one statement was not problem with relation to school administration. According to John Williams and Deborah Best, men are more dominant driven and aggressive (John Williams and Deborah Best, 1990 a.p. 15). There is no evidence of societies where women are more dominant than men (Paratte, 1996). Gender differences are shrinking over time as women assume

more managerial and leadership positions. Feminist approach explained that there should equal opportunities to female teacher should not be dominated by school administration as female. They have to encourage female teacher to take part in teacher training program. The mathematics class is not assigned for male teacher only. Interview support these problematic statement and also supported the non-problematic statement. From an interview there was no support of administration to make materials. Administration can organize the programme for teach to make and use of instructional materials if female teacher have no more time to make this then administration provide materials to the female teachers and teach how to use this in the classroom. Male teachers does not support the female teacher in teaching mathematics. They dominant her. Some teachers says there is no any supervisor visit to see their class.

**Table no. 2**

**Problem Related to Students and Guardians**

S.N.	Statement	S.A	A	U	D	SDA	Mean weightage
11	Guardians great you or respect you as they respect male teacher	3	5	1	1	3	3.30
12	You are neglected by the students in classroom being female teacher	4	4	0	3	2	2.61
13	Students make unnecessary question in teaching mathematics due to female teacher	3	5	2	2	1	2.46
14	Do you feel difficulties to control the class being a female teacher	2	7	1	3	0	2.38

The eleventh statement-was, "Guardians great you or respect you as they respect male teacher." The mean weightage 3.30 is greater than three. It indicates that the eleventh statement was a great problem for female mathematics teacher at secondary level.

The twelve statements were, "You are neglected by the students in classroom being female teachers." The means weightage of their value is 2.61 which is less than 3. So the twelfth statement is not problem for female mathematics teacher at secondary level.

The thirteenth statement was, "Student make unnecessary question in teaching mathematic due to female teachers." since besides majority of the respondents were agree this statement is not a problem for female mathematics teacher at the secondary level.

The fourteen statements was, "Do you feel difficulties to control the class being a female teachers?" Since the mean weightage is 2.38 less than three. The fourteen statement is not problematic for female mathematics teacher at secondary level.

From above table it was found that there was problem in one statement and there were no problem in three statements. Social and cultural factors that manifest themselves as gender-based stereotypes in educational setting and outside of these institutions negative female interest in mathematics starting at a young age (Spelke, 2005, Spelke and Grace, 2007). Influential role models such as parents and teachers reinforce harmful stereotypes about who is good at math, further dampening female interest in this field (Usher, 2009).

Social leadership includes being sympathetize and on supportive, structuring teamwork, and intervening conflicts. this is often a self- governing method. Many



researcher think this type of leadership is also, good for self-confidence also when workers feel that they are in control over what they are doing, they are more likely to be motivated and therefore achieve more.

Feminist approach told that guardians did not want to accept female as a mathematics teacher. The guardians told that the female had not enough time to make pre-lesson planning. So they could not teach as well. The feminist approach told that the students could not accept as a mathematics teacher as a female. They told that the women should not be a good in mathematics. It was found that, guardians should not respect female teacher as they respect male teacher. From the observation and interview it was found that there was also seen problem in non-problematic statement. Students neglect the female teacher in a classroom. They asked unnecessary question in teaching mathematics due to female teacher. It was found that, they have to face many problems to control the class being a female teacher. Female teachers faced the disciplinary problem in the classroom. Female teacher's teaching ability to perform mathematical tools has also been shown to influence a student's confidence and interest in mathematics.

**Table no. 3**

**Problems Related to Curriculum**

S.N.	Statement	S.A	A	U	D	SDA	Mean weightage
15	Teacher guides are available for mathematics book	1	5	1	5	1	3
16	The curriculum of mathematics is not relevant to students need	2	2	0	7	2	3.38
17	Some of units on mathematics are difficult to teach	2	6	2	3	0	2.46

18	You have heavy teaching loads	2	5	2	3	1	2.69
19	Previous lesson of mathematics do not provide background for the current lesson	2	6	2	2	1	2.53

From the above table, the fifteen statement was "Teacher guides are available for mathematics book." The means weightage is three which is equal to three, the statement is a problem for female mathematics teachers.

The sixteenth statement was, "The curriculum of mathematics is not relevant to students need." The mean weightage is greater than three So, this statement is a problem for female mathematics teachers at secondary level.

The seventeenth statement was, "some of units and mathematics are difficult to teach." The mean weightage is 2.46 seventeenth statements is not a problematic for female mathematics teacher at secondary level.

The eighteenth statements, "You have heavily teaching loads." The mean weightage 2.69 is less than three. It is concluded that this statement was not a problem for female mathematics teacher at secondary level.

The nineteenth statement was, "previous lesson of mathematics don't provide background for the current lesson." The mean weightage is 2.53 which is less than three, it was not problematic for female mathematics teachers at secondary level.

From the above table, it was found that there were problem in two statements and there were no problem in three statements. According to the feminist approach practitioners who design courses and major requirements within STEM disciplines should be careful about how they emphasize the mathematical skills and abilities needed for success.

The feminist approach told that the curriculum should be easy and clear the

curriculum should suitable for the secondary level math. The female teacher also need knowledge about curriculum of mathematics. Observation and interview also support these problematic statements. From the interview and observation, there was found problem in non-problematic statements. Some of the units on mathematics are difficult to teach. They have heavy teaching loads.

**Table No. 4**

**Problem Related to Home**

S.N.	Statement	S.A	A	U	D	SDA	Mean weightage
20	your family members cooperate you for your preparation	5	7	0	1	0	4.23
21	Your family members help you to collect related references	2	3	1	7	0	3
22	Your family members are happy with your teaching professions	6	7	0	0	0	4.46
23	Your family members do not give permissions for involving teacher training programme	2	3	1	3	4	3.30
24	You have to perform all household works before and after the school	0	8	1	2	2	3.15

The twentieth statement was "your family members cooperate you for your preparation. "The means weightage is 4.23. Since the mean weightage is greater than 3, this statement is problematic for female mathematics teacher at the secondary level.

The twenty first statements were your family members "help you to collect related references". Since the mean weightages is equal to 3. This statement was problem for female mathematics teacher at secondary level.

The twenty second statements was," your family members are happy with your teaching profession." The mean weightage 4.46 is greater than 3 so this statement is problematic for female mathematics teacher at the secondary level.

The twenty third statements were, "Your family members don't give permission for involving teacher training program". The mean weightage 3.30 is more than three. So, this statement was a problem for female mathematics teacher at secondary level.

The twenty-fourth statement was "you have to perform all household work before and after the school." Since the mean weightage 3.15 is less than three. So, the statement was not a problematic for female at secondary level.

From the above table, it was found that there were problem in all five statements. The feminist approaches told that cultural forces influence interest in mathematics, with socialization occurring at anyone age about who should be interested in mathematics why mathematics is useful for accomplishing everyday tasks, and which careers are suitable for which gender. Parents should support females who indicate an interest in math-based careers and become involved in helping students select the courses that provide appropriate academic preparation for such fields. This type of behavior among parents is associated with greater retention and success in females pursuing math based careers. Providing access to female role models who are involved in math careers. There is a lot of household work to female teacher. To be a good female mathematics teacher, they have a lot of time necessary. To solve these problems, the family members should help them to collect related

reference and manage the time to study. From the interview it was found that the family members are happy with their teaching professions but they do not help for teaching preparation. Their family members do not give permissions for involving teacher training programme. Interview also supported all the problematic statement. From the interview family members do not cooperative her preparation and do not help to collected related references books journals. They have to perform all household works before and after the school family members do not give permission for involving teacher training programme. Female teacher says some of the teaching techniques which learned from training are not usable in the class. According to feminist approach these problems should be solved to be a good female mathematics teacher.

**Table No. 5**

**Problem Related to Female Teacher**

S.N.	Statement	S.A	A	U	D	SDA	Mean weightage
25	Low teaching experience of teachers creates problem in teaching	2	5	3	2	1	3.38
26	Lack of command to teach mathematics create problems	1	7	1	3	1	3.30
27	I do not like to be a mathematics teachers	0	0	1	7	5	4.30
28	Some female teachers do not have time for preparation because she should look after their children and preparing food,	3	7	0	2	1	2.30

	Due to pregnancy and menstruation, home environment.						
29	In teaching mathematics there is no remarkable training opportunity for skill development which can be helpful to develop teaching profession	1	4	5	2	1	2.84

The twenty fifth statements were, "low teaching experience of teachers creates problem in teaching." The mean weightage 3.38 is more than three. So, it indicates that this statement was a problem for female mathematics teachers at the secondary level school.

The twenty-sixth statement was "Lack, of command to teach mathematics create problems." The mean weighted 3.30 is more than three. So, it indicates that this statement was a great problem for a female teacher at the secondary level school.

The twenty-seventh statement was "I don't like to be a mathematics teacher." The mean weightage is 4.30. It is more than three. So it is conclude that this statement was a great problem for a female mathematics teacher at secondary level school.

The twenty-eight statement was, "Some female teachers do not have time for preparation because she should look after their children and preparing foods- due to pregnancy and menstruation-home environment". The mean weightage is 2.30 which is less than three, So it indicates this statement was not a problem for a female mathematics teacher.

The twenty-nine statement was " In teaching mathematics there is no remarkable training opportunity for sill development which can be help full to develop teaching profession." The mean weightage is 2.84 which is less than three. It indicates that this statement was not a problem for a female mathematics teacher at the secondary level school.

From the above table, there were found problems in three statements and there were not found problems in two statements. According to feminist approach, some of female math anxiety can be attributed to female role models such as female school teachers and mothers. Having a female teacher who says she is anxious about math leads her students to share that attitude and score lower on tests (Beilock, Gunderson, Ramirez and Levme, 2010). A female teacher's teaching ability to perform mathematical tools has also been shown to influence a student's confidence and interest in mathematics. Faculty development efforts should be designed to support this initiative, providing educators with information about the usefulness of math across content areas and providing training for all educators on teaching math skills.

Girls receive implicit and explicit message from parents, peers that math is a male dominated field that is of little use to women, who should be more interested in socially based endeavors.

Task leadership includes setting standards, organizing, and goal achievement. Task leaders most commonly have a dictative style. One that can work well if the leader is smart and adequate enough to give good instructions or guidelines. Also, since the task leadership wants to achieve their goals, they would be good at keeping the group on track making something are getting done. Experiments done on the subject show that a mixture of detailed and perhaps tough goals and intermittent advertisement helps stimulate students' achievement.

Differenced in our professional personal lives also influenced our perception of selves working within feminist research. Laura often reflected on her experiences as a daughter, sister and teacher, while Nancy and vera referred to their experiences as mothers and professors. The responsibilities associated with conducting meaningful feminist research were balanced in relation to an scholarly academic positions and own personal life positions.

Girls show less confidence in their ability to learn than boys do. Girls are less confidence about future math performance when predicting future grades in math, girls are less optimistic than boys of equal ability. This lack of confidence is devastating for several reasons. If girls believe that they are incapable of performing well in math class, they may experience a sense of helplessness in the classroom.

Girls learn to attribute their failures to lack of ability and boys learn to attribute their to lack of effort. So girls stop trying, boys where are more likely to hold an incremental. They may attributed failure to lack of effort and work harder. This hard work is necessary for success in mathematics.

Low teaching experience of teachers creates problem in teaching. From an interview three respondents teachers said "there is a lack of skilled/trained teacher for mathematics. When the researcher asked students are not well motivated in female teachers class, is it right ? then they said "starting days students are not motivated in their class because they have low teaching experience so that they have no more knowledge about subject matter and also have no more knowledge about the teaching strategies. From class observation experience teachers teach confidently and more students are participate in teaching programme. The feminist approach told that to be a good teaching there would be necessary a well experience teacher. If female teacher got opportunities to get training then, they should be also a experience mathematics teachers. There should be good environment in teaching mathematics observation and interview supported the problematic statement. From the observation and interview it was found that some students did real like a female mathematics teacher. The observations and interview support that lack of command to teach mathematics create problem. There were also a problem found in nonproblematic statement from observation and interview. In teaching mathematics there is no remarkable training



opportunity for skill development. The feminist approach told that there should be necessary remarkable training opportunity for skill development to teach mathematics.

### **Discussion**

From the above table, there are total twenty nine statement from that, it was found that there were twenty problems and nine were not problem for female teacher in teaching mathematics at secondary level. In the modern time female also could be a good mathematics teacher. For this school administration, male teacher and parents supported them. Feminists approach argue that mathematics is a male dominated subject that explains everything from the viewpoint of male behind female and feminists' perspective is must to understand the subordination and exploitation of women by men. From the above table it was found that female mathematics teacher is excluded from the domain of mathematics, thus masculinity. Feminist approach argue that only including or adding women in the domain of mathematics does not serve the purpose of understanding women or justify the absence of woman's presence in mathematics.

Parents should support females who indicate an interest in math-based careers and become involved in helping students select the courses that provide appropriate academic preparation for such fields. This type of behavior among parents is associated with greater retention and success in females pursuing math based careers providing access to female role models who are involved in math careers.

Practitioners who design courses and major requirements within STEM disciplines should be careful about how they emphasize the mathematical skills and abilities needed for success.

There is a common belief that females are less mathematically capable than males. This belief is not entirely unfounded. Although evidence from the many

studies performed on gender difference in mathematics is inconsistent, small but statistically significant differences are the norm (see Feingold, 1988; Hyde, Fenema and Lamon, 1990. (Lubiuski and Benbow, 1992; Maccoby and Jacklin, 1974 for some reviews of the literature).

### **Analysis the cause of problem faced by female mathematics teachers in secondary level**

There are many causes that to face the female mathematics teacher in secondary level while teaching at the classroom Because of the female mathematics teacher, students neglected them to teach mathematics at the teaching time in the classroom. The female teachers are not enthusiastic to prepare the lesson plans due to lack of time. Female teacher did not receive opportunities to undertake training due to their family obligation some female teacher did not have time for perpetration to look after their children and preparing food. Most of the female teacher were frustrated, dissimulation unmotivated to teach mathematics because school administration did not support and encourages to teaching mathematics to female teacher as a male teacher and they have heavy work burden as compared to men. Teaching School, the home does not necessary reduces our work burned at home. To choose the work outside the home is to be prepared to assume the double responsibility of home and school. Cooking takes much of our time. The preparing food is our day-to-day responsibility. Aside from cooking, we must bear a number of domestic tasks which does not appear to be the case with the male teacher. We cannot have proper arrangement to look after their children, so we ourself have to take care of children while at work. The subjects we are currently teaching to be difficult." Female mathematics teachers should read journals and news about the latest developments and trends in the teaching of mathematics. But female teachers are not unable to engage in recreation activities.

### **Analysis situation of practices and opportunities to get free from these problem**

The observation of classroom activities were intended to identify the problems that arose in the classroom while the actual teaching goes on. From the observation; it is found that in the mathematics classroom the cleanliness is a problem. Most of the teacher faced the problems of the temperature and humidity. Lack of mathematic laboratory gave rise of the problem. The female teacher faced disciplinary problems in the classes because of the students. The student's participation in the class wasn't satisfactory. It was found that level of motivation also a problem. The researcher observed that there is a lack of self confidence in most of the female teacher and also an incentive Handling and lack of cogitation about the construction and use of instructional materials gave rise to the problems. The researcher also observed that most of female teacher don't make lesson plans. The female teachers were not using available instructional materials to practice in a classroom. Qualities of homework were observed to satisfactory, but the summarization and evaluation of lesson, the achievement of objectives and indication to the next lesson were not satisfactory. Some irrational questions, which are asked to female teacher by students.

From the interview schedule, it was found that some of the female teachers were trained but trained female teachers could not apply their experiences in teaching mathematics at secondary level. They felt difficulty in teaching mathematics. They had household responsibility. Students are not well motivated from female teacher because lack of skilled to encourage students towards the subject and also lack of expertise about subject matter. Almost the students are weak in mathematics because there was lack of skilled trained female teacher, and students low interest in mathematics, and teachers doesn't care for weak students, and lack of student's more practice in mathematics and students have misconception about mathematics is very difficult subject for mathematics. From the interview, most of the female teacher says

there is no any supervisor came. It was found that students often ask irrational questions when a female teacher is teaching mathematics in classroom.

There are many practices and opportunities should be done to get free from these problems. First of all, school administration should not be biased for female teacher. They have to give a lot of time to practice mathematics problem. Students should not have to dominate as a female mathematics teacher. Students should not have to ignore them. Of these types of problem solved in school by administration than female teacher also would a good mathematics teacher. To solve these problems, school administration encourages them to take part in teacher training program. The school head master has to solve all these problems. The students have to understand that the female would also a mathematics teacher. In our society, being a female mathematics teacher family members are happy with their teaching professions but they do not help for teaching preparation and their professional development. In our society, family members do not give permissions for involving teacher training programme, if the training center is far from the home town. They have to do household works before and after the school. Male teacher should be support and help them. Family members should be reduces their work burned at home. These are the main problems for female mathematics teacher in school and our society.

Females perform as well as they do differences between males and females performance is quite small compared to the stereotypes that many people hold. And these differences are getting smaller over time. This bodes well for future. As these difference decrease, parents, guardians, administration, male teachers will see more and more that females are capable of performing well in mathematics. This will lead to more parental and academic support, further enhancing females ability.

## Chapter- V

### SUMMARY, FINDING, CONCLUSION AND RECOMMENDATIONS

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

#### Summary

Mathematics is more essential in the development of science and technology. It is widely used in all discipline in course of its development and application. In the contest of mathematics teacher Honn (1961) writes. "The large numbers of teachers who dislike or fears mathematics has become a factor in children's' attitudes are wide spread like all other attitude dislike in mathematics really acuminated to children either directly or unconsciously, It contributes to reutilize teaching mathematics the recognitions of the female teachers in promoting the status of girls education has lead the development and implementation of a number of initiatives and policies in the country since the early 1970s . In every field gender plays the significant role. But gender disparity has been a chronic problems in educations similarly; being secondary mathematics teacher women faced a lot of problems. So the study was focused on to find the problem faced by female teacher in teaching mathematics at secondary level.

To fulfill the objectives of the study, researcher had adopted mixed design and the respondents were the female mathematics teachers at secondary levels school in Bardia district. Only thirteen teachers were selected by simple random sampling method to fulfill the objectives of the study. Questionnaire and class observation form and interview were took to fulfill the objectives. They were subtitled to supervisor for validation the researcher analyzed the collected data by verbal description methods.

#### Findings

The major finding of the study are as follow:

- ) Female teacher faced disciplinary problem, students don't give equal-respect for female teacher compared to male teacher, students ask questions in the class

which are not relevant to the topics.

- ) School administration doesn't encourage female teacher to teaching mathematics at secondary level and also does not encourage to participate in teacher training program.
- ) Male teachers don't support them in teaching mathematics.
- ) Students are not motivated in learning mathematics and ignore their teaching.
- ) Most of the teachers felt some of units in mathematics are difficult to teach.
- ) Their family members are not co-operative in preparing teaching, and teaching materials.
- ) They have to perform all the household work before and after the school. Because of the household works they can't manage time to attend the training which is organized with frequent changes in curriculum.

### **Conclusion**

Finally, the researcher's came to conclude those female teachers who were teaching mathematics at secondary level of different areas of Bardiya district are suffered from different problem. In their opinion, mathematics is an interesting subject but them multiple responsibilities of long life problem, school administration and school management. In teaching mathematics most of the problems are arise because they have not sufficient time to read reference books. Most of the problems arise because of the school administration. Male mathematics teacher don't help female teacher in teaching mathematics. Female teacher get less chance in teaching mathematics. Curriculums of mathematics don't encourage new methods of teaching. Female teacher get less respect from students and guardians. Students feel less happy when female teacher teaching mathematics at classroom. Female mathematics teacher

are not supported by their family members in collecting and reading reference books and collecting and making teaching materials. Family members are happy with their teaching profession but they do not care about problem and professional development of female teacher. Female teachers themselves have no more practice and preparation for teaching.

### **Recommendations**

Proper immediate remedies should be taken into consideration to address the concerns and to minimize the problem faced by the secondary level female teacher.

At last of this research the researcher makes the following recommendations.

Male teacher should help female teacher in teaching mathematics.

- ) Female teacher must be granted leave in their problem
- ) Supervisor must be visit frequently and solve the female teacher's professional problems.
- ) School administration should not biased in allocation of responsibilities to male and female teachers.
- ) School administration and the male teacher should discourage the students from asking unnecessary questions to the female teacher.
- ) School administration provide teachers guide for female teacher.
- ) Female teachers should be given first priority in teacher training program because teaching develops skill.
- ) At least one period of mathematics should be given to teach to every secondary level school teacher. Do you agree with view.
- ) Female teachers should be sufficiently empowered so that classroom performance improves and student will be motivated to take class with female teachers.
- ) Female teacher involved in mathematics workshop, seminars and meeting to

be able to discuss the latest trends in mathematics teaching and gather ideas for effective teaching.

- ) Female teachers themselves care about good performance in the classroom and also they care about their professional development.
- ) Family members should co-operate the female mathematics teachers as teaching mathematics is a challenging job.
- ) Text book and subject matters should encompass the practiced problems so that students will be motivated to study mathematics.

### **Recommendation for Further Study**

This study is about female teachers' problems in teaching mathematics at secondary level. It is not an in-depth study of the respondents. Thus, findings and conclusions drawn from the study cannot be generalized for all female mathematics teachers. If the study was conducted in a wider area with more sample than this study, the findings of the study will be more reliable. The findings and conclusions drawn from the study cannot be generalized for all female mathematics teachers. So, the researcher makes the following suggestions for the further study.

1. Similar study can be conducted in a wider geographical area.
2. This study should be conducted quantitatively.
3. This study should be conducted qualitatively.
4. This study can be conducted in other levels.
5. This study can be conducted at secondary level comparatively government and institutional.



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## Appendix A

**Teacher's Name:**

**Qualification:**

**School's Name:**

**Year of experience:**

Please study the statement carefully and give your own opinion by putting tick (J) on any of the following five rating of each statement.

SA = Strongly Agree

A = Agree

U = Undecided D = Disagree

SD = Strongly Disagree

	S.N	Statement	SA	A	U	D	SDA	Remarks
Questions related to school administration	1	School administration provides you equal opportunities compare to male teacher						
	2	School administration encourages you to take part in teacher training program						
	3	Magazines and reference books are available						
	4	The school administration is helpful in keeping efficiency to work for betterment						
	5	School administration gives reward for good performance						
	6	Supervisor visit frequently. If yes He/she helps you to solve professional problem?						

	7	School headmaster does not grant you leave when you are in problem						
	8	Male teacher does not support you in teaching mathematics						
	9	No support of administration to make materials						
	10	The mathematics class is assigned for male teacher only						
Questions related to students and guardians	11	Guardians great you or respect you as they respect male teacher						
	12	You are neglected by the students in classroom being female teacher						
	13	Students make unnecessary question in teaching mathematics due to female teacher						
	14	Do you feel difficulties to control the class being a female teacher						
Questions related to curriculum	15	Teacher guides are available for mathematics book						
	16	The curriculum of mathematics is not relevant to students need						
	17	Some of units on mathematics are difficult to teach						
	18	You have heavy teaching loads						

	19	Previous lesson of mathematics do not provide background for the current lesson						
	20	your family members cooperate you for your preparation						
	21	Your family members help you to collect related references						
	22	Your family members are happy with your teaching professions						
	23	Your family members do not give permissions for involving teacher training programme						
	24	You have to perform all household works before and after the school						
Questions related to teachers	25	Low teaching experience of teachers creates problem in teaching						
	26	Lack of command to teach mathematics create problems						
	27	I do not like to be a mathematics teachers						
	28	Some female teachers do not have time for preparation because she should look after their children and						

		preparing food, Due to pregnancy and menstruation, home environment.						
	29	In teaching mathematics there is no remarkable training opportunity for skill development which can be helpful to develop teaching profession						

## Appendix - B

### Class Observation Form

Name of the teacher:

Class:

Lesson :

Unit:

1. Appearance in classroom

a) Clean

b) Self-confident

c) Punctual

Good	Tolerable	Poor	Remarks

2. Initiation of lesson

a) Was the lesson objective clear to the students ?

b) Was the lesson based on the previous one ?

c) Were the students ready to learn ?

d) Was the start of the lesson interesting ?

Yes	No	Remarks

3. Language

a) Fluency

b) Voice

c) Clarity

Good	Tolerable	Poor	Remarks

4. Instructional materials

a) Size and clarity

b) Appropriate to the teaching

c) Proper use

d) Use of chalk board

Good	Tolerable	Poor	Remarks

5. Students Participation
- a) Listen attentively
  - b) Ask questions relevantly
  - c) Answer teachers question
  - d) Participate in discussion
  - e) Follow directions

Yes	No	Remarks

6. Teacher's activities
- a) Lecturer
  - b) Question
  - c) Answer to the students
  - d) Encourage students
  - e) Discuss with the students
  - f) Clarify students' points
  - g) Listen to students' opinions

Yes	No	Remarks

7. Closing of the lesson
- a) Was the lesson summarized ?
  - b) Were the objectives achieve ?
  - c) Was the lesson evaluated ?
  - d) If yes, oral ?
  - e) Written?

Yes	No	Remarks



## APPENDIX C

### Questionnaire for Teachers

Name:

Qualification:

Teaching Experience:

School's Name and address:

Age:

1. Now you are \_\_\_\_\_Teacher  
Temporary \_\_\_\_\_ Permanent \_\_\_\_\_
2. Have you got any training course?  
Yes \_\_\_\_\_ [ ] No \_\_\_\_\_ [ ]
3. Mention the main subject which you are teaching now ?
4. In your view mathematics is :  
(i) a difficult subject [ ]  
(ii) an interesting subject [ ]  
(iii) a subject like as others [ ]
5. Mathematics is a compulsory subject in secondary level. What is the rationale behind it is your view?  
(i) Parallel as other subject [ ]  
(ii) To solve the daily life problems [ ]  
(iii) Base for the higher level study [ ]
6. You are a female teacher. Do the following factors affect in your teaching?  
Household responsibility [ ]
7. Do you complete the course of mathematics in time?  
Yes [ ] No [ ]

8. Do your male colleagues help in your profession?  
Yes [ ] No [ ]
9. Who encourage you to teach mathematics?  
Yes [ ] No [ ]
10. Is mathematics a hard subject to teach and learn in you view?  
Yes [ ] No [ ]
11. Are you unable to prepare lesson plan due to multiple responsibilities as school teacher?  
Yes [ ] No [ ]
12. Are you satisfied with you teaching profession?  
Yes [ ] No [ ]
13. At least one period of mathematics should be given to teach to every secondary level school teacher. Do you agree with view?  
Yes [ ] No [ ]
14. Almost all the students are weak in mathematics because  
(i) Mathematics is a hard subject [ ]  
(ii) Students do not have mathematical mind [ ]  
(iii) The is lack of skilled/trained teacher for mathematics [ ]
15. Students are not well motivated in female teacher class  
Yes [ ] No [ ]
16. Students often ask irrational questions when a female teacher is teaching mathematics.  
Yes [ ] No [ ]

## Appendix - D

### Sample Teachers Profile

S.N.	Name of teachers	Name of schools	Year of experience
1	Deepika Joshi	Shree Shukra Higher Secondary	2 years
2	Dhana Laxmi Marasaini	Shree Aashu Barma Higher Secondary	12 years
3	Sushila Sharma	Dhurba Higher Secondary School	2 years
4	Shusma Sharma	Shree Tribhuvan Higher Secondary School	4 years
5	Durga Regmi	Shree Jagadamba Higher Secondary School	5 years
6	Salina Thapa	Shree Virkuti Secondary School	4 years
7	Indira Acharya	Shree Kishan Secondary School	6 years
8	Jandevi Shiwakoti	Shree Jeevam Jyoti Secondary School	3 years
9	Gita Aryal	Petriyal E.M. School	4 years
10	Rama Parajuli	Shre Janata Secondary School	5 years
11	Hem Maya Timalsina	Shree Janasewa Higher Secondary School	7 years
12	Sabita Paudel	Shree Yuwak Higher Secondary School	1 year
13	Deepa Thakuri	Shree Gurans Higher Secondary School	3 years