FEMALE TEACHERS AND GIRLS' ACADEMIC ACHIEVEMENT: A CASE OF POKHARA SUB METROPOLITAN

Lina Gurung

A Dissertation

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DECLARATION

I hereby declare that this dissertation represents my original work and it has not been submitted for candidature for any other degree.

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Lina Gurung, January 17, 2014

Degree Candidate

DEDICATION

This dissertation is dedicated to the promotion of girls' education and female teacher's professional development in the country.

A dissertation of Master of Philosophy in Education has been presented by *Lina Gurung* presented on January 17, 2014.

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I understand that my dissertation will become part of permanent collection of the library of Kathmandu University. My signature below authorizes the release of my dissertation to any reader upon request for scholarly purposes.

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AN ABSTRACT OF THE DISSERTATION

Lina Gurung for the degree of Master of Philosophy in Education presented to School of Education, Kathmandu University on 2013.

Title: Female Teachers and Girl Student's Performance In Public Schools

Abstract approved: _____

Prof. Mana Prasad Wagley, PhD

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The aim of the study is to explore the statistical relationships between female teachers and girls' academic achievement. The government of Nepal has emphasized to increase the number of female teachers through the policy of hiring at least one female teacher in every primary school. The logic behind the policy was guided by the concept that female teachers can bring huge influence on girl's education by increasing enrollment, motivating them and improving their learning achievement. So whether the gendered role model in primary level school can bring improvement in learning achievement of girls or not was the main concern in the study. The research questions of the study were to find the trend of sex wise academic achievement, subject wise performance when taught by female teachers and the perceptions between girls and female teachers about the practiced characteristics of a female teacher as a role model.

In this study, I employed the quantitative methodology relying on post-positivistic paradigm. In this survey research design, Pokhara Sub-metropolitan of Kaski district was my study site. I collected annual examination records of 5965 students of five years (2008 – 2012 A.D) from 37 community schools through census method. The structured questionnaire was administered to 565 grade five girl students

and 165 teachers. The Statistical Packages to Social Science (SPSS) was used for data entry and analysis. Descriptive analysis and t-test were the statistical tools used in this study.

The findings of my study revealed that there was majority of female teachers in primary level. The study found that girls of grade five outperformed the boys over the five years in Nepali, English, Science and Social Studies. Thus the girls excelled in literary subjects and lagged behind in numerical. The study concluded that the girl achieve better scores in Nepali, Science and Social studies when taught by female teachers. There was no statistically significant result in Maths. The study found that the girls perceived their female teacher as a role model in terms of punctuality, appearance, and motivation. Regarding the female teachers' behavior, they loved students, helped them, polite and cared for weak students but physically punished students sometimes. Most of them didn't prepare their daily lesson plans and less used the teaching materials in class. Thus corporal punishment and lack of professionalism to some extent in female teachers prevented them to be role model to all girl students. In overall, the girls had very positive perception about their female teachers. However the study strongly implies that female teachers can really play a contributing role for improving girls' achievement if they respect child rights by reducing the practice of corporal punishment towards them, creating a child friendly environment in school and maintain professionalism to be a good teacher.

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Lina Gurung January 17, 2014

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Lina Gurung

Degree Candidate January 17, 2014

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ABBREVIATIONS AND ACRONYMS

BPEP	Basic and Primary Education Master Plan
CERID	Research Centre for Educational Innovation and Development
COPE	Community Owned Primary Education Programme
EAWEP	Equal Access of Women to Education Project
EDSC	Education and Development Service Center
EFA	Education for All
EGWN	Education for Girls and Women in Nepal
ERDCN	Educational Resource and Development Centre Nepal
GER	Gross Enrolment Ratio
GON	Government of Nepal
GPI	Gender Parity Index
MDG	Millennium Development Goals
MOE	Ministry of Education
MoWCSW	Ministry of Women, Children and Social Welfare
NER	Net Enrolment Ratio
NESP	National Education System Plan
NNEPC	Nepal National Education Planning Commission
PEP	Primary Education Project
SERDP	Education for Rural Development Seti Project
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization

CHAPTER I

INTRODUCTION

Gender issues have been continued to play a key role in the formulation of public policy, not least in the education sector where the gender gap in many developing countries remains a challenge (Chege & Sifuna, 2006, p.1). Globally, females have made significant progress over the past 40 years in reducing historic educational disparities to males (Scheicher, 2008, p.43). Education for all is the aim of almost all countries of the world, but a number of countries have not yet provided education partly because they do not have enough educated persons eligible to become teachers (Jatoi, 1992). When Women Education Program (WEP)'s policy required female facilitator for running literacy classes for women in Nepal, it was extremely difficult to get a female facilitator especially in rural areas (MoE, 1997). But now, women's increasing involvement in teaching workforce has helped to mitigate the gender gap especially in primary schooling. Thus gender gap in education is shrinking rapidly (Shtrii Shakti, 2011). Besides the motivational factor for increasing the enrollment of girls in schools, female teachers' role reinforces the gender achievement in different ways and there are debates of gender gap in achievement levels of schools (Francis & Skelton, 2005, p.1). Therefore, it would be worthy to analyze the issue of gender gap in relation to achievement of girls.

Globally, some 39 million girls are currently not enrolled in either primary or secondary education, while two-thirds of the world's 796 million illiterate adults are women and only about one-third of countries have achieved gender parity at secondary level (UNESCO, 2011). The evidence shows that there is still enough work

to do for achieving gender parity. As gender disparity is rooted in the socio-economic, cultural and political system of a country, Nepal is far behind in achieving gender equality. Nepal has continued to struggle to meet its national goals and those of the international aid agencies (Maslak, 2003, p.7). There is wide diversity in terms of educational access and quality (ERO, 2013). The variation includes the magnitude of the problems of illiteracy, non-enrolment and school dropout rates which vary by region, by gender, social groups, remoteness, gender, ethnicity and economic status (ERO, 2013).

Nepal has made international commitment on Millennium Development Goals (MDGs) and Education for All (EFA). Therefore, the emphasis has been given on gender equity and equality in education. The promoting girls' education has been prioritized by national and international multilateral agencies and donor communities (Chitrakar, 2009, p. 9).According to Chitrakar (2009), one of the reasons behind this is that the investment in girls' education contributes to achieving several socio-economic development goals (p. 9). On the other hand, the social returns to female education are higher than that of male education as female education improves children's health and reduces the number of unwanted births and causes women to want smaller families (UNESCO, 2002). Information on student's achievement and the factors contributing to the achievements are necessary to policy makers, administrators and ministry of education for making decisions about educational policy (Khaniya, 2007, p. 30). Thus, the whole nation can be benefitted from the girl's and women's education.

There have been national assessments of student's learning achievement in Nepal of different grades mostly on grade 3, 5 and 8. These kind of national assessment provide valuable information to policy makers, researchers, educationist

and concerned authorities for various purposes. It is said that focusing on students' test scores is an effective way to improve students' achievement (Hallinan, 2012).In 1997 EDSC conducted a study on "National Achievement of Grade 3 Students. Likewise in 1997, BPEP conducted a study to investigate the impact of the new curriculum on the achievement of grade 4 students in five core subjects (BPEP 1997). With the help of CERID, in 1998, performance level of grade 5 students was studied by Primary Education Development Project. The findings of these assessments were that there was hardly improvement in students' achievement in overall (DOE, 2008). Regarding sex-wise performance of grade 5 students in the study, girls have outperformed boys in many subjects as shown in table 1.

Table 1

Sex-wise Learning Achievement of Grade 5 Students

	Boys' Scores (%)	Girls' Scores (%)	Mean Score
English	39.09	40.25	39.68
Nepali	44.26	45.8	45.08
Maths	48.84	46.56	47.64
Science	44.39	45.72	45.56
Social Studies	66.8	67.26	67.04

Source: DEO, 2008

Table 1 shows that the girls scored more scores than boys in English, Nepali, Science and Social studies. In mathematics boys have more scores. The scores of girls were slightly more than the average scores. These scores are influenced by various factors and female teachers teaching them could be one of it. The increased girls' scores shows that gender gap in learning achievement in grade 5 was slowly reducing while boy's are comparatively less.

The female teachers have a huge influence on the well-being of the students, particularly on girls in Nepal (Duwadi, 2009; Aaronson, Barrow, & Sander, 2006;

Guarino et al., 2007). The presence of women teachers in schools have a number of positive impacts on promotion of girls education such as enhanced intake, dropouts, retention, regularity, and reduced sexual abuses and exploitation against girls in schools (UNESCO, 2006). The logic behind the policy to hire female teachers is that they would contribute not only to increase enrollment (MoE, 1997), motivate for regular attendance but also to improve the academic achievement of girls which would reduce the high rate of retention and dropouts (Bista, 2004, as cited in Bista, 2006). Therefore, Nepal National Education Planning Commission (NNEPC) has recognized the need for recruiting women in teaching profession as early as 1956 (Bista, 2006, p. 13). The government of Nepal has also realized the need of women teachers and hence given the priority on recruiting them in schools. Accordingly, efforts have been made to increase women's participation in teaching profession. The government policies (Education Regulation, 1992; Girl's Education Strategy, 2006) have made the provision to recruit at least one female teacher in primary schools but in reality still many public schools lack female teachers. Various efforts made for the expansion of girls' education have built the knowledge that women need equal status in society (Thapa, 2012). Despite various initiatives, their educational status is still low due to less favorable attitude of society towards women education (Thapa, 2012). Nevertheless, Nepal has not recruited adequate female teachers in schools. Out of 2, 62,508 teachers, females are 90,395 and male 1, 72,113 (MOE, 2011). This number accounts for 34.4 percent of female teachers' representation in teaching workforce in schools. This percentage demands for more efforts to bring females in schools. Thus in the context of Nepal, the participation of women teachers in schools is low which is shown in table 2;

Table 2

Total Number of Teachers in All Types of Community Schools by Levels

	Females (%)	Males (%)	Total	GPI
Primary (1-5)	49,397 (37.5)	82,274 (62.5)	131,671	0.60
Lower Secondary (6-8)	6,909 (20.1)	27,491 (79.9)	34,400	0.25
Basic Level (1-8)	56,306 (33.9)	109,765 (66.1)	166,071	0.51

Adapted from Flash Report I, 2011

Table 2 reveals that number of teachers in all types of community schools in the beginning of the school year. The number of teachers includes all types of teachers (i.e. teachers working in approved positions, Rahat teachers and teachers appointed by the community from their own sources). A total of 166,071 teachers with 56,306 female and 109,765 male teachers were reported for the basic level schools. Out of the total numbers of teachers in community schools, the shares of female teachers are 37.5%, 20.1% and 33.9% at primary, lower secondary and basic levels respectively. Moreover, the table reveals that the Gender Parity Index (GPI) for all types of community schools is 0.60 at primary level, 0.25 at lower secondary level, and 0.51 at basic level. This shows that there is still less share of female teachers in community schools in all level. With 0.60 GPI in primary level indicates that many schools in Nepal especially in rural areas lack female teachers.

The minimum presence of female teachers increases girls' enrollment and decreases the incidence of girls leaving school, however no studies have been conducted to determine whether the presence of female teacher's improves learning achievement as well (Bista, 2004, p. 16). Inadequate numbers of female teachers in the schools of Nepal has resulted to lack of female role models and hence contributing to lesser participation of girls in schools (UNESCO, 2004).However some of the studies found no evidence that an increase in the proportion of female faculty has a

positive impact on the academic performance of female students (Canes & Rosen, 1995, as cited in Neumark & Gardecki, 1998). The effect of the teachers' sex on boys and girls has long been suspect (Arnold, 1968). The relation between women teachers' professional execution and the academic performance of children has not been investigated yet. Therefore, this research has attempted to see the statistical relationships of women teachers and children's achievements.

Statement of the Problem

What explains the gender gap in school performance in particular with the sex of a teacher? It is a crucial problem. Program for International Student Assessment (PISA) has suggested that the 'gender gap' in attainment is a global issue (OECD, 2004). It has been the focus of the educational policies (Sadovnik, Cookson, & Semel, 2013, p. 5). Increased students' achievement can alleviate poverty and improve economic competence (ERO, 2013).

It has been claimed that female teachers have greater roles of improving the achievement of girls (UNESCO, 2006). The improved achievement of girls has a number of impacts of reducing dropouts and hence they have opportunity of completing certain level of schooling. An assessment study in Nepal of academic achievement of class 8 in three core subjects found that boys had higher scores than of girls (ERO, 2013). However, some studies show that the average performance of the girls is now exceeding that of boys in all levels of education (Machin & Mcnally, 2005, p. 358). At the same time some assessment studies report for unsatisfied performance of students which contradicts to each other.

The question lies to see the girls' achievement beyond the gender difference in access and enrollment. If we look at the developments in the way in which the position of girls in education is viewed in policy, the impression gained of the

situation is less favorable (Dam & Volman, 1995). Though global policy frameworks such as MDG and EFA, and the national policies has contributed to accelerate the girls' education and gender equality, the major focus was to ensure the girl's access to school (Unterhalter & North, 2011). The meanings of gender equality and issues invoked have remained less addressed in these global initiatives. Guided by this the national plans and policies are thus compromised and fail to deal with the other important aspects of gender equality in education. Has gender gap really being narrowed in schools? If so then have girls been able to achieve better than boys in their grades? What matters for girl's student achievement in relation to the role played by their female teachers?

Although the recruitment of female teachers has been recommended as a strategy to create role models for girls as well as for their safety, studies indicate that there is no difference in expectations of female students between male and female teachers (Odaga & Haneveld, 1995, as cited in UNESCO, 2002). On the other hand, some studies show that parents and students perceive their female teachers more friendly, caring and inspiring for improving their achievement. In this regard, concerns are raised that can the female teachers serve as role models to their girl in schools. Has there been any improvement in learning achievement of those girls? Are role models inevitably gendered especially in primary level?

Purpose of the Study

The purpose of this research study is to explore the relation between female teachers and girl student's academic achievement. Moreover this study wants to find out the trend of the achievement level of the girl students and the attitudinal differences between the performance of girls and female teachers by each other.

Research Questions

The research questions for the study were as following:

1. How is the trend of academic achievement of boys and girls?
2. How significant is the subject-wise achievement of girls when taught by female teachers?
3. Is there any perceptional difference between girls and their female teachers on female teachers' punctuality, appearance, motivation, behavior and profession?

Rationale of My Research

There have been many research and assessments consolidated in reports. For instances EFA and Global Monitoring Reports have highlighted the quantitative scenario of girl's education in the global and national context. The national assessments study about the scores only but do not apply its significance test and relationship with other factors which are in shadow. In order to complete this gap, I have selected this research with intention to test the scores in relation to its influencing factors. This study consolidates my interest in teachers' sex role with the academic performance of students. Further from the literature review from the second chapter in this study clearly indicates that there has been dilemma of girls' performance whether satisfactorily outperformed boys or not.

Delimitations

I have delimited my study on the role of female teachers for uplifting girl's academic performance. Thus here other factors influencing the girl student's academic performance has not taken into consideration for study.Regarding the different aspects of the female teachers as the independent variable, I have considered only five factors named as punctuality, appearance, motivation, behaviors, professionalism and perception. In other words, I have analyzed the perception of

students on these factors to make sense of how these could contribute to students' academic performance.

Organization of the Study

The organization of the thesis is not different than the general pattern followed in School of Education, Kathmandu University. The first chapter includes the background, problem statement, purpose of the study, research hypothesis and research questions. The second chapter discusses the various literatures on the research problem with sections on policy, theory and empirical research review. The theoretical review is the major element which was highly kept in mind during the planning, implementation and thesis writing of the research. At the end of the chapter the discussion is made on the gap observed in the literature review. The third chapter describes the methodological section. The philosophical assumptions, research designs, sampling frame, population and sample size, data collection method, data analysis and presentation has been considered in the chapter. The fourth chapters is about analyzing and presenting the data. It incorporates the demographic data with several tables and charts followed by the correlation analysis. The fifth chapter summarizes the research findings and provides implications

CHAPTER II

LITERATURE REVIEW

Chapter Overview

In Chapter I, I introduced my research agenda. The major purpose of this chapter is to review the related literature on the research problem to shape the conceptual framework. I have tried to locate the summaries, books and journals on the research topic and summarize it in written report (Creswell, 2012). Thus review literature does not mean only meaning making found in the text itself, but rather it is a creative action, a transaction between the text and the reader that produces meaning (Slack, 2009). The review has been done on the existing policies, empirical research findings and theoretical insights. The chapter also includes the discussion on the gap observed from the literature review.

Policy Review

The educational policy of Nepal is in favor to increase the number of female teachers in schools mostly in primary level. Education Regulation (1992) has ensured to recruit at least one woman teacher in every primary school. Further, it has made mandatory to have at least 2 female teachers in schools with more than 4 teachers and at least 3 female teachers in schools with more than seven teachers. In addition, according to the regulation, primary schools where more than half of the teachers are female would get an additional stipend to promote the recruitment of female teachers. If the permanent positions have been occupied already by the male teachers in the current situation, female teachers will have to be appointed as soon as the position falls vacant or as a new teacher position is created. If female teacher is not available,

then there is a provision of hiring a male teacher for the temporary period and as soon as a female teacher is available, the reserved post will be provided to her.

The need of appointing female teachers was recognized as early as 1956 through Nepal National Education Planning Commission (NNEPC). It borrowed the concept of Western countries and dreamt of making teaching a woman's profession. However, the dream couldn't be realized due to lack of specific programs. Then, All Round National Education Committee was formed in 1961. It reaffirmed the need for recruiting women teachers to realize this policy objective. National Education System Plan (NESP) which was established in 1971 marked the beginning of the expansion of girls' education in Nepal through the production and recruitment of female teachers (Bista, 2006, p. 13). Since the NESP carried along the spirit of promoting female education in the country, it adopted the policy of conducting innovative projects such as *Equal Access of Girls and Women to Education* in 1971. As stated in MOE (1997), the project felt that production and recruitment of female teachers would motivate the rural parents to send their daughters to school. Establishment of Women's Education Unit in the year 1983 under the Ministry of Education was given the responsibility of accelerating the participation of girls, especially at the primary level. It is also said that the initiation of the major reform of the present system of primary education was conceived in 1983 when Primary Education Project (PEP) was implemented as a pilot project with the assistance of the World Bank (Khaniya, 2007, p. 13). After ratifying CEDAW in 1991, it was mandatory for the country to provide equal access to women in education. The National Women's Commission specifically addresses the issues of women and girls. The Ministry of Women, Children and Social Welfare (MoWCSW) is the national institution working for the advancement of women. It is responsible for mainstreaming gender into policies and plans of all sectoral ministries. Importantly it

is also responsible for monitoring the activities of sectoral ministries in align with the women favorable policies.

Education For All (2004 – 2009) and School Sector Reform Plan (SSRP) (2009 – 2015) have made special provisions for females for entry into teaching profession. And Nepal has executed many initiatives in other dimensions or goals of MDG including the promotion through increase in female teacher's presence. SSRP has come up with many positive aspirations in order to promote women and girl's education. The plan focuses on gender mainstreaming and social inclusion in education (MoE, 2009). In view of differential rates of participation and success in education for different social groups the reform will focus on girls and women and children from educationally deprived groups so that they will participate equally and attain equitable results (MOE, 2008, p. 19).

Review of Periodic Plans

The national development plans formulated various policies for the promotion of girls and women education in Nepal. The considerable efforts were made from the fifth five year plan to promote the girls and women in education system of Nepal.

The Fifth Five Year Plan (1975-1980)

It is believed that women's education was incorporated in the national development goal since the fifth five year plan. The fifth five year plan (1976-80) committed itself to increasing the access of girls especially at programs of Seti-Education and Rural Development Project launched in Seti zone in 1981. The serious shortage of female teachers who could be trained to be teachers and the low enrolment rate of girls in school was realized as the challenge. It stated of recruiting women as teachers in primary schools in order to expand girls' enrolment. It emphasized to recruit as many female teachers as possible in primary schools. Equal access to

education for boys and girls were initiated from this plan. During this plan, government launched projects such as the Equal Access of Women to Education Project (EAWEP) and feeder hostels in different districts of the country to upgrade the academic level of girls in remote areas.

The Sixth Five Year Plan (1975-1980)

The sixth plan also emphasized to increase educational expansion and promotion of girls' education (MoE, 1997). The priority was given to the need of recruitment of female teachers to promote girl's education in the country. The Equal Access of Women to Education Project (EAWEP) as renamed as Education for Girls and Women in Nepal (EGWN) was launched in 1983 due to unavailability of the educated and qualified women in the rural communities. The new project aimed to train females as primary teachers and fulfill the need of female teachers in primary schools. It aimed at making primary education free to all students of the primary school level with text books upto Class 3 (Herz, 2006, as cited in Ghimire, 2008, p.32). Education and Rural Development Project, an action based project was also launched in Seti zone in 1981 to make education an effective force for rural development (Sannon, Shrestha, & Rana, 1989, p. 167)

The Seventh Five Year Plan (1985-1990)

The seventh plan (1986-90) gave emphasis to primary and adult education to increase women's literacy. Programs such as scholarships, hostel facilities in rural areas and free text books up to the fifth grade for girls were launched (Suwal, 2002, p. 201). The programs aimed at improving girls' admission into feeder hostels and attracting more women into teaching (Bista, 2006, p. 15). This program was fruitful to enhance the participation of rural girls in Nepalese Education System. Regarding girl's education in primary schools, there were two basic reasons why the government

had focused on greater emphasis on the girl's participation in primary level. Firstly girls' participation is still severe problem at the primary level. Secondly it is assumed that increased girls' participation in primary education would contribute to increasing girls' number in secondary education as well (Suwal, 2002, p. 201). In 1990, a world conference on Education for All was held in Thailand which was also connected with ensuring education for girls and women. This international concern boosted the emerging needs and initiatives of programs for women's education in Nepal.

The Eighth Five Year Plan (1992-1997)

In 1992, the government constituted the National Education Commission (NEC) to devise appropriate educational policy and programs in the changed political context. The eighth five year plan adopted many of the recommendations and policy measures suggested by the National Education Commission and the Basic Primary Education Master Plan of 1991 (Bista, 2006, p. 15). The plan laid stress on the promotion of girls' participation in basic and primary education by providing opportunities to women belonging to educationally backward areas and by compulsory appointment of one female teacher in each primary school (Rajbhandari, 1997, p. 13; MoE, 1997). The plan felt the need of special programs as the distribution of school uniforms, provision of scholarships and awards to school-going girls (MoE, 1997). Following the Beijing Declaration, 1995 Gender Equity and Women's Empowerment National Work Plan, 1997 had been formulated which pushed the educational plans and programs to be more gender sensitive and make more investment in girls' education through scholarships, provisions of hostels and increasing the number of female teachers in schools (Ghimire, 2008, p. 35).

The Ninth Five Year Plan (1997-2002)

The ninth plan emphasized for the poverty alleviation of the country. It realized that education is one of the major means to reduce poverty among the people nationwide. The plan gave emphasis to increase equal participation of the deprived, remote and backward communities in basic and primary education (Bista, 2006, p. 16). It can be sensed that aim of the plan was concerned with gender equity and equality issues in education. The plan stated that preference should be given to women in the recruitment of teachers for lower secondary and secondary schools throughout the country (Bista, 2006, p. 16). During the ninth plan period, a major study was accorded by the government of Nepal to promote female participation in the civil service of Nepal. The report called Engendering Nepalese Civil Service with Specific Reference to Promotion and Entry in Administrative Services (UNDP, 2001 as cited in Ghimire, 2008, p. 36), realized that without promoting equitable system in education women's participation in public service was not possible (Ghimire, 2008, p. 36).

The Tenth Five Year Plan (2002-2007)

The main purpose of the tenth plan was to reduce poverty and it was realized that poverty reduction could not be done without mainstreaming women in the development process increasing their access to education more and more on an equitable manner (Ghimire, 2008, p. 37). The plan laid emphasis on gender mainstreaming and social inclusion and sought to ensure equal access to quality basic education irrespective of gender, caste or ethnicity (Bista, 2006, p. 16). The tenth five year plan targeted at 30% of female teachers at the primary level. Many programs and activities launched earlier to enhance girls' and women's participation in basic and primary education was to be continued (Bista, 2006, p. 16). During this plan, the

government adopted the six goals of EFA (2004-2009) and the programs were targeted to ensure equal access to education for all children and increase the number of female teachers. The programs accelerated with the need to meet the MDG goals as well.

First Three Year Interim Plan (2007-2010)

First Three Year Interim plan which appeared after people's movement (Jana Andolan II) in 2006, had much expectations from people of the country. This plan aimed to improve the structure and quality of education from primary to higher education level. It realized that this objective can be met when there is participation of local agencies in an inclusive manner. The plan looked promising to establish education as the basic right of the people and make accessible to all irrespective of caste, region, gender and other deprived people.

Government Initiatives for Girls' Education and Females' Participation in Teaching

The programs undertaken by the government which aimed to promote girl's education through involvement of more female teachers in primary schools simultaneously benefitted women in teaching profession. The following initiatives of the government of Nepal have emphasized particularly for female teachers. The Non-Governmental Organizations (NGOs), in collaboration with the government of Nepal has been making significant effort on promoting the participation of girls and women in education in Nepal. Therefore, in this section, I have attempted to discuss some particular programs/projects as the efforts of ensuring their inclusion in education system in Nepal.

Education of Girls and Women in Nepal (EGWN)

In 1971, the Government of Nepal launched the Project 'Education of Girls and Women in Nepal (EGWN)' in the financial and technical support of UNESCO, UNDP and UNICEF which identified female teachers as the key agents increasing girl's participation in school education. The project upgraded the girls' qualifications and provided 10 month training courses for subsequent employment as teachers in primary schools as change agents for the community (Sannon et al., 1989, p. 164). During the course the girls were provided a monthly stipend of Rs 350-450, as well as the incentive of accommodation in hostels, medical facilities, travelling allowances, tuition fees, textbooks and educational materials etc. (p. 164).

Basic and Primary Education Master Plan (BPEP)

The Basic and Primary Education Master Plan (BPEP) 1997 – 2002 of Nepal very much in line with this declaration adopted various policies in order to give greater impetus to increasing girls' and women's participation in education. The BPEP policies were designed to increase females' participation in formal and non-formal education programs by emphasizing increased enrolment of girls (6 – 10age group) in primary schools and conducting non-formal education programs such as out-of school program for the children of 8 – 14 age group and adult classes for females of 14 – 45 age group, to enhance women's teacher training program and to offer scholarships for attracting girls to school (MOE, 1997).

Free and Compulsory Primary Education Program

Nepal has decided to introduce free and compulsory primary education during the ninth plan (1997-2002) period which was implemented in phased manner. This program has been still given emphasis in the nationwide. As a result of the program by 1997/98, there were 4150 female teachers and around 2 lakhs girl students

provided with the scholarships. Apart from these, series of non-formal education programs were also conducted (Suwal, 2002, p. 202).

Equal Access of Women to Education Project (EAWEP)

In 1971, the government launched the Equal Access of Women to Education Project (EAWEP) with the purpose of increasing girls' participation in education through the production and recruitment of female teachers (Bista, 2006, p. 1). This is a special teacher education program developed with the assistance of UNICEF. The women trainees were generally selected on the basis of quota; from districts the school enrollment of girls was relatively low. The girls with less than eighth grade qualification were selected and enrolled in a nearby high school until they could pass the eighth grade (Joshi, 1985, p. 56). Girls with the qualification of eight grade pass or below S.L.C were recruited in the 'B' level primary teacher training program. Maintenance allowance and free dormitory accommodation were privileged for the participations of this non-credit program (Shrestha, 1982, p. 106, as cited in Joshi, 1985, p. 56). While there were not many qualified or education women, the program tried to recruit women with reduced experience or qualifications to be educated and trained as teachers and be deployed to work in rural areas upon completion of their education and training. Later in 1983, Equal access of women to Education project program was renamed as the Education for Girls and Women in Nepal (EGWN) (Bista, 2006, p. 2).

B Level Teachers Training Program

The Institute of Education provided a 'B' level program of primary teachers training for the girls from very remote areas who were selected and provided scholarsips to continue their in a nearby secondary school up to ninth/tenth grade. This was a one-year specially tailored program for these girls with added curriculum

content on community develoment and home making. Continuous workshops and seminars are organized to make the curriculum of othe ‘B’ level teachers training program more relevant. The government make a special provision that the girls trained through this programme must be appointed in the school of othe area from where they are being recruited for training. Such girls were also given the concession that they could be appointed even if they hold incomplete S.L.C. (Shrestha & Maskey, 1987, p. 61).

There have been several efforts from the government to promote girl’s education and women’s representation in teaching workforce, however, we still find that there is unsatisfactory participation of women in education. Many rural girls are still out of school who are burdened with heavy loads of household works.

Cheli Beti Program

Chelibeti program was first initiated in Seti project as a pilot program. It was a non-formal education program targeted for out of school girls who were economically and socially deprived (Sannon et al., 1989, p. 170). The program was basically designed for improving the self-perception and status of the women folk. The program was conducted in the morning for 2 hours to a heterogeneous age group from 6 – 45. As in the adult classes, the Chelibeti program also incorporated development oriented works (Shrestha & Maskey, 1987, p. 32). The course was of a 6 months period and each chelibeti class comprised of 20 girls. Following this course, many girls who did not had the opportunity of attending school were able to go to school with their newly acquired education as the six month course was assumed to be equivalent to grade 3 standard in literacy and numeracy skills (Sannon et al., 1989, p. 171).

Feeder Hostels

The government constructed 14 feeder hostels (currently 18) in different locations of the country with the support of UNESCO and NORAD to provide residential facility to the girls. The feeder hostels provided meals and residential facilities to the girls, who then attended a local secondary school to upgrade their academic qualifications (Bista, 2006, p. 15). The idea was to provide secondary education and ten month of teacher training to these girls who were expected to go back to their villages to serve as teachers upon completion of their education and training. Feeder hostels were built in strategic locations where girls from the nearby districts stay and study (Shrestha& Maskey, 1987, p. 61).Shrestha and Maskey (1987) further stated that "These feeder hostels accommodate around 30 girl and they are attached to a secondary school" (p. 61). These feeder hostels are functioning even today. Studies (e.g., CERID, 1996; MITRA, 2001) conducted to assess the effectiveness of the feeder hostel program (FHP) have reported that the feeder hostels have made a positive contribution to promoting girls' education by providing educational opportunity and access to girls (Bista, 2006, p. 16).

Community Owned Primary Education Programme

The Community Owned Primary Education (COPE) Programme was initiated in 2000 with a focus on decentralized management of primary education in order to ensure quality and equity in primary education opportunities (especially girls and socially disadvantaged). A total of 120 COPE schools were established in 6 programme districts of Okhaldhunga, Rautahat, Kapilvastu, Achham, Bajhang and Baitadi (UNDP/MLD, 2003). UNDP/MLD (2003) further asserted that the programme has claimed success in contributing decentralized planning and

management of primary education with more female primary teachers and enormous increment in NER for Girls.

Scholarship Programme

School Scholarship program was launched with the purpose of providing some financial aid to school going children from remote and backward communities (Sannon et al., 1989, p. 165). Girls were provided various scholarships to attract in schools. Incentive of Rs 250 per year per girl for a total of 32,000 girls at the primary level of 10 districts of western development region was provided along with daytime snacks (Suwal, 2002, p. 202). Local school scholarship for the selected girls of grades 6, 7, 8, 9, and 10 were given monthly sum of Rs 60, 70, 80, 90, and 100 respectively. Scholarships were also awarded annually to 400 girls studying education in higher secondary or campus level in remote districts. The scholarship amount was Rs 450 for girls in general while girls from Karnali zone were given Rs 550 as the scholarship amount (Suwal, 2002).

Theoretical Review

I have seen the objective realities of impact of female teachers' recruitment on girls' achievement level through feminist theory and Vygotsky's theory. I have used these theories as complementary lenses each other to bring insights from the research issue.

Feminist Theory

Feminist theory has contributed to build the socio-cultural foundations of education. When addressing gender issues in education, the role of feminist thinking in shaping the theory of equality and equity cannot be ignored (Chege & Sifuna, 2006), there were three waves of feminist movement in education. The first wave (1848 – 1920) did not focus directly on education rather it focused on right to vote, to

own property and reproductive rights. However, second wave (1960 – 1970) advocated for equal access of women in higher education and having no discrimination in workplace due to their gender. Similarly, the focus of third wave (initiated from early 1990s) was to recruit local female teachers for effective girls' education with a view to respect plurality and differences among women.

The women in development (WID) approach, predominant in the 1970s and 1980s, that addressed women's practical needs was proving to be insufficient to achieve gender equity (Welsh, 2010). The women have been excluded from control over vital resources and questioned for structures of existing societies. They have been accepting the existing social and power structures, working within them to improve the position of women (Welsh, 2010). As an integrative strategy, the WID approach addressed only the practical needs of women, totally ignoring their strategic needs that would enable them to challenge the patriarchal structures that served to discriminate against women and lock them out of the development agenda (Chege & Sifuna, 2006)

An improvement of the WID was the Gender and Development (GAD) strategy that not only integrated women but also aimed at empowering women and men to challenge the existing unequal power relations in society. The sexual division of labor in the society was one of the connection in which men and women became dependent on each other (Peet & Hartwick, 2009).

The feminist theory focuses that women are active agents in breaking down walls between private and public spheres, creating a positive social change that benefits women, girls and all society. The life experiences of the women teachers bring into sharp focus the link between private and public, between life and education, between the personal and political (UNICEF, 2002). Thus this feminist theory

positions women as the subject of in research rather than objects. It shows how women's concerns and problems can be better understood by situating them in a context that exposes the unique and particular factors that pertain to women as they lead their lives in their social circles (Maslak, 2003, p. 108).

Feminist pedagogy which is based on an alternative instructional model and have emerged from the application of feminist theory to education addresses the need for social change and focuses on educating the oppressed through strategies for empowering the self, building community and developing leadership (Sandell, 1991). The pedagogy adopted by female teachers ultimately seeks a transformation of the academy which can be achieved through classroom interactions that foster empowerment, community and leadership (Shrewsbury, 1987, as cited in Sandell, 1991).

The education policy in Nepal has been amended in later days from feminist approach. Promoting girl's education through scholarship programs, incentives, awareness and female teacher's recruitment is an example. To test the empiricism, it is necessary to explain the relationship between them. The predominance of female teachers has been argued to have had a fundamental impact on primary school achievement and this includes the ideas of adopting of daily routines and practices which favor females, and the way in which the curriculum is delivered and assessed favors girls' learning styles (Delamont, 1999, as cited in Francis & Skeleton, 2005, p. 90). Thus, feminist theory speaks about 'feminization of teaching' whereby circumstances are made favorable for girls to achieve better and succeed.

Feminist theory argue that girls are largely absent from the mainstream debate. The lack of discussion on such issues of girls constitutes an absence, a silence gap in the discourse promoting the marginalization of girls (Francis & Skeletion, 2005, p.

104). Some feminist educationalists have observed that when girls were perceived to be the underachieving group, there was far less attention to their plight or funding to the remedy the situation (Francis & Skeletion, 2005, p. 104). Consequently, feminist standpoint theory is a useful lens for examining the academic achievement about gender because it is one way of connecting feminist knowledge and student's experiences (Slack, 2009, p. 15) to the realities of gendered social relations.

Vygotsky's Learning Theory

In this research I have linked Vygotsky's learning theory because he has emphasized the "complex mental functions of categorical perception, logical memory, conceptual thinking and self regulated attention" (Gredler, 2009, p. 341). Vygotsky's learning theory is based on the premise that individual learner must be studied with in the particular social and cultural context. Vygotsky's notion of the zone of proximal development, a central proposition of this theory, refers to a level of development attained when learners engage in social behavior. Vygotsky (1978) defines the zone of proximal development as the distance between the actual development level and the level of potential development. Hence, the zone of proximal development (ZPD) links that which is known to that which is unknown. In order to develop the ZPD, learners must actively interact socially with knowledgeable adult or capable peers. A student can only progress to the ZPD and consequently independent learning if he/she is first guided by a teacher or expert. The teacher's role becomes one of purposeful instruction, a mediator of activities and substantial experiences allowing the learner to attain his or zone of proximal development.

Moreover, Vygotsky's has introduced the notion (Zone of Proximal Development) ZPD in relation to learning and development. It is based on his theory that learning is, at its core, a largely socially-mediated activity, and that real learning

takes place in students' ZPD. According to Vygotsky (1986) what the child can do in cooperation today he/she can do alone tomorrow (p. 188). Therefore, good and effective instruction is that which marches ahead of development and leads it.

Vygotsky has proposed a new approach that emphasizes particular attention on learning and development as interrelated, dynamic process. In the process, the students become active participants in their learning using language and interaction with others. From Vygotsky's theory I brought an idea that ZPD is a notion that takes into account individual differences and is focused on the communicative nature of learning in which the students come to an understanding of the task they are performing. Continual guidance within the ZPD enables students to understand what is complex and move on to being able to know something as well as share it with others. In the Nepali scenario, the notion of collective development is most consistent with the pluralistic nature of the society. Individuals who collaborate engage in teaching-learning activities as a way to begin developing collaborative relationship. It makes students understand more clearly the world where collaboration is a social process in which meaning is constructed from discussion from group members (Vygotsky, 1978).

Major contribution of this theory is useful for the instruction in the classroom because it focuses the learner interest and need. It believes that every learner can learn but not in the same way it accept teacher as a facilitator rather than tutor. It believes on collaboration and inclusive classroom. This theory stresses to the cultural environment, cultural tool of learning, focuses on learning process according to the need and surroundings of the learners.

According to Vygotsky's (1986) theory of developmental psychology, cognitive and social development and cultural tools are important in inclusive classroom but it is also equally important to consider the perspective of students' activities. I have

intended to explore whether cultural and collaborative solutions may be drawn based upon Vygotskian developmental principles. I am interested to see an opportunity to apply relevant aspects of Vygotsy's framework where students can involve for themselves in taking action by collaborating with one another.

Vygotsky's social, cultural and historical perspective is evident in his conviction that all learning is first accomplished through the language that follows between individuals. Language and action, for Vygotsky, are tools of mediation for learning. Speaking reorganizes students' thinking and their language comes to them as a cultural heritage through their interaction with others (Balkrishnan, 2009). Vygotsky has focused on the notion that human use tools and sign systems in order to transform themselves to reshape cultural forms of society and hence the potential for development of these capabilities is determined by the cultural-historical heritage of the child's culture and the child's social experience.

Vygotsky has visualized that the goal of the school is not at all a matter of reducing everyone to the same level, on the contrary, one of the goals of the social environment that is created in the school is to achieve as complex, as diversified, and as flexible as an organization of the various elements in this environment as possible. It is only necessary that these elements are not in any way irreconcilable, and that they be linked up together into a single system (Vygotsky, 1997, p. 79). His theory requires the teacher and students to play active roles as they collaborate with each other. The teacher should collaborate with his/her students to create meaning in ways that students can make their own learning.

Thematic Review

There has been worldwide realization of the gender disparity in education. There is gender disparity in access, opportunities, achievement, perception and assessment as well.

Gender Disparity in Education

The school as a social institution is characterized by particular gender regimes (Muhanguzi, Bennett, & Muhanguzi, 2011, p. 141). Muhanguzi et al. (2011) further said:

> In the gendered school environment, students face hierarchial gender arrangements manifested in the extensive segregation of boys and girls in various school activities and in the actual location of facilities as part of the everyday lived culture of the school. (p. 141)

Despite calls for equality world-wide, and despite Nepal's assumed democracy, women remain marginalized in education. Little attention has, however, been given to what happens to girls in the schools that is to the 'in school factors' or the treatment experienced by girls within the schools (Machingura, 2006, as cited in Mutekwe, Modiba, & Maphosa, 2012). In our Nepalese context, education is thought more important for men than for women as men have to take care of the family but women are mostly engaged in household work (Thapa, 2012).

There are differences between men and women's educational achievements. These differences are a result of socially constructed knowledge about the gender roles rather than of biological difference (Bhasin, 2000). The problem is not whether significant differences exist between the sexes but whether these differences have educational implications (Clark, 1959). Rather than providing "equality of

opportunity" for all students, schools in fact perpetuate existing inequalities in our society (Levy, 1972).

With regard to gender disparities, increasing the number of female teachers is often recommended as a strategy for raising achievement as well as attainment among girls and women (Chege & Sifuna, 2006, p.125). The female teachers are the role models for girls as well as for their safety but the largest gender-gaps in enrolment exist where the percentage of female teachers is low (World Bank, 1992, as cited in UNESCO, 2002). The female teachers at low-performing schools are more favorably disposed to teach boys than are their male counterparts at all schools and their female counterparts at high-performing schools (Mensch & Lloyd, 1998). To the extent that teachers would rather teach one sex than the other, they prefer to teach boys. Evidence suggests that female teachers do not favour girls over boys in their classroom interactions and that the observed sex differences may be due to differences in student behavior rather than to the attitudes of female teachers (Brophy & Good, 1973). Brophy and Good (1973) went on saying that girls are found to suffer from negative attitudes and discriminatory behavior in both sorts of schools. The empirical evidence of whether and how teachers' gender plays a role in causing gender differences in educational outcomes is inconclusive (Sadovnik et al., 2013, p. 470).

Gender Gap in Achievement

Student's achievement is affected by various factors such as parental involvement, socio-economic status (Juma, Simatwa, & Ayodo, 2012, p. 297), government policy, school resources, teacher's perception, and gender. Various studies have illustrated how constructions of gendered behavior constitute a key explanation for a 'gender gap' in achievement (Francis & Skeleton, 2005, p. 101). Program for International Student Assessment (PISA) has suggested that the 'gender

gap' in attainment is global issue (OECD, 2004). It has been the focus of the educational policies (Sadovnik et al., 2013, p. 5). In most subjects, the average performance of girls now exceeds that of boys at all levels of education (Machin & Mcnally, 2005, p. 358). Many explanations have been put forward for the existence of a gender gap in achievement. However, one possibility is that the gender gap at a point in time (or changes over time) might be explained by differences between schools in terms of resources, gender mix, teachers (and gender of teacher), etc. (Machin & Mcnally, 2005, p. 362).

With regard to primary school, the more important change over time has been in reading, where the gender gap favoring girls is more pronounced than it was in the past. The causes of the gender gap (and possible solutions) should not be thought of only in relation to young children. From this analysis, it appears that the explanation for changes in the gender gap over time is to be found in the teenage, secondary school, yearsand not in early experience at school or at home (Machin & Mcnally, 2005, p. 368). "Gender inequality is manifested in the existence of educational discrepancies in male and female student achievement, aspirations, and self-evaluation" (Tatar & Emmanuel, 2001, p. 215) and these "discrepancies are caused by societal stereotyping by parents, peers, and teachers who influence and reinforce gender role stereotypes" (Eccles, 1989, as cited in Tatar & Emmanuel, 2001, p. 215).

Role of a Female Teacher

Female teachers have crucial role to increase enrollment and retention of girl children. Female teachers are viewed both as role models and caretakers. Their presence partly makes parents feel secured, though this is not applicable to all parts of the country but the respect for the profession in the society is decreasing (Paudyal, 2012). For female students female teachers are needed more in upper grades but for

school system they are needed more in lower grades because they are presumed to be good caretakers. Low presence of female teachers in upper level has implication on female students' learning environment because absence of female teachers in upper grades leaves female students with no one to tell their problems (CERID, 2009). In fact the presence of female teachers is necessary in all level of formal education for equal representation of girls and better academic performance.

Female teachers by virtue of their own experience of subordination in society are expected to be more kind to students and more understanding and therefore less inclined to use physical punishment when exerting discipline in the class (CERID, 2000). They are more child friendly due to their nature and role in society. On the other hand, enrollment rates do improve and dropout rates decline with the presence of female teachers (CERID, 2000). Teaching is one of the caring professions and many evidences indicate that women are involved caring for children in their teaching profession too. It shows that caring of children is highly gender stereotyped.

Many factors affect student learning outcomes, including parents, peers, teachers, schools and the students themselves (Potter & Centra, 1980). The personality characteristics of teachers largely confirm the various research findings of influencing the student's achievement (Fevre, 1967; Kifer, 1975). Teacher quality is vital to student's achievement and variation in teacher quality is driven by characteristics that are difficult to measure (Rockoff, 2004). In this study, thus instead of measuring the characteristics or applying any statistical test, the characteristics were considered from the attitudinal perspective via Likert scale.

The social returns to female education are high and exceed the returns to male education: female education improves children's health, reduces the number of unwanted births and causes women to want smaller families (UNESCO, 2002). The

potential for more productive labour, better health, and slower population growth all argue for more investment in female education (UNESCO, 2002).

The absence of women teachers also makes schools unsafe places (Bista, 2004, p. 7) Parents do not feel safe sending their girls to male-dominated environments. They may be concerned that sending girls to school will expose them to physical or sexual abuse from teachers or boys. Educating a young girl does carry heavy risk in a male-only school environment (Bista, 2004, p. 8). The quality of teaching influences demand for girls' education even more than for boys (Bista, 2004, p. 8). Schools without female teachers leave girls without role models to emulate and boys are assured that women's roles do not extend beyond the home (Tasnim, 2006, p. 46). Faculties with increased numbers of female teachers will be more effective at motivating their female students to finish their programs/degrees and play a meaningful role in the world (Butler & Christensen, 2003, p. 785).

Relationship Between Teachers and Students

Teacher influences student's learning achievement more than the school environment, home environment or the availability of the educational materials do (ERO, 2013). One of the most compelling arguments for increasing the number of women teachers in school relates to the positive impact on girls' education. There is evidence to show a correlation between the number of women teachers and girls' enrollment. When levels of women's educational access and attainment for participating countries are measured against a variety of social indicators, a positive correlation emerges between higher educational attainment and improved social conditions (ADB, 1994, p. 44).

In countries where there are more or less equal numbers of male and female primary teachers, there is close to gender parity in student intake. In contrast, in

countries where women constitute only 20% of teachers, there are far more boys than girls entering school (UNESCO, 2003). The relationship between women teachers and girls' enrollment is more than a simple cause and effect, as there are many factors that prevent girls from attending school some of which also impact on the number of women teachers.

There are different reasons for the generally positive relationships between girls' enrollment and women teachers. Firstly in some conservative communities, parents will not allow their daughters to be taught by a male teacher. Secondly the presence of women in schools can also impact positively on girls' retention in school and on their achievement. Another reason is that at the school policy level, women teachers may act as advocates for girls, representing their perspectives and needs, and promoting more girl-friendly learning. The fourth reason is that women teachers provide new and different role models for girls especially those in rural and conservative communities (UNESCO, 2006). It was perceived that women teachers can play the role model for girls' students and parents feel more secure and comfortable to send their girls in schools (Bajracharya et al., 2006, p. 10, as cited in Paudyal, 2012).

Children's attitudes towards female teachers were found positive. In a study (Bista, 2006), female teachers were reported to be very caring and loving to children, behaving equally to boys and girls, children feeling safe under them, listening to students' personal and family problems, respecting students and being more receptive than their male teachers. The same study on the teachers' attitudes towards students as learners revealed that girls were shy and nervous to ask questions in the classroom and spends little or no time for study due to household work resulting to their poor performance as compared with boys (Bista, 2006).

The children demonstrate free action because of their practical activity has not been influenced by the perceptions of their social world (Charles, 2004, p. 275). The boys are more disruptive, louder, and more vocal and make irrelevant rescores while girls usually spent a good deal of time quietly chatting and doing with their nails and hair (Warrington, Younger, & William, 2000).

Teachers play an important role in students' adjustment from one level to another and teachers serve as confidants, mentors and friends when students have extensive involvement with them (Reddy, Rhodes, & Mulhall, 2003, p. 119). Indeed, schools are interpersonal settings in which relationships influence students' motivation, academic performance and psychosocial adjustment (Pianta, 1999, as cited in Reddyet al., 2003, p. 120). Relationships with teachers can be particularly important to early adolescents, who are often undergoing profound shifts in their sense of self (Reddy et al., 2003, p. 120). Girls' scholarship with the female teachers has contributed to some extent to increasing girls' access to and retention at primary level but failed to ensure their continuation in higher grades as expected (Koirala & Acharya, 2005, p. 9).

Having female teachers in schools is as important as they demonstrate different leadership styles, provide role models for girls and illustrate the gender inclusiveness of educational institutions (UNESCO, 2011). Evidences suggest that the improvement in access in enrollment has not been mirrored in an improvement in gender equality in performance (Saito& Byamugisha, 2011, as cited in UNESCO, 2011). The relationship between the girl-child and the teacher can reinforce the traditional female stereotype or help the girl-child to develop a new concept of herself (UNESCO/UNICEF, 1993).

Moreover, female teachers know the problems of female students better than male teachers do, they could understand better (Wudu & Getahun, 2009). The female teachers passed many challenges while they were students, they can share their experiences to solve the problem that we girls face today and sometimes they struggle for the rights of female students as well (Wudu & Getahun, 2009). It shows that female teachers play a significant role to create a conducive environment for female students to discuss freely about their problems and find solutions as well. Girls and boys tend to perform better with teachers of their own gender and/or receive better grades than with teachers of the opposite gender (Neugebauer, Helbig, & Landmann, 2010).

It is assumed that girls have benefited academically from the increased share of female teachers among the teaching population, whereas boys have been negatively affected by the simultaneous decrease in male teachers at school (Neugebauer et al., 2010). Types of behavior that tend to disrupt school activities and negatively affect students' academic performance are more frequently found to originate from boys than from girls (Eagly & Chrvala, 1986, as cited in Neugebauer et al., 2010).

The differential behaviors by teachers towards their students are often the result of teacher perceptions and attitudes toward their students' gender roles, which mirror prevailing societal stereo types (Tatar & Emmanuel, 2001, p. 215). A study found no evidence that same-sex or same race teacher improves student test scores about same-sex teacher has a positive casual impact on student outcomes (Holmlund & Sund, 2005). However they do find that matched teacher-student characteristics in terms of sex and race have an impact on the teacher's subjective assessment of the students (Holmlund & Sund, 2005). There has been no clear evidence about observable characteristics of effective teachers influencing on student achievement

(Guarino et al., 2006). On the contrary, it can be also argued that variance in student' achievement was potentially due to the variation in teacher's performance in evaluation (Rivkin, Hanushek, & Kain, 2005).

Student's Perceptions Towards Female Teachers

Since the female teachers are the role models to whom girls relate and set norms of behavior and achievement to which they aspire (Haveman & Wolfe, 1995, as cited in Nixon & Robinson, 1999), their presence, professionalism, motivation for students and behavior play important role in shaping the student's feelings about teachers and school. Role models provide a means for decreasing the uncertainty of achievements (Reid, 2005, p. 41). The amount by which the uncertainty is reduced as a function of how closely the student can identify with her role model and how easily she can envision herself achieving what her role model has achieved (Reid, 2005). Therefore perception of girls and female teachers themselves towards female teachers in terms of professionalism, motivation, perception, and so on could be contributing to the better achievement of girls. If students feel ignored, misunderstood, devalued or disrespected by their teachers, they are likely to react negatively and if they feel that their teachers have regard for them, approve of their behavior and are interested in their welfare, they will react positively (Hallinan, 2012, p. 213). So the personal characteristics of teachers associated with their presentation in front of their students are an important factor influencing their academic performance. The female teachers as role models provide positive educational outcomes for female students. This confirms that there is a significant relationship between the female teachers and the educational attainment of female students (Nixon & Robinson, 1999).

Underachievement of Boys or Girls

At schooling level, where education is equally available to all, there is gender gap in the achievement that favors girls. The differences between men and women's achievements are a result of socially constructed knowledge about the gender roles rather than of biological difference (Bhasin, 2000). Girls out-performance of boys in schools is strongly connected to their overwhelmingly higher achievement at language and literacy subjects, which somewhat skews the achievement figures overall (Francis & Skelton, 2005, p. 3). On the other hand there is growing concern of the underachievement of boys in an international arena and feminist apprehension are criticized for their greater focus on girls' achievement rising the gender gap with boy's underachievement.

An article by Wright (2001), which originated from a research project investigating the effects of gender on achievement in music education in one secondary school showed a correlation between gender and achievement in music with some surprising insights into possible causes of male under-achievement in education (Wright, 2001, p. 275).

In the eighties feminist research raised concerns about male domination of the classroom and the under-achievement of girls, particularly in math and the sciences (Acker, 1994, p. 94, as cited in Wright, 2001, p. 275).

There have been studies carried out on the impact of teachers' characteristics on student's achievement. Some studies do find a positive impact of teacher quality on student achievement (Rivkin et al., 2005; Rockoff, 2004, as cited in Eisenkopf, Hessami, Fischbacher, & Ursprung, 2011, p. 9). On the other hand, Jepsen (2005) uses survey data and finds that a number of non-standard teacher characteristics are insignificant predictors of student achievement, especially so in lower grades. In a

similar attempt, Holmlund and Sund (2008) have observed the superior academic performance of girls can be attributed to the female domination in the teacher profession. They have found that gender-specific performance differences indeed increase with the share of female teachers.

In some cases, even though girls' performance in math and science continues to lag behind that of boys in most countries, girls have been catching up with boys regarding both their math and science skills (Baker & Jones, 1993; Cole, 1997; Hedges & Nowell, 1995; IES, 2009; Willingham & Cole, 1997, as cited in Neugebauer et al., 2010). This so-called "feminization of schooling" is seen as the key source for boys' poor educational opportunities when compared to girls (Arnot et al., 1998; Diefenbach & Klein, 2002; Driessen, 2007; Hannan, 2001; Horstkemper, 1999; Sexton, 1969, as cited in Neugebauer et al., 2010).

This study's results indicate that the gender interactions between teachers and students have statistically significant effects on a diverse set of educational outcomes: test scores, teacher perceptions of student performance and student engagement with academic subjects. Furthermore, the size of the estimated effects to an opposite-gender teacher lowers student achievement by nearly 0.05 standard deviations. This effect size implies that just one year with a male English teacher would eliminate nearly a third of the gender gap in reading and would do so by improving the performance of boys and simultaneously harming the performance of girls. More specifically, changing an English teacher from female to male would lower the achievement of girls by 0.045 standard deviations and raise the achievement of boys by 0.047 standard deviations (Dee, 2007). So the gender of a teacher is subject to students' learning achievement especially to girls'.

Status of Female Teachers in Nepal

Female teachers have experienced various forms of exclusion such as negligence, lack of communication, harassment, discrimination which deprive them of their equal opportunity (Paudyal, 2012). Mothers in Nepal reported that they were more comfortable in talking to women teachers regarding their children's progress and problems. According to the study of UNESCO (2000), children were also reported to be more comfortable with women teachers in most cases. This was true for both girls and boys in primary level. Children found women teacher sympathetic, patient, affectionate and open to questions and discussions (UNESCO, 2000)

Although government has implemented various incentives programs for enhancing girls' enrolment in schools, this has hardly brought satisfactory results (Koirala, 2003). Regarding the socio-economic factors, the parents qualifications was found prominent in the educational attainment of the student (Jha, 2010). The social demeaning of girls in the society and the unfavorable educational environment at home drew back the girls from attaining schools (Thapa, 2012).

Bista (2006) emphasizes the serious consideration for the frustrating environment of female teachers which do not allow them to teach subjects of their choices probably because of the not possessing the relevant academic background in the subjects (p. 150). The low achievement of students in community schools is also due the government policy that at the primary level a teacher must be able to teach all the subjects included in the curriculum. In this condition the notion of 'all-subjects teaching primary teacher' fails where the primary teachers have the minimum academic qualification is SLC which is as equal to the completion of grade 10 (Bista, 2006, p. 150). When teacher education requirements are low, many primary school teachers have a weak background in the subjects they are teaching (Brint, 2006, p.

227). Further the lack of professionalism due to such minimum qualification suggests increasing the access of teachers to trainings, teachers' guides, reference books and teaching materials.

Both policy-makers and donors supporting school reform in Nepal are operating on the hunch that more women teachers in school will attract more girls, ensure that girls remain in school, and enhance their learning achievement (Bista, 2004, p. 9).

The studies have confirmed that the mere presence of women teachers increases girls' enrollment and decreases the incidence of girls leaving school; however, no studies have been conducted to determine whether the presence of women teachers improves learning achievement as well. The link between women teachers in the classroom and the academic performance of children has not been investigated.

As indicators of school achievement, we have used both school scores and standardized test scores to avoid gender bias in educational outcome measures. The results have shown that gender differences in elementary school achievement exist in various subjects and in most cases are in favor of girls. However, when school achievement was measured by school scores, these differences were more pronounced than when measured by standardized tests (Burusic, Babarovic, & Seric, 2011).

Empirical Review

Palme (1993) has reported that the higher rate of failure for girls might be due to inequality of treatment (UNESCO, 2002). The average SLC performance of the girls in Nepal has been historically lower than that of boys (Bhatta, 2009).

'National Assessment of Grade 5 Students' (1999) found out that regular attendance of the students, percentage of female teachers, availability of text books

and use of better learning materials promotes the achievement of students (cited in Jha, 2010). Likewise, Department of Education (2011) has assessed the academic achievement of grade 8 students in three core subjects of Nepali, Mathematics, and Social Studies that has been presented and analyzed below;

Table 3

Average Achievements of Grade 8 Students in Math, Nepali, and Social Study

	Achievement of Boys (%)	Achievement of Girls (%)
Math	45	41
Nepali	48	49
Social Studies	50	49
Average	48	46

Adapted from Ministry of Education (2011)

Table 3 reveals that the average achievement of boys is higher than that of girls. It has clearly shown the achievement of boys in math and social studies are higher than that of girls. But the achievement of girls in Nepali seems slightly higher than that of boys. The report questions the underachievement of girls in Mathematics and social studies. This subject wise analysis of academic achievement is required to clarify the evidences for the relationship between teachers and students.

A study carried out by CERID (2004), on "Female teachers in primary schools' found that the presence of female teachers was much more important to retain the young girls in the school as they could give motherly affection to their students. The study further found out that the female teachers in the rural areas are mostly perceived as housewives and mothers rather in the role of a professional teacher.

Few studies examined the implementation status of the government's policy on female teachers and found that the implementation of the policy was ineffective due to inadequate teacher quotas, the lack of clear policy guidelines, the unavailability

of female teachers in the local community, the lack of proper coordination among different local actors such as District Education Officers, school principals and SMC members, poor implementation guidelines, preference for men teachers and the reluctance of women candidates to go and live in rural areas (MITRA, 2001; CERID, 2000).

A report on 20 years of research in to assessment, found that amongst other things, that teachers' judgments of boys' academic abilities were informed by their behavior and as they tended to misbehave more than girls, they were more likely to lose out on good assessment grades (Francis & Skeleton, 2005, p.98).

A baseline survey carried out in Wenje Division of Tana River District of the Coast Province Kenya studies about the gendered pattern of enrolment, completion and achievement in schools (Action Aid Intertional Kenya, 2011). The survey found that the legislative and policy plans were not effective in ensuring girls' safety and achievement within schools which has limited impact of free primary schooling on enrolment, retention and attainment. According to the study, girls are out-performed by boys in national examination and are thus unlikely to proceed to secondary education compared to boys.

Summary of Literature Review

Social structure, norms and practices are the outcomes of human creativity. Men among these humans are taken as the most advantaged group. There are many rationale and theories to define the subordinate position of women in the society. There has been mixed empirical findings on the same sex relationships for improving educational achievement. There are favorable policies to upgrade women's literacy and educational outcomes, but somewhere loopholes exist which has not allowed materializing the goals. Literature review has analyzed those situations through

different theoretical lens and empirical evidences. After reviewing the literature, I have found that gender disparities still exists in the education sector which has promoted the marginalization of the girls. Feminist theory emphasizes for reducing the gender gap especially on the ground that female teachers can serve as a role model to their girl students. Vygotsky stresses on the role of a teacher who motivates students for their better performance and learning. Students can collaborate with teachers if their individual differences are understood and enhance it for learning while teachers develop interactive relationship through teaching learning activities.

The literature review has helped me to find the gap for understanding the logics for reproduction of social practices in terms of particular group. Do pro-women policies really support their wellbeing in all settings? The dominant assumption that homogenizing for implications of social policies need to be examined and studied thoroughly. There is knowledge gap of empiricism which guides to explore the linear reasons as well as diverse dimensions.

Conceptual Framework

Girls' academic performance was the dependent variable in the study. The independent variable was the female teacher's presence. The research has explored the academic achievement of girl students and examined the female teachers' contribution for the achievement. While examining the relation, the theoretical lens of feminist theory and Vygotsky's theory is being considered applying the quantitative paradigm of methodology. The conceptual framework adopted for this study is drawn from the above mentioned review of literature.

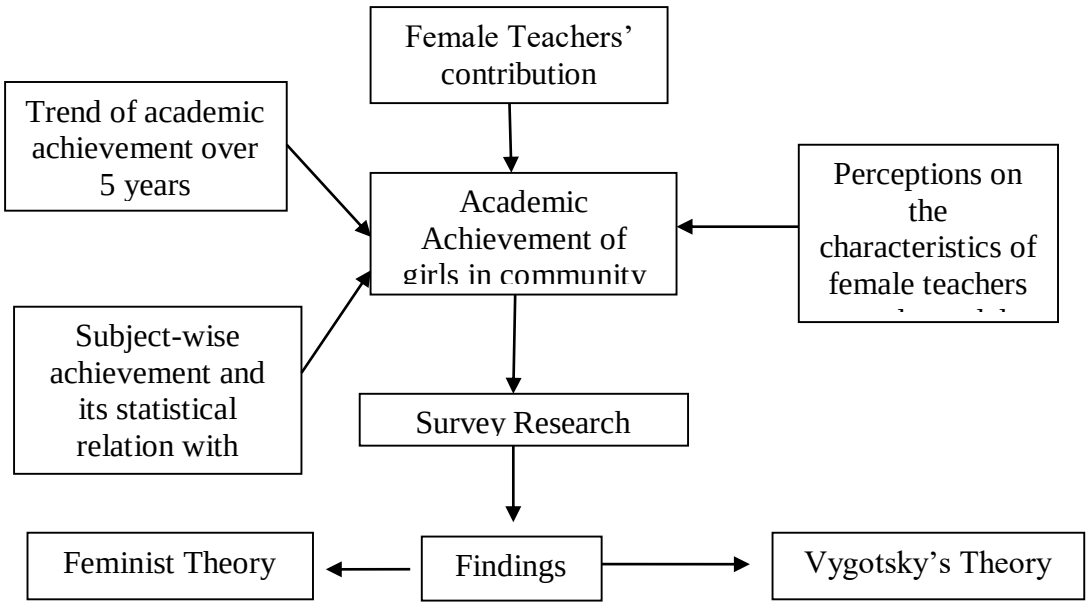

Figure1. Conceptual framework.

CHAPTER III

RESEARCH METHODOLOGY

Chapter Overview

In this chapter, I discussed the various elements of research methodology which I applied during my research work. The 'methodology' here is used in general sense to refer to both theoretical and practical aspects of the conduct of the research (Oliver, 2008, p. 103). Thus, I discussed my philosophical assumptions including my ontology and epistemology. This chapter also includes research design, study area, research population and sample size of the research, data collection, data analysis, reliability and validity, and ethical considerations of the research.

Philosophical Underpinnings

I shaped my research with philosophies of knowledge of ontology, epistemology, axiology, and methodology. Philosophically, I have claimed the nature of reality (ontology), ways of knowing the objective realities (epistemology), how we write about it (rhetoric) and the processes for studying it (methodology) (Creswell, 2003, p. 6).

Ontological Assumptions

Ontology refers to the nature of reality (Creswell & Plano Clark, 2011). I believed on objective realism. I believed that every reality has a theory to explain which has been proved already or yet to be proved. Thus, I thought that there was single and objective reality. Nevertheless, I acknowledged that my attempt would be to closer to the reality. In this study, I believed that the truths have been existed in the relationship between the female teachers and girl students. However, this nature of

truth could never be fully understood because of the hidden values and a lack of absolute in nature (Guba & Lincoln, 2005; Merrim, 1991; Merriam et al., 2007, as cited in Denzin & Lincoln, 2011). Thus, the focus of my research was on confidence regarding how much others could rely on my research findings and how well could they predict certain outcomes (Muijs, 2004).

Epistemological Assumptions

In this research, epistemologically, there was no relationship existed between the researcher and the research object. The researcher and the research project were independent beings. The true knowledge was generated independently without any influences of human perceptions or preconceptions. I was aware that the epistemology as the ways of knowing the social world. It concerned on how researchers gain knowledge about what they know (Creswell & Plano Clark, 2011). In this study, my epistemology was objectivism (Taylor & Medina, 2011, p. 5). My research was guided by the feminist epistemology which would contribute a little to develop a 'successor science' as opposed to an 'analytically orientated and masculine form of knowledge (Letherby, 2010). As my belief, experience of women teachers who were reflexively engaged in teaching learning activities and knowledge arose from this intellectual engagement (Smart, 1990, as cited in Letherby, 2010). My attempts were therefore to seek the women's experiences through post-positivistic approach.

Rhetorical Assumptions

In a quantitative research, the writing style is very structured or formal (Creswell & Plano Clark, 2011). The whole research writing was guided by the definitions and research questions of the study. The research was organized in structured way.

Research Design

Research design is a plan for conducting the study. It is a term employed to refer to a framework for the collection and analysis of data (Bryman, 2008). Black (1999) has considered research design as a thinking, imagination and visualization of the ways for gaining sufficient understanding to make a sound decision. My research design was explorative and analytic. In this study I explored the directional relationship between two variables; girl students' academic achievement as dependent variable and female teachers as independent variable. Further, the research was analytical to show the trend of the student's performance and comparative analysis between boys and girls performance. Different factors of female teachers were also studied analytically in relation to girls' performance. Thus, I have dealt with the matters such as selecting participants for the research preparing for data collection and activities that comprise the research process (Wiersma & Jurs, 2005, p. 83).

Survey

Since this research is a quantitative, it has a structured research design. Non experimental quantitative research is probably the single most widely used research type in educational research (Wiersma & Jurs, 2005, p. 155). Studies involving relationships among variables are often called correlational studies and surveys research is the method applied to conduct it. I have applied survey method to carry out my non experimental quantitative research. I have attempted to make a quantitative or numeric description of trends, attitudes or opinions of a population by studying a sample of that population (Creswell, 2003, p.153).

In this study, at first I indentified the purpose of the survey research. The elements of my research design included the method and tools applied for data collection, sources of data, analysis and interpretation of data. The data were

processed, analyzed and interpreted quantitatively to find out the truth (Wiersma & Jurs, 2005, p. 95). In this Survey Research, I have administered the structured questionnaire with close ended questions. In survey research, questionnaires having dozens of questions are filled with a large number of people in a short time frame (Neuman, 2008).

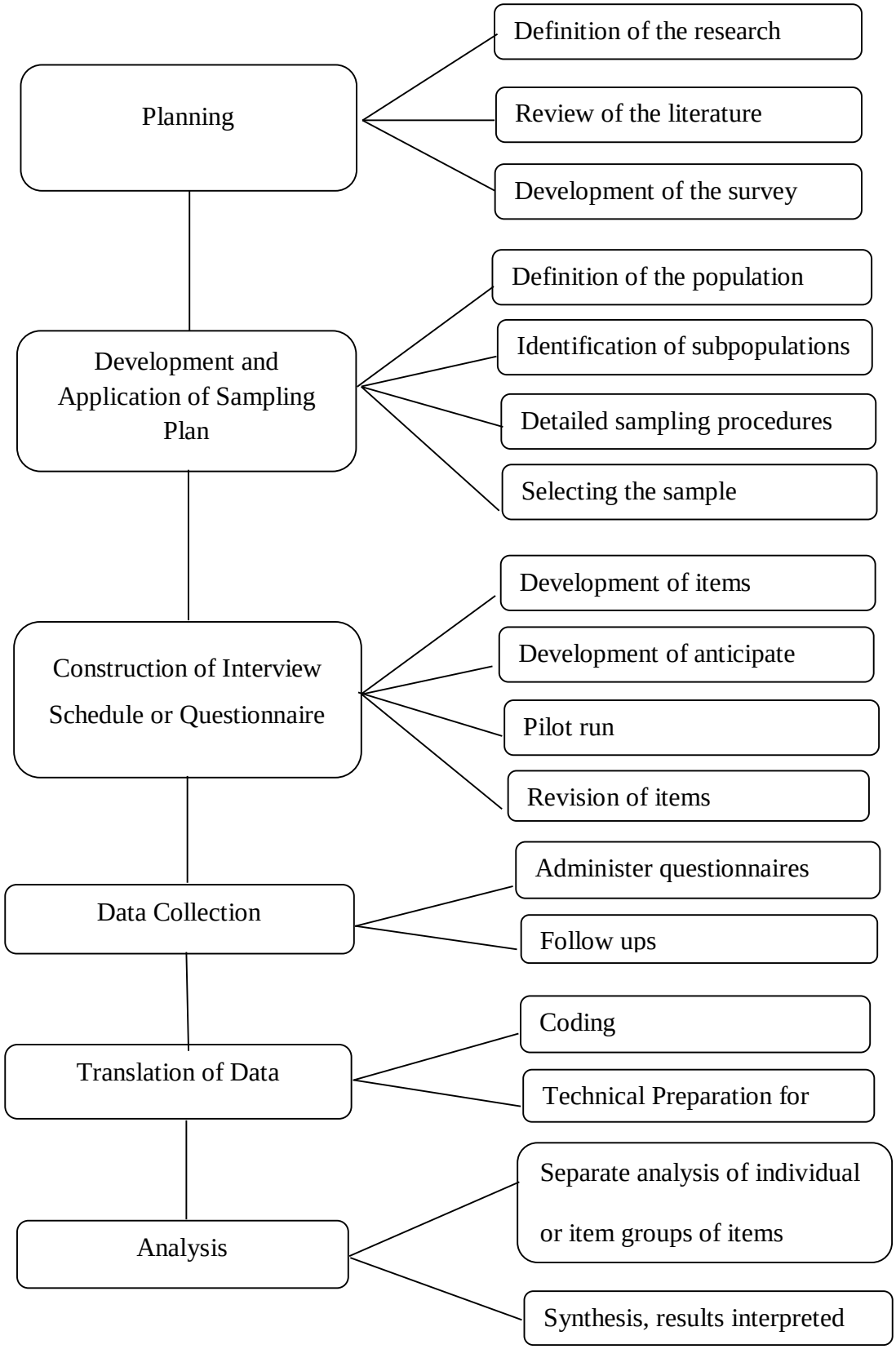

*Figure 2.*Research design

(Adapted from Wiersma & Jurs, 2005, p. 166).

Study Variables

Study variables refer to a characteristic or attribute of an individual or an organization that can be measured or observed and that varies among the people or organization being studied (Creswell, 2002, as cited in Creswell, 2003). There are independent and dependent variables in this study. Dependent variables depend on the independent variables and they are the outcomes or results of the influence of the independent variables (Creswell, 2003, p. 94). The "girl student's academic achievement" is dependent variable and the "female teachers" is independent variable taken into consideration in this study. Therefore the study has analyzed the performance of female teachers and girls in relation to each other.

Study Area

Kaski district was the sampled district as my study area. Kaski district generally has better performance in HDI, GDI and other development measures in comparison to other districts. This district has better representation of female teachers and girls students in public school. Pokhara Sub-Metropolitan Municipality was further sampled for primary data collection and conduct structured interview. Among the five development regions, western development region is taken as the best performing region besides the central region. The achievement level in SLC examination in central region was 59.68%, western region had 53.78%, far western region had 42.67%, eastern region had 35.62% and mid western had the lowest achievement i.e. 31.99%. In western region, Kaski district is one of the best performing districts in education sector.

Population and Sample Size

The public schools, primary level teachers and students of grade 5 were the population of this research. There were 39 community schools in Pokhara Sub-

metropolitan municipality of Kaski district. Since my study focused for grade 5 of primary level, I had to drop one school as the school had classes upto class three only. Therefore in this research I collected data from all 38 eligible schools as sample schools. This method is census method of the sampled cluster. Further I filled up the questionnaire from 165 teachers and 565 girl students of grade 5.

Further the test scores of five years of five core subjects were collected from 37 schools (1 excluded due to unavailability of data). There were altogether 5965 student's test scores entered in SPSS program and t-test was applied to make further analysis. Based on the analysis and interpretation of quantitative data, the following findings have been extracted.

The following sample chart shows the sampling procedure clearly.

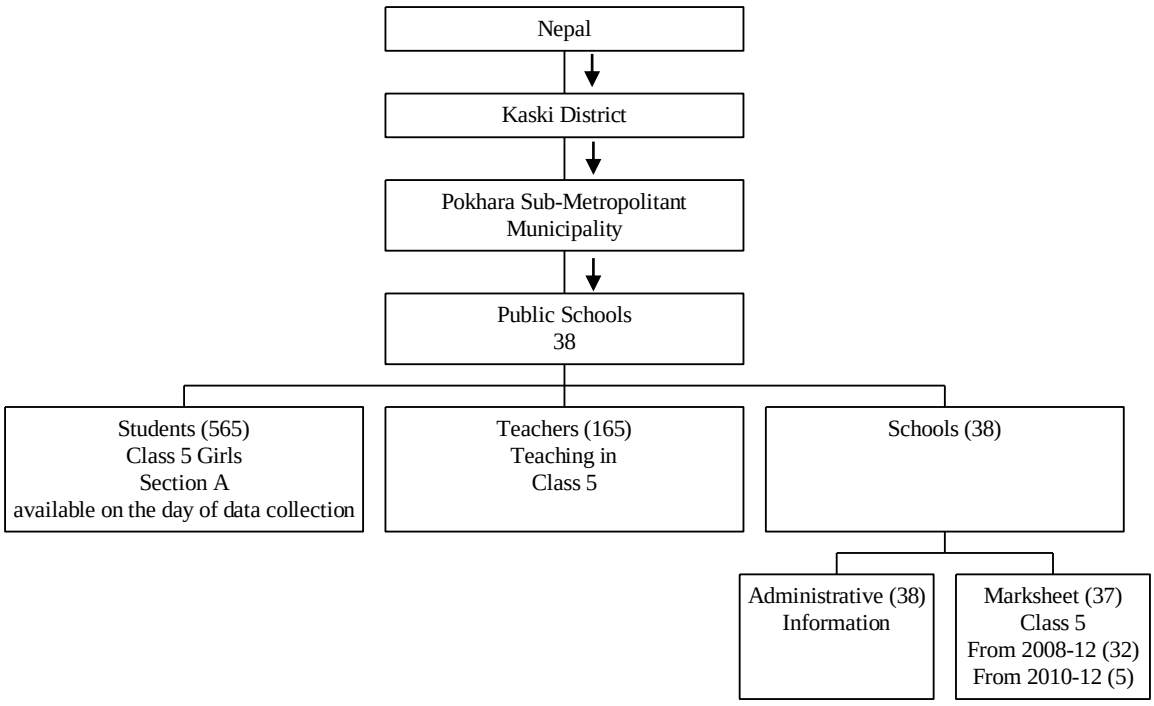

Figure 3. Sampling Framework.

The questionnaire was filled up through de facto method, a method applied in census with the population available in the place at the time of conducting research. The smaller the sample, the greater the risk so it tend to emphasize the need to predict

optimum sample sizes in order to achieve the minimum amount of error in the sample means (Black, 1999). Therefore the census method applied in survey research was most probably minimizing the sampling error such as low response rate and small sample size.

Tools/Instruments

The structured questionnaire was the research tool applied for data collection in my research. The role of the questionnaire was to elicit the information that was required to enable the researcher to answer the objectives of the survey (Ian, 2004). For this I prepared the questionnaire not only with the purpose to collect accurate responses but also to collect data in the most accurate way possible. Item construction for questionnaire was carefully done on the basis of literature review and general guidelines which otherwise is a straightforward process (Wiersma & Jurs, 2005, p. 165).

There were three sets of questionnaires prepared for administration section, teachers currently teaching in class 5 and the girls of class 5. Questionnaire for the students were made child friendly with some pictoral scales of smiling, confused and annoying faces for rating purpose through Likert scale. Pictoral representation was generally targeted to the children who were unable to relate their responses to verbal descriptors (Ian, 2004). The Likert scale that measures respondents' attitudes by asking the extent to which they agree or disagree with a particular question or statement was developed with 3 scales.

Piloting/Pretesting the Tools

I was aware that it is important to ‘road test’ the prototype before commencing the full survey, as this often throws up unanticipated problems or interpretational difficulties that should be ironed out (Simon, 2006). Therefore, after the construction

of tool, before reaching to the field, a small pilot survey was undertaken for pretesting the questionnaire in two secondary public schools of Lalitpur district employing systematic (probability) sampling procedure (Sullivan, 2001). The participants were asked for their suggestions in order to improve my questionnaire. After evaluating the appropriateness and effectiveness (Baker, 1999) of the questionnaire, I made necessary corrections consulting with research supervisor. After all, I didn't change certain terms and concepts literally, while perfectly innocent terms in the language gave rise to ambiguity, misunderstanding, and amusement were changed (Simon, 2006). Moreover, I revised the questionnaire by adding some options in multiple response questions such as age, caste and parent's occupation. In students' questionnaire, I had used 5 point Likert scale but found that it was difficult to the level of understanding for grade 5 students. Later with the suggestions from expert, I change it to 3 point Likert scale in the questionnaire for students and teachers. Though questionnaires were originally drafted in English, it was translated into Nepali script before administering them to the respondents.

Data Collection Methods

Data collection is identifying and selecting individuals for a study by obtaining their permission and gathering information by questions (Creswell, 2012). The structured questionnaires were self-administered (Creswell, 2003, p. 155) for data collection in my study. At first I made a plan before going to field work for data collection. I received a letter from Kathmandu University, School of Education which eased me in approaching the schools and DEO for data collection. After reaching my study site, firstly I visited district education office of Kaski from where I collected the list of community schools from their recently published annual magazine '*Kaski Shaisik Darpan 2069'*. I also received few electronic data on the enrollment of

students in classwise and number of teachers in those schools. Then I listed the community schools of Pokhara Sub-metropolitan and arrange them to ward wise. I began my data collection in field from the ward 1 (in north) and ended with ward 18 (in south). In some schools I visited only once but in some schools I visited even thrice for getting permission and fixing the appointment with head teachers, giving the questionnaires to fill to again to receive it. I even spent more than two hours in some of those schools to copy the record of annual examinations scores of 5 years in my diary. Most of the headteachers as very cooperative and provided me all the necessary data. I was taken to the classroom to get the questionnaires filled by class 5 girl students. I visited the teacher's room too, explained about my study and collected data from them through my structured questionnaire.

Primary Data

Primary sources of data have been described as those items that are original to the problem under study (Cohen, Manion, & Morrision, 2007, p. 193). Primary data are thus the core of quantitative research particularly in survey research. The data collected through structured questionnaire and the information gathered from the official exam records of the participant schools were the primary sources of data in my research. The findings of my research are solely based on the primary data collected from the respondents.

Secondary Data

Various researchers stress the importance of using primary sources of data (Hill & Kerber, 1967, as cited in Cohen et al., 2007, p. 194) but at the same time we should not minimize the value of secondary sources as well. There are numerous occasion where a secondary source can contribute significantly to more valid and reliable survey research (Cohen et al., 2007, p. 194). In this study, I collected

secondary data such as official document (e.g.: NASA report, BPEP reports and Commission Reports) before generating the primary data. Thus the secondary data provide me the way out to collect the primary data. The district level report from the DEO, Kaski helped me to plan my field work more systematically and reach to my respondents. Besides that I frequently used the secondary data during my research writing, archives, national and international journal articles, books and research papers.

Data Analysis and Interpretation

After the data collection task was completed, I coded each questionnaire manually before entering into the computer. Different coding was given to three set of questionnaires for example RHSS-S1 for first student of Rastriya Higher Secondary School and RHSS-T1 for teacher of same school and RHSS-A for the other administrative data. Likewise for the test scores of five years of individual students of class five of the sampled schools were managed in different data set. So altogether I prepared four data base for the information from different sources or respondents. Then I entered all the data in Statistical Package for Social Science (SPSS) 16.0 version for data analysis. After entering all the data in computer through SPSS, the descriptive analysis tool such as frequency, percentage, mean were used and tables were produced. The descriptive statistics including mean analysis helped me in presenting the demographic data and answering the first research question. Then I applied t-test as inferential statistics for further data analysis according to my second research question. Here the t-test was applied with the scores of the students (dependent variables) and the sex of the teacher teaching the subject (independent variable). This approach investigated relationships as pairs of variables which has enabled me to see how they vary with respect to each other (Black, 1999). All the

data were presented in the forms of tables produced from descriptive as well as inferential statistics. In order to get information for my third research question, a Likert type scale ranging from one to three was applied where one represented disagree, two for neutral opinion and three for agree to the statements. Then the interpretation of the statistical outputs was made.

Reliability and Validity

Reliability and validity are the vital components of quantitative research. Thus they are central issues in all measurement. As Neuman (2008) claims, reliability and validity are salient because constructs are often ambiguous, diffuse and not directly observable so it is virtually impossible to achieve perfect reliability and validity. For him these are the ideals that researchers strive for.

Reliability

Reliability means dependability or consistency (Black, 1999). Reliability refers to the consistency of score or answers from one administration of an instrument and from one set of items to another (Jack & Norman, 2006) or stable over time (Creswell & Plano Clark, 2011). To understand the relationship between the two measures and reliability, it is necessary to consider how reliability is quantified (Black, 1999). In general, it is worth remembering that an instrument without reliability cannot be valid (Black, 1999). In case of this study, reliability coefficient of the research tool was tested in SPSS using the Cronbach's alpha method. So Cronbach's alpha was used to measure the internal consistency of the research tool. Data collected from two pilot schools of Lalitpur district was used for the reliability test. This reliability test was carried out using SPSS 16.0 version. The reliability coefficient for the questionnaire administered for teachers showed 0.762 value while the coefficient was 0.742 for students' questionnaire. With 25 items, this result is within the acceptable level of

Cronbach's alpha where most authors put forth a level of 0.70 – 0.80 (Hall, 2010, p. 171; Densecomber, 1999). It shows that the research tools used in this study is highly reliable and confirms its consistency in providing required information.

Validity

Validity suggests truthfulness (Neuman, 2008). According to Neuman (2008) validity addresses the question of how well the social reality being measured through research matches with the constructs researchers use to understand it. In quantitative research, the researcher is concerned about three types of validity which are content validity (how judges assess whether the items or questions are representative of possible terms), criterion-related validity (whether the scores relate to some external standard, such as scores on a similar instrument) or construct validity (whether they measure what they intend to measure) (Creswell & Plano Clark, 2011).

Enough theoretical, empirical and policy review including the review of different national assessment study and suggestions from expert has helped me in to make the items in my research tool more representative for assuring content validity. Similarly, questionnaire that gets accurate responses from respondents is also validity. Response rate is the percentage of respondents returning the questionnaire and quality of the response depends on the completeness of data (Wiersma & Jurs, 2005, p. 175). Since the contacts with respondents was face to face (Black, 1999), there was contended situation of non-responses in my survey research. Thus I was completely aware to justify the representativeness of the sample as I prioritized to minimize the non-response in sampling errors (Black, 1999). My survey has met the criteria of validity as there was 100 percent response rate which disconfirms the possibility of bias arising from non-response of sampling error or it counters the criticism of non-response error. With this attempt this research is able to claim the criteria for external

and content validity. External validity refers to the degree to which the results can be generalized to the wider population, cases or situations and content validity shows that it fairly and comprehensively covers the domain or items that it purports to cover (Cohen et at., 2007, pp.136-137). . External validity is the extent to which the investigator can conclude that the results apply to a larger population, which is usually of highest concern in survey designs (Creswell & Plano Clark, 2011).

Validity is concerned with the integrity of the conclusions that are generated from a piece of research (Bryman, 2008).Quantitative researchers also consider the validity of conclusions that they are able to draw from their results (Creswell & Plano Clark, 2011). To address this concern for construct validity, I have dealt with each research questions separately, analyze its data and discussion made in separate heading arranged sequentially.

Ethical Considerations

Research has an ethical-moral dimension. In my study I have considered various aspects of ethics for the stage of designing my research till the report writing. Ethics begin and end with the researcher (Sagarin, 1973) thus ethical conduct ultimately depends on the individual researcher (Neuman, 2008). In my study I have remained ethical over the study and especially aware about the rights of the respondents even when they are unaware of or less concerned about protecting their privacy (Neuman, 2008). According to Cohen et al. (2002), the researcher should be careful about the respect, confidentiality and informed consents of the participants.

While conducting the survey research, I have followed all the norms and guidelines of research ethics while administrating the questionnaires with research participants. A fundamental ethical principle of social research is: never coerce anyone into participating; participation must be voluntary (Neuman, 2008). Therefore

I sent request letters to the participants before administering the questionnaire. Further before doing so I clearly mentioned the purpose of research and requested for their voluntary participation. I didn't force any respondents to fill up the questionnaire. I assured them of the confidentiality of the information given by them.

CHAPTER IV

DATA ANALYSIS AND PRESENTATION

Chapter Overview

This chapter includes all the data analysis and presentation of it to address the research questions of the study. In fact this chapter is all about the statistical analysis of data and its interpretation. Here, I have presented the demographic information of the respondents in the first section and their analysis of statistical test in the second part of the chapter. In the second part, the statistical analysis is made upon the scores of students of class 5 in their five core subjects mainly Nepali, English, Mathematics, Science and Social Studies. The statistical analysis is thus applied on the mean score of students with sex segregation. The scores are based on the final academic performance of five years from 2008 to 2012 B.S. After that the data collected through Likert scale to explore the perceptional differences of female teachers and girl of each other was presented.

Demographic Status/Characteristics of the Respondents

In this section, demographic characteristics of respondents (teachers, students and school administrators) have been discussed. The characteristics of teachers and students have been discussed in terms of their gender, age, caste, religion, marital status, qualifications, service type and occupation of students' parents. The school administrators were asked to provide the data about the school and academic scores of the students of five years. Here the characteristics of the schools are the information provided by the school administration and do not include the personal characteristics of school administrators.

Characteristics of the Girl Students

Age and caste/ethnicity are important demographic characteristics of any respondents in survey research. The following frequency table presents the ages and caste of students.

Table 4

Girls' Demographic Characteristics (N = 576)

Variables	Categories	N (576)	Percent
Age	9 years	24	4.2
	10 years	104	18.1
	11 years	160	27.7
	12 years	187	32.5
	Above 12 years	101	17.5
Caste	Brahmin	65	11.3
	Chhetri	59	10.2
	Gurung	72	12.5
	Magar	89	15.5
	Dalit	155	26.9
	Tamang	39	6.8
	Newar	24	4.2
	Other	73	12.7

Source: Field Survey, 2013

Above table depicts that maximum girl students (32.5%) were of 12 years of age which was followed by 11 years (27.7%), 10 years (18.1%) and above 12 years (17.5%). Minimum students were of ages 9 (4.2%). The master plan of the Basic and Primary Education Project (BPEP) has mentioned that it take more than nine years for a child to complete the primary cycle of five years in Nepal (Khaniya, 1997). Here, most of the girls are more than the average age i.e 9 or 10 years. It shows that girls are generally late enrolled in schools and thus become overage in primary level.

Regarding the caste, the highest number of students which was more than one-fourth of the sample population were dalits (N=155 and percent = 26.9). Magar

(15.5%) and Gurung children (12.5%) were also more in number than children of Brahmin (11.3%) and Chhetri (10.2%) caste. It gives the picture that more dalit children study in community schools than from other caste groups.

Occupation of the Students' Parents

Child rearing is highly dependent on the occupation of their parents. Parents involved in white color job provide all the facilities to their children for enhancing their academic performance. High paid occupation allows parents to admit their children in reputed school for competent knowledge whereas if the parents have low paid jobs, they generally send their children to public schools which bring less cost for them. The existence of the students in the public schools and their performance is very much related to their parent's occupation. To know more about socio-economic background of the girls, I have presented the occupation of the students' parents.

Table 5

Occupation of the Students' Parents

	Father's Occupation		Mother's Occupation	
	N	Percentage	N	Percentage
Government job	26	4.5	17	3%
Work abroad	127	22.1	14	2.4%
Daily labour	123	21.4	18	3.1%
Business	91	15.58	66	11.5%
Agriculture	58	10.1	32	5.6%
Driver	49	8.5	-	-
Carpenter	16	2.8	-	-
Job in private office	16	2.8	8	1.4%
Army	11	1.9	-	-
Teaching	1	0.2	4	0.7%
Household Work	-	-	391	67.9%
Others	58	10.1	26	4.5%

Source: Field Survey, 2013

Table 5 shows the occupational status of respondents' (girl students) parents. Here, majority of the girl students' father work abroad (22.1%) and do labor work in

daily wages (21.4%). Besides that, some of their fathers were involved in small business (15.58%), agriculture (10.1%), driving work (8.5%) and government job (4.5%). There was minimal number of them who involved in carpentry (2.8%), job in private office (2.8%), military (1.9%) and teaching (0.2%). There were about 10.1% of the students' fathers mentioning other jobs besides the given criteria. In relation to mother's occupation, majority of their mother were housewives (67.9%). 11.5% of them had some business (vendors), 5.6% were farmer and 4.5% of them did other kind of jobs which were not specified for them. However, there were few mothers involved in daily labor works (3.1%), government job (3%), work abroad (2.4%), job in private office (1.4%) and teaching (0.4%).

The study indicated that respondents' (girl students) parents were involved in labor works either in country or abroad as their occupation for livelihood. Besides that some of the parents were involved in small business such as grocers or vendors. As general pattern many of their mothers were housewives. The other interesting thing was that the children of teachers were very less (less than 1 percent) studying in public schools. This pattern of sending their children to private boarding schools for better education by their parents who were teachers of public schools have questioned the academic outcome of the school.

Teacher's Demographic Characteristics

Demographic characteristics are the facts of the population. Here, under the demographic characteristics of the population, I have included age, gender, caste, religion, academic background, marital status and service type. The table below shows the demographic characteristics of teachers of the sample population. These demographic characteristics are highly related with the students' success rate in examination (Pokharel, 2010) and professional performance of a teacher. Therefore

examination of such demographic factors can serve various purposes for policymakers and program planners. There were 165 teachers as respondents included in this study.

Table 6

Teacher's Demographic Characteristics

Variables	Categories	N (165)	Percent
Age	Less than 20 years	2	1
	21 – 25 years	9	5
	26 – 30 years	19	12
	31 – 35 years	31	19
	36 – 40 years	36	22
	41 – 45 years	30	18
	Above 45 years	38	23
Sex	Male	49	29.7
	Female	116	70.3
Caste	Brahmin	110	66.7
	Chhetri	30	18.2
	Gurung	10	6.1
	Magar	3	1.8
	Newar	3	1.8
	Thakuri	3	1.8
	Others	6	3.6
Religion	Hindu	150	90.9
	Buddhist	8	4.8
	Muslim	3	1.8
	Christian	1	0.6
	Others	3	1.8

Source: Field Survey, 2013

Table 6 shows the distribution of teachers of their different demographic characteristics. Among 165 teachers, majority of them 38 (23%) were above 45 years of age while 36 (22%) of them belonged to the age group of 36 – 40 years. Rest of the teachers who belonged to the age group of 31 – 35 years, 41 – 45 years, 26 – 30 years,

21 – 25 years and less than 20 years were 31 (19%), 30 (18%), 19 (12%), 9 (5%) and 2 (1%) respectively. It shows that the respondents (teachers) were quite experienced and aged people in teaching profession. The teaching experiences of these respondents were minimum 1 year and maximum 39 years with 16.6 mean years and the standard deviation was 9.2. The next variable in the table is sex of the respondents. There were 54 (33%) male teacher and 111 (67%) female teachers working in the community schools and teaching in class 5.

Almost all the respondents were Brahmin (66.7%) and Chhetri (18.2%). Teachers belonging to Gurung community were 10 (6.1%). The rest were very little and accounted only 1.8%. In other caste there were 6 respondents but they didn't mention their caste. There were no dalit teachers found in the sampled community schools in Pokhara Sub-metropolitan municipality in primary level especially in reference to class 5. Though Kaski district is highly inhabitated by Gurungs, their representation was very less in teaching profession especially in community schools. Almost all the teachers (91%) were Hindus. There were very less Buddhists (4.8%), Muslims (1.8%) and Christians (0.6%). There were 3 respondents reported to follow other religions as well. Teachers, educational qualification, marital status and their type of service is also important demographic characteristics. Table 7 shows the quantitative data of such demographic characteristics.

Table 7

Teachers' Characteristics by Academic Background, Marital Status and Service Types

Variables	Categories	N (165)	Percent
Academic	SLC	29	17.6
Background	Proficiency level	51	30.9
	Bachelor	64	38.8
	Master's	20	12.1
	Above Master Degree	1	0.6
Marital Status	Married	152	92.1
	Unmarried	11	6.7
	Single (Divorcee & Separated)	2	1.2
Service Type	Permanent	44	29.1
	Temporary	94	62.3
	Contract	9	6.0
	Private	2	1.3

Source: Field Survey, 2013

Regarding the educational qualification, majority (38.8%) of them had academic background with bachelor degree. 30.9 % teachers had passed proficiency level followed by S.L.C (17.6%) and master's degree (12.1%). The data shows that the teachers were qualified in their profession.

Table 7 shows that almost all the respondents were married (92.1%) and few were unmarried (6.7%). The divorcee and separated were very few (1.2%). There were minimum one child and maximum 6 children reported by the respondents. The mean number of children was two. Another variable given in the table is the service type of the teachers. According to it, most of the teachers i.e. 94 (62.3%) are in temporary service period and 44 (29.1%) of them hold the permanent job. Very few of them are in contract (6.0%), private (1.3%) and others (1.3%).

Characteristics of the Sample Schools

This study has delimited its area to community schools only. Applying the census method, I collected data from all 38 public schools in Pokhara Sub-metropolitans. The academic achievement of the students is also highly related with the different factors in the schools such as STR and number of female teachers. The study has shown that the STR was 25:1 in the public schools which correspond with the national data i.e. 24:1 of 2010 statistics (MOE, 2011, p. 77). The study has observed that there was 51.8 percent of female teacher's presence in the schools while in primary level the representation was higher as it is 78.1 percent.

Table 8

Characteristics of the Sample Schools

Variables	Categories	N (38)	Percent
Level of School	Primary	8	21.1
	Lower Secondary	6	15.8
	Secondary	5	13.2
	Higher Secondary	19	50.0
Head Teacher	Male	31	82
	Female	7	18

Source: Field Survey, 2013

Out of 38 schools, there were 8 (21.1%) primary schools, 6 (15.8%) lower secondary schools, 5 (13.2%) secondary schools and 19 (50%) higher secondary schools. Table 8 shows the gender wise leadership pattern in public schools. According to it, more than fourth-fifth (82%) of the head teachers were male and only 18 percent were female. It shows that though teaching has been taken as feminized profession, very less women are in leadership role.

Trend of Academic Achievement of Girls

In this second section, I have analyzed on non-demographic status of the respondents. In doing so, I observed the trend of academic achievement of girls on five core subjects of Nepali, English, Math, Science, and Social Studies taught by female teachers. In addition, I have made comparative analysis of those achievements on core subjects taught by male and female teachers.

The learning achievement of students is measured through various examinations. There are many international test assessments such as PISA (Programme for International Student Assessment), TiMSS (Trends in International Mathematics and Science Study) or PIRLS (Progress in International Reading Literary Study), etc. Many countries of the world have participated in these assessment tests. Here, in this study, the achievement scores were not based on any standardized tests. The scores were the final scores achieved by grade five students in exit examination of corresponding academic years taken by the schools. The achievements, in this study, were based on examinations irrespective of continuous assessment systems.

Sexes of Teachers and Subjects They Teach

Teaching, the most important part of a teacher's career, is a process of generating knowledge to facilitate the learners. The teacher is the pivot on which the educational process rests. No educational system can be imagined without efficient teachers. The teachers are the key to impart knowledge to the students in schools. They can play the crucial roles not only for shaping the behavior of students but also for developing morale and personality of the students. The teachers are the facilitators of knowledge acquisition. The subject wise teachers by sex have been presented in the following table.

Table 9 : Distribution of Teachers Based on Sex and Subject Taught

Subjects	Male Teachers		Female Teachers		Total	
	N	%	N	%	N	%
Nepali	7	14.3	32	27.6	39	23.6
English	16	32.7	23	19.8	39	23.6
Math	13	26.5	17	14.7	30	18.2
Science	7	14.3	22	19.0	29	17.6
Social Studies	6	12.2	22	19.0	28	17.0
Total	49	100.0	116	100.0	165	100.0

Source: Field Survey, 2013

As depicted in the table 9, out of 165 sampled teachers, the male teachers occupied 49 (29.7%) and female teachers occupied 116 (70.3%). Therefore, there were majority of female teachers teaching in primary level. The maximum female teachers (28%) were teaching Nepali but only 14% of male teachers were teaching Nepali subject. On contrary, one third of male teachers (33%) were teaching English whereas only one fifth (20%) female teachers were teaching this subject. In case of teaching Math, about one fourth (26.5%) male teachers and only 15% female teachers were found teaching Math. Moreover, 14% of male teachers were science teachers and one fifth (19%) females were science teachers. Similar patterns could be observed in Social Studies.

In addition, male teachers teaching English were the highest (32.7%) followed by Math with 26.5%. There were few male teachers teaching social studies (12.2%). But, the highest numbers of the female teachers were teaching Nepali subject (27.6%) was followed by English (19.8%), Science (19.0%) and Social Studies (19.0%). There was the least percentage (1.7%) of female teachers who were teaching Math subjects in grade five. In overall, there were more female teachers teaching Nepali, Science, and Social Studies. However, there were more male teachers teaching Math and English.

Achievement Trends

Student achievement is the product of teaching learning activities which gives to know the amount of exposure students have had to the content of the assessment (Suter, 200). The conceptions of educational achievements have critically important effects on educational practice and nature of schooling (Cole, 1990). The following table shows the average achievements and standard deviations secured by male and female students of grade five.

Table 10

Trend of Mean and Standard Deviation of Achievements of Boys and Girl Students

Year	Boys (N=2573)		Girls (N=3383)	
	Mean	SD	Mean	SD
2008	46.7	16.3	50.3	16.7
2009	43	17.7	42.8	16.7
2010	39.7	16.6	38.3	15.4
2011	44.1	16.9	45.7	17.3
2012	43.8	15.8	45.1	15.4

Source: Field Survey, 2013

The above table describes the overall achievement trends of male and female students from 2008 to 2012. The average scores were the aggregated scores of five core subjects as Nepali, English, Math, Science and Social Studies. The trends show that the average achievements of female students were slightly higher in 2008 (boys-46.7 and girls-50.3), 2011 (boys-44.1 and girls-45.7), and 2012 (boys-43.8 and girls-45.1). However, the average achievements were equal in 2009 (boys-43 and girls-42.8). But the average achievements of female students was slightly less than male students in 2010 (boys-39.7 and girls-38.3).

Overall average scores of the female students were better than the male students in the majority of years. The average scores were found fluctuated but in the

latest two years the average scores of girls were slightly better than the boys. Also, the highest average mark was scored by female students in 2008. Moreover, in the table there seems that there is not much differences in standard deviations in all five years. Therefore, the scores obtained by the male and female students were consistent or uniform. This further makes reliable average scores of the students. The female students outperformed in terms of trends observation of five years. In addition, I have analyzed the achievements of male and female students more rigorously on each subject in the following table.

Table 11

Mean and Standard Deviation of Subject Wise Achievement of Boys and Girls

Subject→	Nepali		English		Math		Science		Social Std.	
Year↓	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
2008										
Boys (N=516)	48.2	15.5	42.9	16.2	39.9	15.9	47.5	16	45.9	16.3
Girls (N=706)	50.5	15.3	42.3	15.5	38.9	14.5	48.2	16	47.3	15.3
2009										
Boys (N=476)	45.6	15.6	40.1	16.1	38.7	17.1	46.5	14.9	42.5	13.7
Girls (N=619)	50.4	16	41.3	15.8	38.2	16.3	49.2	16.4	44.2	13.7
2010										
Boys (N=594)	45.3	15.6	42.6	17.6	37.7	15.9	45.1	16.4	42.7	15.5
Girls (N=751)	48.8	16.4	43.9	16.7	37.5	15.1	48.5	16.2	44.4	14.6
2011										
Boys (N=507)	47.2	17.3	41.6	18.3	39	16.7	40.8	17.9	43	16.4
Girls (N=679)	50	17.6	41.7	17.4	36.9	15.1	42.2	17.7	44.3	16.1
2012										
Boys (N=80)	49.5	17	48	19.3	43.6	16.8	40.6	18.2	45.3	16.5
Girls (N=628)	52.1	18.3	45.9	17.7	40.3	16.3	41.5	18.2	45.4	17

Source: Field Survey, 2013

Table 11 sums up the achievement of male and female students in core five different subjects: Nepali, English, Math, Science and Social studies over the period of five years from 2008 to 2012. The mean achievements of female students in Nepali

in each year from 2008 to 2012 were slightly more than the achievements of male students of each of the corresponding year. The achievements of male and female students in English were approximately equal in most of the years except in 2012. In 2012, the female students' achievement (45.9%) was slightly less than that of male students (48%). Similar pattern was in mathematics. However, the female students' achievements in mathematics were slightly less than that of male students in the later years (boys-39, girls-36.9 in 2011 and boys-43.6, girls-40.3 in 2012). Likewise, in Science, female students achieved better in almost all years than male students. In addition, similar pattern could be observed in the case of achievements in Social Studies.

Comparing and contrasting the information of table 9, there were male teachers teaching English which was the highest (32.7%) followed by Math with 26.5%. There were very less no of male teachers who taught social studies (12.2%). The highest numbers of the female teachers taught Nepali subject (27.6%), and this was followed by English (19.8%), Science (19.0%) and Social Studies (19.0%). There was least percentage (1.7%) of female teachers who taught math subjects in grade five. There was clear direct relationship of higher the female teachers and better the achievements of female students mostly in Nepali, Science, and Social Studies. Likewise, there were higher dominancy of male teachers in Math and English, therefore, it could be observed that there lesser achievements of females in the latter years. However, the achievements were almost equal in those subjects.

The trend shows that the achievements of female students in Nepali, Science, and Social Studies were better than male students in all the years. But, the average achievement scores of male students were better in Math in most of the years except 2008. The average achievement scores of girls in English were slightly less than the

achievement scores of boys in 2008 and 2012 only. However, the scores of females were better than that of males in this subject in all other remaining years.

As the above analysis, there was gender gap in the achievement favoring girls. Girls out-performance of boys in schools was strongly connected to their overwhelmingly higher achievement at language subjects (Francis & Skelton, 2005), Science and Social Studies. This was in line with the feminist apprehension for their greater focus on girls' achievement raising the gender gap with boy's underachievement (ibid). As argued by the feminist, male domination of the classroom leads to the under-achievement of girls, particularly in Math and Sciences (Acker, 1994, p. 94 as cited in Wright, 2001. p.275).

In some cases, even though girls' performance in math and science continues to lag behind that of boys in most countries, girls have been catching up with boys regarding both their math and science skills (Baker & Jones, 1993; Cole, 1997; Hedges & Nowell, 1995; IES, 2009; Willingham & Cole, 1997, as cited in Neugebauer et al., 2010). But, here, the females were achieving better than males in science. In general, females earn higher grades than males because they are more likely to internalize negative stereotypes than males (Brunn & Kao, 2008, p.141). This so-called "feminization of schooling" is seen as the key source for boys' poor educational opportunities when compared to girls (Arnot et al.,1998; Diefenbach & Klein, 2002; Driessen, 2007; Hannan, 2001; Horstkemper, 1999; Sexton, 1969, as cited in Neugebauer et al., 2010).

Teacher's Sex and Performance of the Students

The academic performance of the students is influenced by various factors as discussed in Chapter II. It has been widely accepted that the gender of the teacher is also responsible for the increase and decrease in test scores of the students. In other

words, the achievements of the students are influenced by the sex of the teachers who teach them. This section has explored whether there is a significant difference between student's performance and the teacher's gender who were teaching the core five different subjects within the period of five years. Table 12 shows the mean differences of boy students and girl students of class 5 in five core subjects over five years period from 2008 to 2012. These mean differences is sex specific of the teacher especially when taught by the female teachers. Details of the table which include the number (N), mean, standard deviation, t-value and the p value has been presented in Annex 1.

Table 12 : T-Test Results of Grade 5 Students When Taught by Female Teachers

Mean Differences of Achievement Scores of Grade 5 Boys and Girls Students in					
Year	Nepali	English	Math	Science	Social
2008	3.7**	-0.8	0.1	2.1*	1.4
2009	4.9**	2.4*	-0.4	3.0**	0.8
2010	3.6**	-1.1	1.6	3.7**	2.1*
2011	1.3	0.2	-1.4	0.8	1.5
2012	2.4*	-1.7	-3.0*	-1.3	0.8

(-) sign = scores of girls < boys

*p<0.05, **p<0.01

Source: Field Survey, 2013

Table 12 presents the summary of t-test results on the sex-wise academic performance of grade 5 students over 5 years when taught by female teacher. Here, in Nepali subject, girls scored more scores than boys in all five years. As shown in table, the mean difference of the scores of male and female students in 2008 was high (mean difference = 3.7) and the result is significant (p = .000). The highest mean difference is observed in 2009 with 4.9 and statistically significant (p = .000). Likewise the mean

difference of the subject is 3.6 in 2010 (p= .001) and 2.4 in 2012 (p=.050). The mean difference in 2011 is 1.3 but not statistically significant. The conclusion therefore is that there is a significant relationship between the scores of students in Nepali and the female teacher teaching the subject. It means in overall, female teachers can make difference to teach in Nepali subject.

In English, the table shows that the boys have outperformed in 2008, 2010 and 2012 with mean difference 0.8, 1.1 and 1.7 respectively while girls scored more scores than boys in 2009 with highest (2.4) mean difference and statistically significant (p value = .046). In 2011, there is very nominal mean difference between the boys' and girls' scores (0.2). Similarly, in Math subject, the boys have scored more scores with mean difference of 3 scores as highest in 2012 and significant at 95% level of confidence (p value = .026). The mean difference of boys is higher in 2009 (0.4) and 2011 (1.4) while girls scored more with 0.2 mean difference in 2008 and 1.6 in 2010.

Among the five core subjects, Science similar to Nepali clearly demonstrates the positive and highly significant relation with the sex of the teacher. Along with high mean difference, the significant relation is observed in 2008, 2009 and 2010 with mean difference of 2.1, 3.0 and 3.7. Here, the significance value is less than 0.05 in the first year and 0.01 in the following two years. This result shows that when a female teacher teaches science subject, it contributes to the better academic performance in particular to science subject. However, the significant relation is not seen in 2011 and 2012.

Though there is more number of female teachers (Table 9) teaching social studies, the result of the t-test doesn't show any significant relation between the scores of students and the female teacher's teaching. However the mean difference in the

table implies that girls have scored higher than boys. In five years period, only in 2010, the scores of students in social studies are found significant with female teacher's sex (p value =.016).

To summarize table 12, female teachers have significant role in students' better academic performance especially of girls and in particular to Nepali, Science and Social studies subject. In English and Math subjects, in some years, girls' outperformed boys and in some years boys outperformed girls with no statistically significant relation. So female teachers do not contribute or play significant role in girls' academic achievement in English and Math subjects.

Table 13

T-Test Results of Grade 5 Students When Taught by Male Teachers

Mean Difference of Boy and Girl students in					
Year	Nepali	English	Math	Science	Social
2008	4.6**	-1.4	-1.7	-3.1	-0.5
2009	3.3*	-1.1	-0.2	1.6	5.1**
2010	3.5*	3.6*	-1.8	2.7	-1.1
2011	5.1**	0.4	-2.4	3.4	-0.5
2012	3.6	-1.6	-3.2*	2.7	-7.3

(-) sign = scores of girls < boys

*p<0.05, **p<0.01

Source: Field Survey, 2013

The above table (Table 13) presents the summary of the t-test results on the sex-wise academic performance of students over 5 years when taught by male teacher. Here, the academic performance of the students sex-wise is tested with the sex of the teachers especially with the male teachers. The details of the table including the number (N), mean, standard deviation, t-value and p value has been presented in Annex 2. In Nepali subject, except in 2012, in the four continuous years, the scores of the students have significant relation when taught by male teachers. With the highest

mean difference in 2011 (5.1) and in 2008 (4.6), the significant value is less than 0.01 and less than 0.05 in 2009 (3.3) and 2010 (3.5). In English subject, scores of the students are not significantly related except in 2010 (3.6 mean difference and significant at 0.05). The negative sign before the mean difference implies that when a male teacher teaches, the girl students have scored fewer scores.

Likewise in Math, the scores of the girl students are less than boys throughout five years. In Science, the mean difference shows that boys have more scores than girls from 2009 to 2012 and the mean difference is not significant. In the next core subject i.e. social studies, the scores of the boys are again higher than girls. Though girls have got more scores with mean difference of 5.1 in 2009 and significant at 0.01, in overall, there seems no significant relation with the scores of students and male teacher in respective subject. In conclusion, we can say that male teacher play significant role in academic achievement of girls in Nepali subject while it is not significant in English, Math, Science and Social Studies.

Comparing the two results, it has been observed that the girl student's have scored better scores in Nepali when taught by both female and male teacher. In English there has been a mixed and result of the teacher's sex-wise influence. In Math, it shows that girls get low scores when taught by male teachers. There is a positive relation in Science between female teacher and girls. In Social studies too, girls' academic achievement is better when taught by female teacher than by male teachers. Overall, we can draw the conclusion that female teachers can contribute significantly for the better academic achievement of girls in class 5. The above results indicate that the gender interactions between teachers and students have statistically significant effects on a diverse set of educational outcomes such as test scores. It indicates that opposite-gender teacher lowers the achievement of students.

Female Teachers as Role Models and Their Contribution to Student Achievement

Role models are "adults or peers to whom children or adolescents relate and who set norms of behavior and achievement to which they aspire" (Haveman, & Wolfe, 1995, as cited in Nixon, & Robinson, 1999). There are important ways in which female teachers can be more important role models for girls than male teachers. The amount by which the uncertainty is reduced as a function of how closely the student can identify with her role model and how easily she can envision herself achieving what her role model has achieved (Reid, 2005. p. 41). Schools without female teachers leave girls without role models to emulate and boys are assured that women's roles do not extend beyond the home (Tasnim, 2006, p. 46).

The more female teachers that a girls encounter, the more likely the girls are able to find a role model who will raise her confidence and reduce her uncertainty about the benefits of further education. The female teachers as role models provide positive educational outcomes for girls. This confirms that there is a significant relationship between the percent female teachers and the educational attainment of female students (Nixon & Robinson, 1999).

Perceptions of Female Teachers and Girls

In this section, I have discussed the perceptions of girls on their female teachers and vice versa on the characteristics (considered in this study) of a female teacher as a role model. The differences in perception have been measured with characteristics of female teachers such as punctuality, appearance, behavior, motivation and professionalism. The opinion of girl students and female teachers on female teachers' punctuality, appearance, behavior towards girls, motivation and professionalism were collected by employing a questionnaire of three point Likert

scale. Here, since the opinions on female teacher's characteristics and some on girls' activities were asked to link it with the same sex role model in learning achievement, the opinions of male teachers were not included. The perception was collected to support the analysis of achievement trend and relation with teachers' sex and find whether female teachers really do posses the qualities of a role model in terms of punctuality, appearance, behavior, motivation and professionalism in the eyes of girls and themselves. So the comparative analysis from frequency and percentage distribution of the opinions of female teachers and girls are presented here. The analyzed data of the above have been presented in the following subheadings of punctuality and appearance, motivations, behaviors and professionalism.

Punctuality and Appearance of Female Teachers

Punctuality in this study was measured in terms of regularity to school and timely arrival to classes. Similarly, appearance was measured by three variables such as neatness of a teacher, dress up and smartness including clean habits. The structured questionnaires were asked to female teachers teaching in grade 5 and girl students of the same grade to know their perception on punctuality and appearance towards female teachers in school. After data analysis, the result has been presented in table 1 and explained.

Table 14

Female Teachers' Punctuality and Appearance

Statement	Girls' Perception			Female Teachers' Perception		
	Agree	Neutral	Disagree	Agree	Neutral	Disagree
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Regular to school	455 (79.8)	112 (19.6)	3 (0.5)	97 (84.3)	18 (15.7)	-
Punctual during class hours	477 (83.2)	91 (15.9)	5 (0.9)	93 (80.2)	22 (19.0)	1 (0.9)
Neat and Tidy	556 (97.4)	15 (2.6)	-	89 (76.7)	27 (23.3)	-
Well Dressed	515 (91)	48 (8.5)	3 (0.5)	86 (74.1)	29 (25.0)	1 (0.9)
Clean habits and Smart	519 (91.2)	50 (8.8)	-	62 (53.9)	51 (44.3)	2 (1.7)

Source: Field Survey, 2013

As presented in Table 14 most of the female teachers (84.3 %) opined that they were regular to school whereas four fifth (79.8%) of the students agreed on the statement. However, about 15.7% of female teachers and 19.6% of students had neutral opinion which indicates that few teachers are not regular to school. Likewise, 80.2 % of teachers agreed that they were punctual during their class hours. The numbers of female students reporting that their teachers were punctual in their classes were also approximately same. Further, 16% of students and 19% of female teachers neither agreed nor disagreed with the punctuality of teachers in the class and very few students (0.9%) and teachers (0.9%) disagreed. This shows that very few female teachers do not go to their classes in time or after the bell rings.

Table 14 also measures the appearance of female teachers from the view of girls of grade five and female teachers themselves. The table further depicts that most of the female students (97.4%) opined that their teachers attended school with neat and tidy appearance which was supported by the opinions of three fourth (76.7%) of

female teachers. Only 2.6% of students expressed neutral opinions on neatness and cleanliness of teachers. But one fifth (23.3%) of the female teachers expressed neutral voices. It indicates that female teachers are not confident of themselves looking neat and tidy. Moreover, most of the students (91%) believed that their teachers were very well dressed and three fourth (74.1%) of female teachers too thought the same. Likewise, most of the girls (91.2%) believed that their teachers had clean habits and they were very smart whereas more than half of the teachers (53.9 %) agreed that they followed clean and smart habits. There were few girls (8.8%) and more female teachers (44.3%) who expressed neutral opinions on the statement. It indicates that nearly half of the female teachers are not confident of themselves as a smart teacher with clean habits. There were almost no students and teachers who disagreed on this issue.

Therefore, most of the students perceived that their female teachers were regular, punctual in the class, neat and clean, tidy and start, well dressed, and showed clean habits. This clearly shows that the students have considered that their female teachers as the role models in terms of regularity, punctuality in school and appearance. In other words, the female teachers hold the good personality which favored their impression in front of their girls.

Therefore, girls' achievements have been influenced by the teachers' regularity and punctuality as perceived by the students and teachers in the above table. In other words, teacher and student absenteeism influence student test score performance (Ehrenberg, Ehrenberg, Rees, & Ehrenberg, 1991). Further, less learning occurs when regular teachers are absent and consequently student’s academic performance may suffer. In addition, the teachers' irregularity and lateness in class hours reduce student motivation (Ehrenberg et al., 1991).

Motivation From Female Teachers to Girls

A teacher as a role model can inspire and motivate their students for better academic achievement. Motivation is an important factor for better performance. Here it is necessary to study if the female teachers are able to motivate their students especially girls to get better scores or not. Motivation in this study has been measured in terms of loving students, creating environment for students to like the subjects they teach, enjoy the class, making the students love to come school daily, being a nice person, provide inspiration and making them feel comfortable with them to speak and share their feelings or problems if any. The following table describes the motivation of girls received from their female teachers.

Table 15

Female Teacher's Motivation to Girls

Statement	Girl's Perception			Female Teachers' Perception		
	Agree	Neutral	Disagree	Agree	Neutral	Disagree
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Love each other	470 (82.6)	97 (17.0)	2 (0.4)	86 (74.1)	29 (25.0)	1 (0.9)
Like the subjects	547 (95.5)	24 (4.2)	2 (0.3)	87 (75.7)	28 (24.3)	-
Enjoy the class	524 (91.0)	52 (9.0)	-	70 (60.3)	35 (30.2)	11 (9.5)
Love to come to school.	551 (96.2)	22 (3.8)	-	87 (75.7)	26 (22.4)	3 (2.6)
Nice person	521 (91.4)	48 (8.4)	1 (0.2)	60 (51.7)	51 (44.0)	5 (4.3)
Provide inspiration	513 (89.7)	58 (10.1)	1 (0.2)	46 (40.7)	46 (40.7)	21 (18.6)
Comfortable to speak	449 (78.5)	112 (19.6)	10 (1.7)	40 (35.7)	54 (48.2)	18 (16.1)

Source: Field Survey, 2013

Table 15 describes the perceptional differences of students and teachers on motivation of girls from their female teachers. In this regard, 82.6% of girls believed that their teachers love them, 95.5 % like the subject taught by their female teachers, 91 % enjoy their classes, 96.2% love to come to school daily, 91.4% found their teacher as a nice person, 89.7 % is inspired by them and 78.5% feel very comfortable to speak and share their problems with their female teachers.

Here the majority of teachers agree on their students' belief about motivation towards girls from female teachers but nearly 41 % of the female teachers are not sure whether they provide inspiration to their students or not and 18.6% disagree to this. In the same way, 44% and 48.2 % teachers have neutral opinion that they are a nice person and making students feel comfortable to speak with them respectively. In table 15, 16.1% of female teacher and 1.7 % of girls disagree for feeling comfortable to speak in front of female teachers. It indicates that female teachers to some extent have not been able to motivate all students by providing inspiration and creating environment to speak comfortably with them.

Overall, most of the girls and female teachers perceived that they loved each other, liked the subjects taught by female teachers, enjoyed in the class, and loved to come to school. This shows that female teachers were more caring, understanding to their students which helped in motivating for improving their academic performance.

Behaviour of Female Teachers

A person can be a role model unless and until it is mirrored in their activities and behavior. Since teachers are daily interacting with students, their behaviors are important to speak of the characteristics of a role model in schools. As shown in table 16, students perceived their female teachers in terms of less physical punishment, always being helpful to them, caring weak students, being polite and friendly, no

shouting and scolding, girls being hardworking and obedient in her class and doing her regular homework.

Table 16

Behaviour of Female Teachers

Statement	Girl's perception			Female Teachers' perception		
	Agree	Neutral	Disagree	Agree	Neutral	Disagree
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
No physical punishment	274 (49.5%)	267 (48.3%)	12 (2.2%)	48 (41.7%)	60 (52.2%)	7 (6.1%)
Always helpful	498 (87.1%)	68 (11.9%)	6 (1.0%)	85 (73.3%)	30 (25.9%)	1 (0.9%)
Care weak students	506 (88.6%)	63 (11.0%)	2 (0.4%)	87 (75%)	29 (25%)	-
Polite and Friendly	505 (89.5%)	57 (10.1%)	2 (0.4%)	70 (60.3%)	42 (36.2%)	4 (3.4%)
No shouting and scolding	280 (49.9%)	275 (49.0%)	6 (1.1%)	25 (21.6%)	66 (56.9%)	25 (21.6%)
Hardworking and obedient in class	398 (69.9)	165 (29.0)	6 (1.1)	57 (50.4)	37 (32.7)	19 (16.8)
Regular homework	422 (73.9)	126 (22.1)	23 (4.0)	33 (30.0)	56 (50.9)	21 (19.1)

Source: Field Survey, 2013

The table presents the perceptional differences on behavior of female teachers and girl students. In the category of physical punishment, students' opinion were in agree (49.5%) and neutral (48.3%). This shows that students' mostly perceive that their female teachers do not punish them physically. The neutral opinion (48.%) indicates that some forms of corporal punishment by female teachers still existed in their schools. This is supported by the teachers opinion as more than half (52.2%) of

the opinion in neutral options and 6% of disagreed. However 41.7% of female teachers completely agreed for not giving punishment. Likewise, most of the students (87.1%) believed that their teachers were always helpful to them and 73.3% teachers opined that they helped their students. Most of the students (88.6%) believed that their teachers were supportive for the weak students and 75 % of the female teachers had similar opinion about themselves. Most of the girls (89.5%) agreed that their teachers were polite and friendly to the children and majority (60.3%) of female teachers too agreed on it but 36.2% of them were in neutral and 3.4% disagreed. It indicates that sometimes the female teachers were not polite and friendly to their students.

In the next category of female teachers' behaviours in terms of not shouting and scolding on students, there were one half of the students in agree (49.9%) and one half in neutral (49.0%) and disagree (11.1%). 56.9% of the female teachers are in neutral and 21.6% each are in agree and disagree. It indicates that female teachers have been shouting and scolding in students.

Regarding the behavior of students, the girls were asked if they are more hardworking and obedient in the class taught by female teacher than taught by male teacher. About 70 percent of the girls agreed upon the statement and even half of the female teachers do had similar opinion. In the same category 29% of girls 32.7% of female teachers were neutral. It indicates that some students are hardworking or not hardworking in the subjects irrespective of teachers' sex.

According to the students, girls were regular in doing homework in the female teachers' subject as 73.9 agree to it. 22% were neutral and 4.0% disagree. But 50.9% of female teaches who were in neutral opinion and 19% in disagree shows that girls were not very regular in doing their homework in the class. Only 30% of the female teacher agreed to it.

Professionalism of Female Teachers

To be a role model or a good teacher, his/her professionalism is also very important. Here, professionalism of a female teacher refers to daily lesson plan, adequate knowledge on subject contents, making the contents clear to the students, using teaching materials while delivering lessons, making the subject more interesting to students through interactive teaching and the students feeling satisfaction from the professionalism of the teacher.

Table 17

Professionalism of Female Teachers

Statement	Student			Female Teachers		
	Agree	Neutral	Disagree	Agree	Neutral	Disagree
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Prepare daily lesson plans	521 (91.7)	44 (7.7)	3 (0.5)	31 (26.7)	63 (54.3)	22 (19.0)
Clarify subject contents	539 (94.4)	31 (5.4)	1 (0.2)	65 (56)	49 (42.2)	2 (1.7)
Good knowledge of the subject	552 (96.2)	22 (3.8)	-	73 (64.0)	41 (36.0)	-
Use of teaching aids in class	404 (71.3)	139 (24.5)	24 (4.2)	25 (21.6)	68 (58.6)	23 (19.8)
Interactive and interesting classes	461 (81.2)	106 (18.7)	1 (0.2)	40 (36.0)	47 (42.3)	24 (21.6)
Satisfaction from her teaching	540 (94.7)	29 (5.1)	1 (0.2)	58 (50.4)	48 (41.7)	9 (7.8)

Source: Field Survey, 2013

The table shows the perception of girls and female teachers on professionalism. The professional teachers prepare their lesson plans, have adequate knowledge on the subject contents, use teaching materials for effective teaching and

are able to satisfy the students in delivering the subject matter. Almost all the students (91.7%) agreed that their female teacher prepared and entered into the class with full preparation. Minimum (7.7%) students were neutral on the statement. Regarding the perception of female teachers, more than half of the respondents (54.3%) were confused and seemed reluctant to agree that they prepared their daily lessons plans. In the same context 19 % of the respondent totally disagree and only about one-fifth of the respondents agreed that they prepare their lessons before teaching in the class. It shows that less female teachers prepare their daily lesson plans which contradict with students' perception.

To make the subject matter clear to the students, almost all (94.4%) the students had positive attitude towards their teacher by agreeing that their female teacher made the subject content clear to them. Here, the female teacher seems to be confident as 56% agree and 42.2 % stay neutral and partially agree. Likewise 96.2 % girls and 64% female teachers perceived that female teachers are experts and have adequate knowledge of their subject matter for teaching. Here 36% female teacher and 38% girls expressed their neutral opinion.

The pedagogical aspect is equally important for the professionalism in teaching. Use of teaching materials while teaching, is a part of professionalism. In table 17, 71.3 % students agreed and 24.5% were neutral that their teacher used the teaching materials in class. Majority (58.6%) of the teachers was neutral and 21.6 % of them agreed while one-fifth of the respondents disagreed that they taught their subjects without using teaching aids.

When asked to both the respondents that if the female teacher makes her subject more interesting through interactive classes, 81.2% girls and only 36% female teachers agreed, 18.7% girls and 42.3% female teachers gave neutral opinion.

Moreover, 21.6% of female teachers disagreed to the statement. Regarding satisfaction with female teachers' teaching, the girls were satisfied as 94.7 % agreed while 50.4% female teachers agreed and 41.7% were in neutral position. There were 7.8% female teachers who disagreed that students are satisfied from their teaching.

The data in Table 17 in overall indicates that girls perceived their female teachers as professional teacher and subject experts. Their satisfaction towards female teachers' teaching shows that they have good impression of their teacher. In contrary, the some of the female teachers did not seem to be very professional in their teaching though majority of them agreed of having better knowledge on subject matter, make student clear on the content and were able to satisfy their students through their teaching. Daily lesson plans, use of teaching materials in class and making the subject interesting for students were not carried out by most of the teachers though students perceived them of doing so.

CHAPTER V

MAJOR FINDINGS, DISCUSSION, CONCLUSIONS AND IMPLICATIONS

In Chapter IV, I analyzed the numeric data using SPSS program. This chapter consists of the summary of this research and the key findings based on the analysis and interpretation from chapter four. Here, the findings are discussed in relation to research questions and making it relevant to theoretical perspectives. Finally this chapter includes the implications eventually drawn from the findings and discussion.

The focus of the inquiry was to explore the academic achievement of girls and the contribution of female teachers. Therefore the purpose of this research study was to explore the significance between female teachers and girls' academic achievement. The specific purposes were to find the trend of academic achievement of the girls, find the statistical relation between the scores and sex of the teacher, and the perceptional differences between the performance of girls and female teachers by each other. In order to answer these questions, the final examination records of grade five from 2008 to 2012 A.D. was collected and groups of statements were given in Likert scale to know their perception.

Demographic Characteristics

The girls of the sampled schools were mostly from 12 years of age and above. Students from Brahmin and Chhetri were comparatively less than dalit and ethnic groups. Regarding the occupation, most of the fathers of the girls worked abroad and were engaged in works on daily wages basis. Besides that a few of them were engaged in small business and in agriculture. The mothers of the girls were mostly housewives. However few of them were involved in small business too.

The respondents of the study were teachers also. Out of 165 sampled teachers, there were about 30 percent of male teachers and 70 percent of female teachers. Most of the teachers belonged to the age group of above 45 years. These teachers had 16.5 years of teaching experience in average. The teachers were mostly Brahmin and Chhetri. Almost all the teachers were Hindus and very few of them were Buddhist and Muslims. Approximately 39 percent of the teachers passed bachelors degree while 31 percent had only proficiency level qualification. There were a few teachers who had master's degree and those who had passed only SLC. Regarding the marital status, almost all the teachers were married and more than three fifth of them were temporary teachers while only 29 percent had the permanent job. Most of the teachers were found highly qualified than the requirement for the job of primary level teacher. But whatever the qualification of the teachers, there is no relationship of it with the student's academic performance (Link & Ratledge, 1979; Rivkin et al., 2005 as cited in Aaronson, Barrow,& Sander, 2007; Suter, 2000)

Out of 38 sampled schools, there were 21 percent primary schools, 16 percent lower secondary schools, 13 percent secondary schools and 50 percent higher secondary schools. More than fourth-fifth (82%) of the head teachers were male and only 18 percent were female head teachers. Among the female teachers, 28 percent of them taught Nepali, 19.8 percent taught English, 14.7 percent taught Math and there were 19 percent female teachers teaching Science and Social Studies each. There were 14 percent male teachers teaching Nepali subject, 33 percent i.e. one third taught English subject, 26.5 percent taught Mathematics, 14 percent taught science and only 12.2 percent taught social studies subjects.

Sex-wise Trend of Academic Achievement

The achievement trend of five years (2008-2012 A.D) of the students (aggregated scores of five core subjects Nepali, English, Math, Science and Social Studies) showed that girls had better performance. The mean scores ranged from 38.3 to 50.3. Comparing the mean scores, girls outperformed boys in 2008, 2011 and 2012. The scores of boys and girls were same in 2009 but in 2010, boys outscored girls by 1.4 score. In summary, the girls' academic achievement was better than boys in five years period.

In subject wise achievement over five years (2008-2012), the achievement scores of the girls were more than boys in Nepali. In English, girls got better scores than boys in 2009, 2010 and 2011. Boys had better scores with mean difference 0.6 in 2008 and 2 score in 2012. In Maths, the boys scored more scores than girls in all the five years. However in science and social studies, the girls had better scores than boys in all five years.

Girls have outperformed the boys in four subjects i.e. Nepali, English, Science and Social studies. It depicts that girls acquired better learning achievement than boys in the schools. But girls couldn't perform better in numerical subject such as Mathematics in five years period.

Significance Level in Girls' Academic Achievement

The mean difference of scores of girls in Nepali was high in all five years and statistically significant (at 99% confidence level) in four years except in 2011 when taught by female teachers. In English subject, only in 2009, the girls had higher achievement with statistically significant at 95 % confidence level. Boys achieved more scores in English in 2008, 2010, 2011 and 2012. There was not much difference in the scores in English in 2011. Similarly in Math subject, the boys have got more

scores with mean difference of 3 as highest in 2012 and significant at 95% level of confidence (p value = .026). The mean difference of boys is higher in 2009 (0.4) and 2011 (1.4) while girls scored more with 0.2 mean difference in 2008 and 1.6 in 2010. Therefore boys scored more in Maths. In science, there was significant relation in 2008 (p value <0.05), 2009 (p value < 0.01) and 2010 (p value < 0.01) with girl's better scores when taught by female teachers. In social studies, though girls have better scores than boys in five years, it is not statistically significant only in 2010 (p value = .016).

The mean difference of the scores when taught by male teachers was statistically tested through t-test in all five subjects. Except in Nepali, it was found that in almost all years, the scores of the boys had no statistical relation with the male teachers teaching the particular subjects. The less achievement of girls in English, Maths, Science and Social Studies shows that when male teachers teach the subjects, there is negative impact on girls' test scores. It shows that male teachers do not play significant role as a role model to girls for increasing their achievement in four subjects except Nepali subject.

To sum up, there was statistically significant relationship between the female teachers and girls' scores in Nepali, Science and Social Studies. It means that the girls' achievement is better or they scored better in these three subjects when taught by female teachers. It confirms the contributory role of female teachers in increasing the learning achievement of girls. There was no statistically significant relation between male teachers and the scores of students except in Nepali. It shows that girls do not have better scores and learning achievement when taught by male teachers.

Perception Towards Female Teachers' Contributing Role

Female teachers and the girl students opined that female teachers are punctual to schools and arrive on time. There was the similar opinion of the students and teachers in female teachers' appearance as most of them agreed that female teachers come to school neat and tidy, properly dressed and have clean habits.

Regarding perceptional differences on motivation, majority of the girls believed that their teachers loved them, they liked the subjects taught by the female teachers, enjoyed the class, loved to go to school and thought their teachers as nice persons who were the sources of their inspiration. Female teachers too had similar views but comparatively less in percentage. But few girls didn't feel comfortable to speak with the female teachers while nearly half of the female teachers thought that girls do not come to them and speak comfortably about their problems if they have any.

Half of the students agreed that their female teachers do not punish them physically, while 12% totally disagree and 42% of them neither agreed nor disagreed. Majority (60%) of the female teachers remained neutral while 42 % of them agreed and 7% of them disagreed that they do not punish their students physically which shows that sometimes corporal punishment was given to the children by them. Regarding the help towards students and caring the weaker students, most of the girls and teachers had the similar positive opinion. Likewise half of the girls (49.9%) believed that their female teachers do not scold and shout upon them while almost all agreed (89.5%) that their teachers are very polite and child friendly. Majority of female teachers had neutral opinion and 21.6% disagreed on it. Though half of the students agreed, the other half of the girls had neutral opinion that their teachers shout and scold upon them which gives a clear picture that female teachers frequently shout

and scold upon them irrespective of the reasons behind it. When the teachers were asked whether girls were more hardworking and obedient in their class than the boys, half of them (50.4%) agreed, 32.7% remained neutral and about 17% disagreed. In regard to doing homework regularly, 74% agreed that they do regular homework in the female teacher's class than male teachers' while only 30 percent of the female teachers agree on it.

For knowing perceptional differences on the professionalism of female teachers, mostly students (91.7%) think that their teachers were prepared while they give class whereas female teachers' opinion were mostly neutral (54.3%) and disagree (19%). Though 26.7% of the teachers agreed that they make preparation before teaching, it shows that all the teachers do not prepare their daily lesson plan while making lesson plans in primary level are very important in professional teaching. Almost all (94.4%) the students had positive attitude towards their teacher by agreeing that their female teacher make the subject content clear to them and most female teachers too agree (56%) with some having neutral opinion (42.2%). Regarding the use of teaching materials 71.3% of the students agreed but 58.6% of the teachers were neutral. In context to knowledge adequacy of the teachers on their subjects, 64 % female teachers and 96.2% students agreed. In the next statement on making the teaching more interactive in the subjects taught by the female teacher 81.2% of the students agreed while only 36% of the teachers agreed, 42.3% were neutral and 21.6% disagreed. However, almost (95%) all the students said that they were satisfied with their female teacher's teaching while only half of the female teachers agreed on it.

In summary, we can say that female teachers were found to make better role models for girl students in terms of punctuality, appearance and motivation. Girls

were impressed by their appearance, punctuality and motivation towards them. But the female teachers were not confident of themselves to serve as role models for their girls in terms of their behavior and professionalism. The existence of corporal punishment, shouting on children, not making daily lesson plans, less use of teaching materials and less interactive class indicate that some female teachers are not professional and were unfriendly to children. In spite of these shortcomings for female teachers, girls are very much positive about their female teachers' behavior and professionalism. For girls, their female teachers are their role models from all dimensions. This positive perception towards their female teachers helps them to achieve better in the subjects taught by female teachers.

Discussion

The study found that there were 7 female teachers in every 10 teachers in primary level which account for 70 percent of female teachers' presence in primary level. When BPEP was initiated on 1991 there were very few female teachers and it targeted the employment for 30 percent female teachers out of total primary teachers (MoE, 1997). According to the flash report of DOE (2011), there are 37.5 percent of female teachers. But since this study was conducted in the urban area, here the representation of female teachers is 70 percent which is nearly double or more than our national data. It shows that there is more representation in the urban area leaving fewer women in rural areas. The government policy of recruiting at least one female teacher out of three in primary schools needs to be emphasized in the rural areas. There was overwhelming majority of female teachers in the primary level in the public schools of Pokhara Sub metropolitan but if we see the international trend, there are almost all female teachers in primary schools or level. Therefore, it seems still fewer as compared to developed countries (Shiksak, 2011). The policy of recruiting at

least one female teacher in the primary schools has contributed to increase the number of female teachers. Recruiting female teachers helps in increasing enrollment and decreasing the dropout rate (Bista, 2004; CERID, 2000). The more female teachers that a girl encounters, the more likely she would be able to find a role model who will raise her confidence and reduce her uncertainty about the benefits of further education (Nixon & Robinson, 1999). The feminist approach to recruit more female teachers in the primary level claims positive influence on girl's academic achievement. For this the number of female teachers in the primary level has to be increased. The study is evident that the policy has in fact increased women's participation in teaching profession. This significant increase is the result of this policy implementation. Here, feminist thought supports affirmative action as a compensatory strategy for redressing past inequalities particularly against women and girls (Chege & Sifuna, 2006). According to a study, schools without female teachers leave girls without role models (Tasnim, 2006, p. 46). Therefore, having more female teachers in school can make girls come across their role models that will contribute to their learning achievement.

Discussing the achievement trends of the students, their average scores have increased. Though the average scores did not increase in complete linear growth, the overall score was more than in the past. Comparing the achievement of students' scores in different subjects from BPEP 1998 to EDSC 2003, according to Khaniya (2007), there was not much improvement in the scores and the performance of the students was unsatisfactory. Looking at the overall scores of the students in public schools it ranges from 40 to 50 which is satisfactory scores. National assessment of grade three students (EDSC 2001) also indicated that there was improvement in students learning in Social Studies but not in Mathematics and Nepali subjects (Khaniya, 2007).Thus there leaves the room of improvement for the students of public

schools to score more scores. In Nepal, substantial evidence of improvement in students' learning is still lacking (Khaniya, 2007, p. 31). Here contrasting with this Khaniya's view, the study found that there was improvement in students' average scores from 2008 to 2012 A.D. The national assessment of learning achievement of grade 5 students, carried out by Department of Education (2008), the mean score of was 48.9 (boys 48.7 and girls 49.1) which is similar to this study's finding. The mean score was 48.5 (boys 46.7 and girls 50.3) in 2008. It is evident that my research finding supports the data of DOE. Khaniya (2007) argues that on the whole there was not such evidence to argue for the fact that the educational reforms made so far had enhanced learning achievements of the students.

Comparing the academic achievement of grade 5 students, the girls outperformed boys. This shows that the outperformance of girls was because of the presence of female teachers in the primary level. Female teachers play a significant role for creating child friendly environment in schools (Bhatta & Koirala, 2007). So here, gender role-model effect applies which is an increase in the achievement of a female student if she has a female teacher (Evans, 1992; Aaronson, Barrow & Sander, 2007; Cardon, 1968). The stereotype belief of girl's underachievement has been proved wrong by this study. Gender inequality which existed between boys' and girls' achievement (Tatar & Emmanuel, 2001) has been now reduced in public schools. This was in line with the feminist apprehension for their greater focus on girls' achievement raising the gender gap with boy's underachievement (Francis & Skelton, 2005).

In terms of subject wise achievement, comparing with the boys, the girl students scored better in Nepali, Science, English and Social Studies whereas they scored slightly less scores in Mathematics. Furthermore, there were more female

teachers teaching those subjects on which the girls outperformed. On contrary, there were fewer female teachers teaching math on which the girls achieved lower. The subjects taught by female teachers were outperformed by the girls. This is from the feminist perspective that the predominance of female teachers had a fundamental impact on primary school achievement. As viewed by feminists the outperformance of girls in the subjects taught by female teachers is because of favoring daily routines and practices of female teachers towards creating learning environment or favoring girls' learning styles (Delamont, 1999, as cited in Francis & Skeleton, 2005, p. 90).

Moreover there was a significant relation between the scores obtained by girls in Nepali, Science and Social Studies when taught by female teachers. On the contrary, there were no significant relation between the scores of girls and male teachers tutoring the subjects. Therefore girls can have better learning achievement when taught by female teachers in three major subjects. In Maths boys had better scores than girls and it was not statistically significant. It shows that the female teachers' teaching Maths were not effective as in other subjects. A study has shown that when the Math teachers are female teachers, their prejudice carries negative consequences for girls' Math achievement by influencing their beliefs on commonly held stereotype that "boys are good at math and girls are good at reading" which lowers the girls' math achievement (Beilock, Gunderson, Ramirez, Levine, & Smith, 2010). This kind of stereotype beliefs bring negative outcomes by getting poor test scores (Lindsey, 2011, p. 307) in Maths. Thus girl students suffer from lower math test scores when assigned to a female teacher without a strong math background (Antecol, Eren, & Ozbeklik, 2012). Definitely this has underestimated the girls' ability in math (Niederle & Vesterlund, 2010; Schleicher, 2008, p. 44). The underachievement of girls in Maths supports the above mentioned claims but yet it

does not confirm the reasons behind it. The reasons may be different in the developing countries like Nepal which needs to be explored.

Girls out-performance of boys in schools was strongly connected to their overwhelmingly higher achievement at language subjects (Francis & Skelton, 2005), Science and Social Studies. As argued by the feminists, male domination of the classroom leads to the under-achievement of girls, particularly in Math (Acker, 1994, p. 94, as cited in Wright, 2001, p. 275). In some cases, even though girls' performance in math and science continues to lag behind that of boys in most countries, girls have been catching up with boys regarding both their math and science skills (Baker & Jones, 1993; Cole, 1997; Hedges & Nowell, 1995; IES, 2009; Willingham & Cole, 1997, as cited in Neugebauer et al., 2010). Girls' lower achievement in Math in this study confirmed the stereotyped debate of underachievement of girl students in mathematics. The academic achievement is thus noticed in the literary subjects rather than with numerical subjects. My conclusion is in line with many other researchers (Beilock et al., 2010; Lindsey, 2011; Antecol et al., 2012; Niederle & Vesterlund, 2010; Schleicher, 2008; Goldhaber & Dominic, 2000).

But here, in Science subject, which is also perceived as male dominated subject, the girls achieved better than boys. Now, this questions the underachievement of boys which was never the issue of debate in developing countries like Nepal. The concept of feminization of schooling is seen as the key source for boys' poor educational opportunities when compared to girls (Arnot et al., 1998; Diefenbach & Klein, 2002; Driessen, 2007; Hannan, 2001; Horstkemper, 1999; Sexton, 1969, as cited in Neugebauer et al., 2010). It raises the concern to now think for the underachievement of boys in Nepal too.

The female teachers as role models provide positive educational outcomes for girls. A study showed that there was a significant relationship between the female teachers' presence and the educational attainment of girls (Nixon & Robinson, 1999). This study adds to the similar knowledge that there is a significant relationship between the sex of a teacher and the student's academic achievement. To explain further, if the female teacher teaches girls, then those students can have better learning achievement than when taught by male teacher due to the role model effect.

A national assessment of students achievement (ERO, 2013) found that students holding a positive attitude towards his/her school and teachers and those maintaining a smooth relationship with their teachers are found to have comparatively better learning achievement (ERO, 2013). Teachers play an important role in students' adjustment from one level to another and teachers serve as confidants, mentors and friends when students have extensive involvement with them (Reddy et al., 2003, p. 119). Relationships with teachers can be particularly important to early adolescents, who are often undergoing profound shifts in their sense of self (Reddy et al., 2003, p. 120). Research findings in child development in respect to female achievement motives have said that affective relationships were of paramount importance in females and that much of their achievement behavior is motivated by a desire to please (Gammage, 1987, p. 191). In a study conducted by Rosenthal and Jacobson (1968), teacher's expectations of students were found to directly influence student achievement. "Through sex role socialization, the environment forms varying self-perception and motivation trends for boys and girls and thus causes different achievement behavior, which in turn leads ultimately to different status-attainment status for men and women" (Kfir,1988). So the better learning is possible when there is good relationship between teacher and student. Here, the girls perceive their female

teachers as role models and have positive perception about them while the female teachers have expectation from girls to do better as they are more disciplined, serious about studies and regular to school.

Regarding the perception of female teachers and girls on teacher as a role model and girls were behaving comparatively better than boys in class, it emerged from the study that girls have perceived about their female teachers in a very positive way than the female teachers about themselves. In fact, girls perceived their teachers' feelings favorably more than of boys (Arnold, 1968). It is said that teacher's stereotypic perception influences their grading practices (Guttmann & Bar-Tal, 1982). In a study Jones and Myhill (2004), where teachers were asked if they felt boys and girls should achieve the same results, 80% of the teachers expressed their expectation of the same result irrespective of student's gender. But the same study explored that the commitment to equal achievement of the teacher was not reflected in teacher's perception when prompted to think about classroom attitude, behavior and ability of students (Jones & Myhill, 2004). Student's perceptions that their teachers support their academic efforts can increase math achievement especially for at risk students (Hallinan, 2008). So we can say that if girls perceive that their female teachers are very supportive towards them, then they can even achieve better in low scoring subject i.e. Maths. However girls themselves need to strengthen their self-perception of their potentiality and grow their self-esteem to overcome the stereotyped beliefs in boys leading subject (Corson, 1998).

In this study, female teachers have found girls better than boys in terms of their interest to their subjects, hardworking, regular to school, obedient and enjoy learning in their class. It shows that female teachers too have some expectation from girls than boys. Persell (1977) found that when teachers demanded more from their

students and praised them more, students learned more and felt better about themselves (as cited in Sadovnic, Cookson, & Semel, 2013, p. 124). This is in the line of Vygotsky's belief of extrinsic motivation driving to action that springs from outside influences instead of from one's own feelings. The female teachers' loving and caring behavior are extrinsic motivational factors. Vygotsky's concern with the character of the relationship between 'matured' and 'maturing' processes which is the relationship between what the children can do independently and in collaboration with others (Barnes, 2008). The children can accomplish more with collaboration of female teachers than alone.

The role model characteristics of female teachers, as discussed above were likely to facilitate the zone of proximal development (ZPD) of girls' (Vygotsky, 1978). The knowledgeable female teachers provided to the girls the flexibility of interacting socially and enhanced independent learning guiding by the female teachers. The teacher's role was one of purposeful instruction, a mediator of activities and substantial experiences allowing the learner to attain his or zone of proximal development. Thus close cooperative teaching learning activities among female teachers and girls allowed outperformance of girls. As believed by Vygotsky (1978), the opportunities of more active, interactive, and collaborative learning accounting individual differences were likely to have means of gaining ends of better performance by the girls in subjects taught by female teachers.

However another part is still yet to be discussed as I go through the words of Adelson (1961):

> A teacher may be a good teacher yet not serve as a model to any of this students; he may inspire his students an d yet fail to influence them; he may influence them without inspiring them; he may be a model for them and yet

> not be an effective teacher; and so on. Their students learn from them, often learn very much; yet these teachers ultimately do not make much of a difference in their students' lives beyond the learning they impart. (p. 386)

So questions for discussions raises. In addition both male and female may serve as role models for girl child. However there are important ways in which female teachers can be more important role models for female students than male teachers (Nixon & Robinson, 1999). Thus, we need to know what characteristics of the female teachers contribute for the outperformance of the girls. Do their professionalism, motivations and behaviors add value to better achievement of girl students? Are female teachers acting as a role model then? Effective classroom, behavior manager, competent instructor and ethical are the characteristics subscribed to teacher (Minor, Onwuegbuzie, Witcher, & James, 2002). However teachers should not be anti-role models who behave so badly that they serve as good examples of what not do (Orstein et al., 2003, as cited in Mutekwe et al., 2012). Teachers play a major role in shaping students' experiences in school (Hallinan, 2008). After all, student's learning outcomes can change through teachers' intervention by providing positive reinforcement (Jarvis, Holford, & Griffin, 1998, p. 26). Schools and their teachers have to impart more than mere bookish knowledge to their pupils which inculcate attitudes, develop habits and skills, strengthen loyalties, promote allegiance and reinforce moral codes (Gammage, 1987, p. 42).

In this study, I have analyzed the perception of girls and female teachers themselves how teachers can play a contributing role to the achievement of girl students. In doing so, it was found that most of girls and the female teachers agreed that they were regularity and punctual in the classroom and school. To the extent that less learning occurs when regular teachers are absent, student academic performance

may suffer (Ehrenberg, Ehrenberg, Rees, & Ehrenberg, 1991). So teacher's and students' absenteeism influences the students' test score performance. In addition, the teachers' irregularity and lateness in class hours reduce student motivation (Ehrenberg et al., 1991). Girls were also found to be influenced by the appealing appearance of the female teacher.

The girls perceived their female teacher as loving and caring teacher and a nice person. The girls liked her subject, took interest in it, and were hardworking and obedient in the particular subject taught by her. This finding supports the version of Bista (2006) that female teachers take care of the girls, love them, care them, listen to them well and behave equally between boys and girls. Girls enjoyed the class of female teachers, satisfied from her way of teaching and loved to come to school which promoted the regular attendance of her in class. Various research studies have shown that students who like to come to school have higher academic achievement and a lower incidence of disciplinary problems, absenteeism, truancy and dropping out of school than do those who dislike school (Hallinan, 2008). Students' less motivation to attend school increased their absenteeism which is highly associated with poor academic performance of the student (Ehrenberg et al., 1991). Teacher's interpersonal competence significantly contributes to the improved conduct of the students (John, 1971). The social and emotional support from the female teachers to the students and the nature of teacher's expectation for students' academic performance influences the student's feelings about school (Hallinan, 2008). So the female teacher's proper communication to students through teaching influences the classroom interaction (Beady & Hansell, 1981) which creates an enjoyable environment in the classroom. The quality of teaching influences demand for girls' education even more than for boys (Bista, 2004, p. 8). "Clearly teachers are models

for students and as instructional leaders, teachers set standards for students and influence student self-esteem and sense of efficacy" (Sadovnic, Cookson, & Semel, 2013, p. 124).

In line of Vygotsky's theory on the Zone of Proximal Development, there is a wide gap between what a child can do alone and what a child can do with assistance of female teachers. This gap can be narrowed by using extrinsic motivators to entice the child to continue learning and accomplish things independently. Therefore, the children must be motivated constantly in order to learn. The students are to be motivated by adding that extra amount of support and praise when they complete a task. By playing with school-related tasks, children can feel as if they are already proficient in a task, even if they have never really attempted it before simply by being around people who offer them motivation.

Vygotsky believes that children want to continue learning if they receive praise or rewards from outside sources. By rewarding the "here and now", children will remember the prize associated with the work, and will therefore want to repeat the action in hopes of receiving the prize again. Although the prize can eventually be weaned off, the child will remember the right way of completing a task and continue doing it properly (Barnes, 2008).

This study indicated that some forms of physical punishment by female teachers still existed in schools. According to Bista (2006) female teachers are very caring, loving, having patience, and understand the problems of girls (Bista, 2006). Since female teachers are role models to girls, they aspire certain norms of behavior from teachers favoring the girls (Haveman & Wolfe, 1995, as cited in Nixon & Robinson, 1999). In this context my study does not support the above mentioned statements. Girls have found female teachers as their role models in terms of

punctuality, appearance and motivation in this study. But due to the physical punishment from female teachers some girls don't find them as their role model. When there are female teachers in school, parents feel secure to send their daughters (Paudyal, 2012) and girls can share their problems with them (CERID, 2009). According to the report of CERID (2000) women tend to use less physical punishment to children. Female teachers understand girls better than male teacher (Wudu & Getahun, 2009). All this assumptions fail when female punish physically to girls in their classes. Because of the students are not able to speak comfortably with the teacher. This finding thus challenges the assumptions of feminist theory too. The female teachers in public schools have many years of experience in teaching. I think they do not enjoy their profession as they have been continuing the same job for many years. Moreover when women are always connected with their domestic problems during their duty hours too, they are not able to leave their anxieties back home and consequently they shout and beat children in class. Further sometimes the teachers are pressurized to maintain discipline in class and show better result in their subject which might have caused them to punish children when they do something wrong. Again it is very difficult to be nice all the time when students are very talkative, noisy, do not do homework regularly, are restless most of the time and do non-disciplinary activities during the study hour. Therefore these factors are also necessary to be taken care of in future research.

This study explored that female teacher lacks professionalism to some extent as many of the female teachers didn't prepare they daily lesson plans, use teaching materials and make their classes interactive and interesting for students. The quality of teaching influences student's academic achievement (Bista, 2006) and the quality of teaching can be maintained through professionalism. The female teachers have

good knowledge of their subject matter and are able to make the students clearly understand the content but not being professional in their career can spoil the image of a role model. As per Vygotsky's belief the role of a female teacher as an extrinsic motivator has to be professional. In addition to the same sex role model, the quality teaching can increase the learning achievement of a student. An unless and until the female teachers carry out their job professionally and teach students, students feely truly motivated, inspired and learn incalculably by bearing in mind the professionalism of female teachers.

Conclusion

There is a majority of female teachers in the primary level in Nepalese community schools especially in the urban area. The policy of recruiting at least one female teacher in the primary level has significantly increased the women's participation in teaching profession. The academic achievement of girls of grade 5 is in increasing trend. The overall scores of the students are satisfactory which shows that there has been improvement in students' learning.

Girls have maintained their dominancy in literary subjects and proved the claim of underachievement in numerical subjects such as Maths. The overall examination scores of girls have improved as the scores were better in literary subjects. The less number of female teachers teaching Maths subject, the stereotyped belief as many studies have stated or the less professionalism in female teachers or others can be the reasons for poor performance of girls in Maths. Nevertheless, girls of grade 5 have outperformed in the subjects taught by female teachers which has been proved statistically in the study. Therefore it gives an evidence to argue that recruiting of more female teachers in primary level can demonstrate positive result or improved academic achievement of the students.

Girls perceive their female teacher as a role model in terms of their characteristics such as punctuality, appearance and motivation. Their practice of corporal punishment, shouting and scolding to children and not being able to make themselves completely professional have hindered them to act as a role model to all or according to their students' expectation. Due to same sex influences, girls perceived their female teachers in a very positive way in spite of less professionalism and less child friendly behaviour which are important characteristics of a good teacher. The partial corporal punishment to girls by female teachers contradicts the role model effect. Sometimes it is stated that students overstate the importance of teachers (Suter, 2000). It may be more applicable in case of girls and female teachers. Girls are unaware about the professionalism a teacher should maintain in school so they just perceive what they see and believe from their ability. So more than professionalism and corporal punishment, for students the teacher's appearance, punctuality and motivation was important to find female teachers as their role model.

Implications

On the basis of the key findings, discussions and conclusion drawn in the aforementioned sections, I have made the following key implications. The implications are divided into two sections – implications for female teachers and implications for future research.

Implications for Female Teachers

In spite of loving and caring nature of female teachers as shown in literature and this study, there are some forms of verbal and physical punishment existing in schools. These practices of female teachers affect the same sex role model benefits to girls. Realizing the claim of this study that girls can have better learning through motivation from female teachers, the physical punishment will leave the children with

bitter experiences, fragile relation with teachers, having threat, mentally tortured and consequently affect the academic performance. Moreover it can lead to violation of child rights which will spoil the child friendly teaching learning environment in schools. Thus if the female teachers abandon this bad practice and ensure child rights, it can help to maintain the role model effect on students for better academic performance and educational outcomes.

The professionalism of the teachers is very important to be a role model for their students. Lack of professionalism in teachers can result in poor performance of students and schools. Therefore, the school sector reform plan has also incorporated teacher's professional development as one of the important components. Thus teachers themselves may rethink for developing or enhancing their professionalism in teaching. If teachers have a well planned lesson and use relevant teaching materials while teaching, then their class will be very effective, interactive and interesting. This will also have spillover effects contributing to quality of education in public schools.

Implications for Future Research

The study was conducted in Pokhara Sub-metropolitan and a majority of female teachers were teaching in the primary level. So its generalization in rural areas is a challenge. The presence of female teachers and girl students in schools of rural Nepal would bring more issues of the academic achievement. Therefore either a comparative study of urban and rural area or based only on rural areas, similar study between public and private schools can be carried out. Equal representation from geographic region can also add more value to the study.

There is an emerging issue of boy students' underachievement in developed countries when we are struggling here to improve girls' learning achievement. So

another study can be carried out for exploring the comparative status between male teachers and boy students or female teachers and boy students.

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Appendices

Appendix A

Table 19 : Scores of students when taught by female Teacher

Year	Boys			Girls			Mean		Sig.
	N	Mean	SD	N	Mean	SD	Difference	T-value	Value
Nepali									
2008	376	46	15.8	477	49.7	15	3.74	3.523**	0.000
2009	357	44.5	15	411	49.4	15.9	4.94	4.405**	0.000
2010	435	45.6	15.9	524	49.2	17.1	3.65	3.4**	0.001
2011	368	46.5	17.4	463	47.7	17.3	1.28	10.55	0.292
2012	353	46.5	16.5	413	52.8	18.1	2.42	1.921	0.055
English									
2008	369	41.5	15.8	466	40.8	15	0.78	0.723	0.470
2009	310	38.6	15.2	377	40.9	15.5	2.36	2.001**	0.046
2010	401	44.5	17.8	475	43.3	16.6	1.15	0.989	0.323
2011	309	42.4	17.3	403	42.7	17	0.24	0.738	0.855
2012	348	48.9	20.8	377	47.2	18	1.68	1.161	0.246
Maths									
2008	205	38.1	14.6	284	38.2	15.1	0.0931	0.068	0.946
2009	294	37.5	18.1	401	37.1	16.2	0.4504	0.344	0.731
2010	320	38	14.2	355	39.6	4.3	1.6558	1.506	0.132
2011	261	40.2	16.4	296	38.8	14.7	1.3984	1.06	0.289
2012	316	44.4	17.3	333	41.4	16.6	2.97	2.227**	0.026
Science									
2008	362	48	15.4	510	50.1	16	2.079	1.922*	0.055
2009	341	47.3	14.6	451	50.3	16.1	2.978	2.674*	0.007
2010	445	44.6	16.5	601	48.3	16	3.695	3.645**	0.000
2011	380	40.4	17.6	531	41.2	16.9	0.82	0.713	0.576
2012	394	42.1	18.2	508	40.8	18.1	1.328	1.092	0.275
Social									
2008	473	46.9	16.1	654	48.3	15.1	1.434	1.525	0.127
2009	373	43.3	14.3	505	44.2	13.8	0.846	0.883	0.378
2010	540	42.6	15.6	662	44.7	14.9	2.133	2.42*	0.016
2011	465	42.8	16.4	629	44.3	16	1.49	1.51	0.131
2012	435	44.6	16	575	45.4	16.9	0.835	0.797	0.426

*p<0.05,*p<0.01

Appendix B

Table 20 : Scores of students when taught by Male teacher

Year	Boys			Girls					Sign.
	N	Mean	SD	N	Mean	SD	Mean Difference	T-value	value
Nepali									
2008	140	48.6	14.7	229	52.2	15.7	4.6	2.789**	0.006
2009	119	49.1	17	208	52.4	15.9	3.3	1.794*	0.074
2010	159	44.5	14.8	227	48	14.6	3.5	2.320**	0.021
2011	139	49.1	17.2	216	54.2	17.3	5.1	2.738**	0.006
2012	127	47	18.2	215	50.6	18.6	3.6	1.750*	0.081
English									
2008	147	46.5	16.8	240	45.1	16.2	1.4	0.816	0.415
2009	166	42.9	17.6	242	41.8	16.4	1.1	0.643	0.520
2010	193	38.7	16.4	276	42.3	17	3.6	0.417**	0.022
2011	198	40.4	19.6	276	40.4	18	0.4	0.263	0.982
2012	132	45.6	14.7	251	44	16.9	1.6	0.888	0.375
Maths									
2008	311	41.1	16.6	422	39.4	14.1	1.7	1.515	0.140
2009	182	40.5	15	218	40.3	16.3	0.2	0.111	0.912
2010	274	37.4	17.7	396	35.6	15.6	1.8	1.403	0.171
2011	246	37.7	16.8	383	35.3	15.1	2.4	1.827	0.075
2012	164	42.2	15.8	295	39	15.9	3.2	2.098	0.036
Science									
2008	154	46.4	17.1	196	43.3	15.2	3.1	1.79	0.074
2009	135	44.5	15.4	168	46.1	16.8	1.6	0.87	0.385
2010	149	46.6	16.1	150	49.4	17.1	2.7	1.415	0.158
2011	127	42.4	18.6	148	45.8	20.2	3.4	1.466	0.144
2012	86	33.8	17	120	36.5	17.9	2.7	1.088	0.278
Social									
2008	43	34.9	14.1	52	52	34.4	0.5	0.201	0.841
2009	103	39.3	10.9	114	114	44.4	5.1	2.975**	0.003
2010	54	43.7	15.2	89	89	42.6	1.1	0.486	0.628
2011	42	44.7	16	50	50	44.2	0.5	0.146	0.884
2012	45	52.6	20	53	53	45.3	7.3	1.902	0.060

*p<0.05,
p<0.01

Appendix C

List of Public School in Pokhara Sub-Metropolitan city

S.N.	Name of School	Address	Level	Rescores
1	Rastriya Higher Secondary	Pokhara-1, Tudikhel	Higher Secondary	
2	Ratna Lower Secondary	Pokhara-1, Kaseri	Lower Secondary	
3	Bal Jyoti Primary School	Pokhara-1, Bagar	Primary Level	
4	Sanskrit Secondary School	Pokhara-1, Bhimkalipatan	Secondary School	
5	Bindabasini Higher Secondary school	Pokhara-2, Barpatan	Higher Secondary	
6	Gyanbhumi Secondary School	Pokhara-3, Nadipur	Secondary School	
7	Bal Mandir Secondary School	Pokhara-3, Nadipur	Secondary School	
8	Kanya Secondary school	Pokhara-3, Nadipur	Secondary School	
9	Nabin Higher Secondary School	Pokhara-4, Gairapatan	Higher Secondary	
10	Barahi Higher Secondary school	Pokhara-5, Malepatan	Higher Secondary	
11	Dharmasthali Lower Secondary School	Pokhara-5, Parsyang	Lower Secondary	
12	Tal Barahi Higher Secondary School	Pokhara-6, Baidam	Higher Secondary School	
13	Annapurna Primary School	Pokhar-6, Baidam	Primary School	Excluded as it had upto only grade 3
14	Krishna Secondary School	Pokhara-7, Masbar	Secondary School	
15	Janapriya Higher Secondary School	Pokhara-8, Simalchaur	Higher Secondary School	
16	Shree Ram Lower	Pokhara-8	Lower Secondary	

	Secondary	Simalchaur		
17	Sahar Bal Primary School	Pokhara-9, Baspark	Primary School	
18	Mahendra Higher Secondary School	Pokhara-9, Naya Bazar	Higher Secondary	
19	Nava Parvat Secondary School	Pokhara-9, Naya Bazar	Secondary School	
20	Kalika Higher Secondary School	Pokhara-10, Naya Bazar	Higher Secondary School	
21	Kudahar Primary School	Pokahra-10, Laliguras Tole	Primary School	
22	Amarsing Higher Secondary School	Pokhara-10, Ramghat	Higher Secondary School	
23	Shiva shakti Higher Secondary School	Pokhara-11, Fulbari	Higher Secondary School	
24	Sraswati Lower Secondary School	Pokhara-12, Dhikalethar	Lower Secondary School	
25	Shitaladevi Secondary School	Pokhara-12, Shitaladevi	Secondary School	
26	Maula Islamic Primary School	Pokhara-13, Miyapatan	Primary School	
27	Bhadrakali Higher Seconary school	Pokahra-13, Kundahar	Higher Secondary School	
28	Bhayeswori Primary School	Pokhara-14, Chauthe	Primary School	
29	Rameshwor Secondary school	Pokhara-14, Majheripatan	Secondary School	
30	Sidda Secondary School	Pokhara-15, Phalepatan	Secondary School	
31	Indra Rajya Laxmi Higher Secondary School	Pokhara-16, Lamachaur	Higher Secondary School	
32	Divyajyoti Primary School	Pokhara-16, Lamachaur	Primary School	

33	Bindbasini Higher Secondary School	Pokhara-16, Batulechaur	Higher Secondary School	
34	Chandika Primary School	Pokhara-16, Ammare	Primary School	
35	Janaki Lower Secondary School	Pokhara-17, Mahatgauda	Lower Secondary School	
36	Chhorepatan Higher Secondary School	Pokhara-17, Chhorepatan	Higher Secondary School	
37	Pardi Higher Secondary School	Pokhara-17, Mustangchowk	Higher Secondary School	
38	Masina Primary school	Pokhara-18, Masina	Primary School	
39	Sukraraj Balbhadra Higher Secondary School	Pokhara-19, Chhinedanda	Higher Secondary School	

Appendix D

List of Teachers in Sample School

Name of School	Total Teachers	Total Female Teachers	Total teachers teaching in primary level	Total female teachers teaching in primary level
Rastriya H.S.S	26	9	13	8
Shree Ratna L.S.S	13	8	4	4
Bal Jyoti P. S.	3	2	3	2
Sanskrit S.S	18	5	4	3
Bindabaseni H. S.S	18	8	7	4
Gyanubaba S. S.	16	8	7	5
Balmandir H. S.S	32	19	17	19
Kanya S. S	16	7	5	3
Nabin H.S.S	22	11	10	7
Barahi H.S.S.	21	11	4	4
Dharmasthali S.S	15	12	11	9
TalBarahi H.S.S	32	17	15	11
Krishna L.S.S	15	11	11	10
Janapriya H.S.S	37	19	19	11
Shree Ram L.S.S	12	9	7	5
Sahara Bal P.S.S	9	6	9	6
Mahendra H.S.S	40	28	23	19
Nava Pravhat S. S.	23	10	10	8
Kalika Higher S. S.	46	26	20	15
Kudhar Primary S	6	3	6	3
Amarsingh H. S. S	38	26	24	20
ShivaShakti H. S. S	17	9	9	7
Saraswoti L. S. S	11	9	8	6
Shitaladevi S. S	29	18	12	8
Maula Ishlamik P. S.	6	3	5	2
BhadraKali H. S. S	39	20	20	16
Bhaeshwori P.S.	5	5		5

Name of School	Total Teachers	Total Female Teachers	Total teachers teaching in primary level	Total female teachers teaching in primary level
Shree Shiddha H.S.S.	22	9	12	8
Indra Rajya Laxmi H.S.S	21	8	7	12
Deepjyoti P.S.	4	4	3	3
Bindhabasini H.S.S	32	20	16	13
Chandika P.S	6	5	6	5
Janaki S.S.	10	5	7	4
Pardi H.S.S.	21	10	12	9
Mashina P.S.	6	4	6	4
Shukraraj Balbhadra H.S.S	16	5	8	5
Choraypatan H.S.S	71	13	10	6
Rameshwori H.S.S	20	9	9	7

Appendix E

List of Students in the Sample Schools

Name of School	Total Students	Total primary girls students	Total primary girl students in class 5
Rastriya H.S.S	800	231	30
Shree Ratna L.S.S	135	44	16
Bal Jyoti P. S.	55	29	4
Sanskrit S.S	200	28	6
Bindabaseni H. S.S	554	80	20
Gyanubaba S. S.	264	52	11
Balmandir H. S.S	1010	379	42
Kanya S. S	325	77	16
Nabin H.S.S	700	425	61
Barahi H.S.S.	450	126	15
Dharmasthali S.S	425	146	33
TalBarahi H.S.S	840	184	43
Krishna L.S.S	368	193	13
Janapriya H.S.S	1646	191	50
Shree Ram L.S.S	193	108	16
Sahara Bal P.S.S	223	110	14
Mahendra H.S.S	759	124	40
Nava Pravhat S. S.	540	98	19
Kalika Higher S. S.	1450	514	61
Kudhar Primary S	118	66	9
Amarsingh H. S. S	1045	166	39
ShivaShakti H. S. S	164	88	19
Saraswoti L. S. S	145	119	14
Shitaladevi S. S	412	130	31
Maula Ishlamik P. S.	97	57	4
BhadraKali H. S. S	1671	275	38

Bhaeshwori P.S.	110	61	19
Name of School	**Total Students**	**Total primary girls students**	**Total primary girl students in class 5**
Shree Shiddha H.S.S.	450	71	11
Indra Rajya Laxmi H.S.S	623	175	13
Deepjyoti P.S.	24	15	3
Bindhabasini H.S.S	677	276	16
Chandika P.S	75	51	9
Janaki S.S.	179	97	10
Pardi H.S.S.	542	134	34
Mashina P.S.	71	43	6
Shukraraj Balbhadra H.S.S	268	143	36
Choraypatan H.S.S	1828	241	32
Rameshwori H.S.S	320	48	14

Appendix F

Letter of Consent

Dear Respondents,

I am Lina Gurung, an Mphil student of Kathmandu University, School of Education, Lalitpur. I am conducting a research thesis entitled "Female Teachers and Girls' Academic Achievement: A case of Pokhara Sub-metropolitan" for my degree completion. I would like to request for your voluntary participation in my thesis by filling up this questionnaire. It will take 10 – 15 minutes to fill up this form. I am sure that your valuable inputs will enrich my dissertation. I would like to ensure you that your identity and responses will be kept confidential and will be used only for this research purpose. Writing your name is optional and if you find uncomfortable with any questions please do not hesitate to clarify it. While answering the questions, please be truthful as possible. I am grateful to you for your kind consideration.

Ms. Lina Gurung
Researcher

Appendix G

Survey Questionnaire for Schools

Form No: _____ Date: _____

Name of the School: _____ Address: _____

Level of the School: Primary/ Lower Secondary/ Secondary/ Higher Secondary

1. Teacher's Information

1.1. Total number of Teachers: _____

1.2. Total number of Female Teachers: _____

1.3 Total number of teachers in primary level: _____

1.4 Total number of female teachers in primary level: _____

1.5 What subjects do female teachers teach in class five?

English ( ) Maths ( ) Science ( ) Nepali ( ) Social Studies ( )

Others (please specify)……..

2. Student's Information

2.1 Total number of Students: _____

2.2. Total number of girl students in primary level: _____

2.3 Total number of girl students in grade 5 (only first section): _____

3. Grade Sheet of Class 5 students (Average Scores in Percentage)

SN	**Subjects**	**2008**			**2009**			**2010**			**2011**			**2012**		
		G	**B**	**TG**	**G**	**B**	**TG**	**G**	**B**	**TG**	**G**	**B**	**TG**	**G**	**B**	**TG**
1.	Nepali															
2	English															
3	Maths															
4	Science															
5	Social Studies															
6	Other															

Note: G = Girls, B = Boys and TG = Teacher's Gender (Male/Female)

(Please provide the scores of each students of every year of class five)

Questionnaire for Grade Five Teacher

Form No: _____ Date: _____

Name (Optional): _____

Name of School (Optional): _____

Type of your service: Permanent/Temporary/contract/Voluntary/Private

1. General Information

1.1 Age:

a) Below 20 years b) 21 – 25 years c) 26 – 30 years d) 30 – 35 years

e) 36 – 40 years f) 41 – 45 years g) Above 45 years

1.2 Educational Background

a) SLC b) Proficiency level c) Bachelor Degree d) Masters Degree e) Above Master's Degree

Please mentioned the stream of study. _____

1.3 Marital Status

a) Unmarried b) Married c) Divorcee d) Separated e) Widow

1.4 No of Children (applicable only to married respondents) _____

1.5 Caste/Ethnicity

a) Brahmin b) Chhetri c) Thakuri d) Gurung e) Magar e) Newarf) Dalit g) Other indigenous group (Please mention) ……..

1.6 Religion

a) Hindu b) Buddhist c) Christian d) Muslim e) Other ……

1.7 How long you have involved in teaching profession?

1.8 Which language do you speak while teaching in classroom?

a) Nepali b) English d) Both e) Mother Tongue (Specify)

1.9 Which subject do you teach? _____

a) Maths b) English c) Science d) Nepali e) Social Studies

Perception Measurement through Likert Scale

Please tick one of the columns of each statement to the best of your opinion.

A = Agree, N = Neutral, D = Disagree

Statements	**Agree**	**Neutral**	**Disagree**
1. I come regularly to school.			
2. I am punctual during my class hours			
3. I come neat and tidy to school.			
4. I am dressed properly.			
5. I am smart and bear good habits.			
6. I love my students.			
7. Students like my subject			
8. Students enjoy my class.			
9. My students love to come to school daily.			
10. I am nice to all and treat them equally.			
11. Girls are inspired from me.			
12. Girls feel comfortable to talk to me than with my male colleagues.			
13. I never punish physically to my students.			
14. I always help my students when they need me.			
15. I take care of weak students by giving more attention and helping in their subjects.			
16. I am polite and friendly to all my students			
17. I don't shout and scold on any students.			
18. Girls are more obedient and hardworking than boys in my class.			
19. Girls do their homework regularly than boys in my subject.			

20. I prepare my daily lessons plan and go to class.			
21. I clarify the doubts of the students if they have any in my subjects.			
22. I have adequate knowledge of my subject for teaching.			
23. I use various teaching materials in my class.			
24. My classes are interactive and interesting for students.			
25. Girls are satisfied with my teaching and behavior towards to them.			

Questionnaire for Girl Students

This questionnaire is to be filled by a girl student studying in grade five.

Form No: _____ Date: _____

Name (Optional): _____

Name of School : _____ Section: _____

1. What is your age?

a) 8 years b) 9 years c) 10 years d) 11 years e) 12 years f) above 12 years

2. What is your caste?

a) Brahmin b) Chhetri c) Gurung d) Magar e) Newar f) dalit g) Others _____

3. What is your father's occupation?

a) government employee b) teacher c) banker d) Farmer e) Businessman

f) Work abroad g) Shopkeeper h) labourer i) Carpenter j) Mason

k) electrician l) others……..

4. What is your mother's occupation?

a) government employee b) teacher c) banker d) Farmer e) Businessman

f) Work abroad g) Shopkeeper h) labourer i) Mason j) electrician

k)Housewife l) does domestic work in others home.

5. Please tick the one of the columns to your best opinion.

Statements	 I agree	 I am confused	 I don't agree
1. My female teacher is regular to school.			
2. My female teacher is punctual during the class hours.			
3. My female teacher comes neat and tidy in school.			

4. My female teacher is well dressed in school.			
5. My female teacher is very smart and has very clean habits.			
6. My female teacher loves me.			
7. I like the subject taught by my female teacher			
8. I enjoy the class of my female teacher.			
9. I love to come to school.			
10. My female teacher is a very nice person.			
11. I am inspired by my female teacher			
12. I feel more comfortable to speak with her than my male teacher and share my problems.			
13. My female teacher never punishes me physically			
14. My female teacher is very helpful and helps me whenever I am in problem.			
15. My female teacher care and help weak students in her class.			
16. My female teacher is very polite and friendly to me.			
17. My female teacher never shouts and scolds upon me.			
18. I am hardworking and obedient in her class than in the class taught by male teacher.			
19. I do my homework regularly in her class than of a male teacher.			
20. My female teacher prepares her lessons and come to class.			

21. My female teacher clarifies any doubts related to her subject matter.			
22. My teacher has very good knowledge of her subject.			
23. My female teacher uses various teaching materials while teaching in class.			
24. I am more interested in her subject as her class is very interactive.			
25. I am satisfied with my teacher's teaching and behavior towards me.			