

**EFFECT OF SOCIO-ECONOMIC STATUS ON MATHEMATICS
ACHIEVEMENT OF GRADE FIVE STUDENTS**

**A
THESIS**

**BY
RESHMI RAJ SHARMA**

**FOR THE PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE
DEGREE OF MASTER OF EDUCATION**

**SUBMITTED
TO
DEPARTMENT OF MATHEMATICS EDUCATION
CENTRAL DEPARTMENT OF EDUCATION
TRIBHUVAN UNIVERSITY
UNIVERSITY CAMPUS
KIRTIPUR, NEEPAL**

2015

LETTER OF CERTIFICATE

This is to certify that **Mr. Reshmi Raj Sharma**, a student of academics year 2063/64 with campus Roll number 487, Thesis number 671, Exam Noll Number 280838(2065) and T.U. Registration Number 9-1-50-1952-2000, has completed his thesis under the rules and regulation of Tribhuvan University, Nepal. The thesis entitled “Effect of Socio-Economic status on mathematics achievement of grade five Students” embodies the results of his investigation conducted during the period 2015, in the department of mathematics education, university campus, Tribhuvan University, Kirtipur, Kathmandu, Nepal. I hereby, recommend and forward that his thesis be submitted for the evolution as the partial requirements to award the degree of Master’s in Mathematics Education.

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LETTER OF APPROVAL

A

Thesis

By

Reshmi Raj Sharma

Entitled

“Effect of Socio-economic Status on Mathematics Achievement of Grade Five Students” has been approved in partial fulfillments of the requirements for the Degree of Master of Mathematics Education.

Committee for the Viva-Voce

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ACKNOWLEDGMENT

First of all, I want to give thank the Department of Mathematics Education, Central Department of Education, Kirtipur Kathmandu for provide me an opportunity and support to carry out the research work.

I am highly indebted to Mr. Abatar Subedi, who is the Lecture of our department as well as thesis guide equipped me with all sort of basic concepts and techniques essential to carry out this study. I want to extend my sincere gratitude for his patience, kindness, proper guidance, supervision and invaluable suggestion that gave me a kind of inspiration to accomplish my thesis with confidence in all stages of the study. My sincere gratitude goes to Prof. Dr. Hari Prasad Upadhyay, Chairman, Subject Committee, Mathematics and Computer Science Education, Prof. Dr. Min BahadurShrestha and other respected teachers for their invaluable comments and suggestion that led me to accomplish this thesis.

My special thanks go to Krishna Adhikari, and my friends Suraj Gaire, Deepak Mainali who helped me directly and indirectly in search the way to go ahead in my research. Also I would like to give thanks the Headteachers of those selected sample schools who provided me data.

.....

Reshmi Raj Sharma

Abstract

The major thrust of this research was to explore the “Effect of socio- economic status and mathematics achievement at primary level of students” with objectives: to find the level of mathematics achievement of students with respect to their socio-economic status and to determine the effect of socio-economic status in mathematics achievement of students. In this study, there were 120 students in total with 61 boys and 59 girls. And 20 students were taken from each selected school. The data for this study were collected from six government schools of grade five students on Gorkha district by visiting the Head teacher of those schools. And the Student’s questionnaire form was used to know the information’s about student’s father’s education, occupation, family size, and family type. In this study the mean, correlation coefficient and multiple regression were used to analyze the data. Statistical analysis of the collected data yielded the following results as the findings of the study:

-) The mean scores of students having educated, literate and illiterate fathers were 59.36, 49.46 and 40.58 respectively. The mean score of educated father’s children is higher than the mean score of literate and illiterate father’s children and the mean score of literate father’s children is higher than those illiterate father’s children.
-) The mean scores of students whose father engaged in job, business and agriculture field were 55.65, 51.77, 44.38 respectively. The mean score of job holder father’s children is higher than the mean score of business worker and agricultural father’s children. And the mean score of business worker father’s children is higher than agricultural father’s children.
-) The mean scores of student’s lives in small family, middle family and large family were 59.24, 49.92, 45.14 respectively. The mean score of small size

families is higher than the mean score of middle size family and large size families' children. And the mean score of middle size family's children is higher than the mean scores of large size families' children.

) The C.V. of students whose parents were educated, literate and illiterate was 30.94%, 31.64% and 31.72% similarly. Thus the C.V. of educated parent's child was less than the C.V. of literate and illiterate parent's child. Thus the consistency of achievement of those children whose parents were educated is more than other ones.

) The C.V. of students whose parents were job holders, businessmen and agricultural were 33.06 %, 33.24 % and 34.52% similarly. Thus the C.V. of job holder parent's child was less than the C.V. of businessmen and agricultural parent's child. Thus the consistency of achievement of that child whose parents were job holders is more than other ones.

) The C.V. of students whose family was small, middle and large was 27.16%, 29.68% and 32.25% similarly. Thus the C.V. of student whose family was small was less than the C.V. of middle and larger size family's child. Thus the consistency of achievement of those children whose family was small is more than other ones.

) The C.V. of students whose live in single family and joint family were 45.29% and 55.95% similarly. Thus the C.V. of single family child is less than the C.V. of joint family child. Thus the consistency of achievement of those children who live in single family is more than joint family child

) The correlation in father's education, father's occupation, family size and family type were 0.226, 0.214, -0.284 and 0.242 respectively with mathematics achievement.

-) Mathematics achievement of those students were found that it be positively associated with their father's education, father's occupation and family type.
-) Mathematics achievement of those students were found that it be negatively associated with the family size.
-) Fourteen percent of variance of mathematics achievement was explained by four explanatory variables entered into regression equation.
-) The variables family size had a negative effect on mathematics achievement and other related variables had a positive effect on mathematics achievement.

From the marks obtained by students in final exam of mathematics by analyzed it was found that: the level of mathematics achievement of those students whose parents were educated is higher than those students whose parents were literate and illiterate, the level of mathematics achievement of those students whose parents were job holder is higher than those students whose parents were business and agricultural the level of mathematics achievement of those students whose families was small is higher than those students whose families were middle and large and the level of mathematics achievement of those students whose families was single is higher than those students whose families were joint. The marks obtained by students in final exam of mathematics were found significantly correlated with father education, father occupation, family size and family type. But the correlation is positive in father's education, father's occupation, family income and the correlation is negative in family size with mathematics achievement.

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Chapter - I

INTRODUCTION

Background of the Study

Education is a continuous and life long process. It helps the people to get new experiences. It modifies the behavior of the man. It starts from cradle and ends with death. The complete development of individual is the essence of education. Education plays vital role in developed civilized and cultured society with independent. We can get education from the two ways. We can get education formal education from educational institutes and informal education from house, society, community, etc. Either formal or informal education man collects new knowledge, which is needed to service. The broad point of education is for life. The major goal of education should be to provide an equal opportunity for each individual to develop his abilities, to his maximum potentials and to prepare him to make his greater contributions to society as a citizen. Education is highly acclaimed as the most essential pre-requisite of human development. In the history of humanity education has formed a basis for the development of human capacity. The development of human resources is the primary function of education.

In the field of education there are various subjects. Among them mathematics is one of them. Mathematics plays a major role in the life of man. It is the, other of civilization. Mathematics has been explained in various ways. It is the numerical and calculation part of human life and knowledge. It helps man to give exact interpretation to his ideas and conclusion. Mathematics and life are related to each other like a relation between nail and muscle in human body. The words mathematics is very difficult to define. It has come from ancient Greek word “Mathematica” it means

“inclined to learn”. In the ancient time mathematics was also in existence. It is the queen of all sciences. It is essential for everyday life as well as for higher study in the fields of science and technology.

Eves in his book “An Introduction of the History of Mathematics” has stated that in the time of Greek civilization, Chinese civilization, and Hindu civilization mathematics education has taken as a major subject. Mathematics gave the birth of modern science and technology. In the mind of many people mathematics and mathematics education are synonymous. But it is quite different. The first international congress of Mathematics Education conducted in August 1969 at Lyon, France, established that Mathematics education as separate subject from Mathematics. Mathematics developed with the development of human civilization. Mathematics maintains a direct concern with human life. Indeed, necessity is mother of invention and innovation. So, mathematics developed with an objective of fulfilling human interests and needs. Generally mathematics is defined as the science of calculation

Socioeconomic Status

Socioeconomic status (SES) is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position relative to others, based on income, education, and occupation. When analyzing a family's SES, the household income, earners' education, and occupation are examined, as well as combined income, versus with an individual, when their own attributes are assessed.

Socioeconomic status is typically broken into three categories, high SES, middle SES, and low SES to describe the three areas a family or an individual may fall into. When placing a family or individual into one of these categories any or all of

the three variables (income, education, and occupation) can be assessed. A fourth variable, wealth, may also be examined when determining socioeconomic status.

Additionally, low income and little education have shown to be strong predictors of a range of physical and mental health problems, ranging from respiratory viruses, arthritis, coronary disease, and schizophrenia. These may be due to environmental conditions in their workplace, or in the case of mental illnesses, may be the entire cause of that person's social predicament to begin with.

Generally Socio Economic status refers to the position of person in the society which contains education, educated, his occupation and his family income.

The education of the child depends not only on part played by teachers, but also on the parent's awareness, interests and knowledge about handling and guiding their children at home. Parents can introduce and teach fundamental knowledge and skills, attitudes and values to their children. Parents can help the children to solve mathematics problems at home. In other words, a great deal of children's total development including their academic achievement level is the combine product of parent's support and teachers inputs. But parent's support of guidance in learning is only possible when they are educated, literate and conscious as well. So education plays very important role on the part of parents in helping their children's education. Parent's education is the most important things to make their children education.

In the encyclopedia of Britannica "Parents education" stated by the United States office of education is as follows: "Parents education was an early outgrowth of adult education movement. It came about as parents in an increasingly complex and rapidly changing society felt the need for greater knowledge and understanding helps them in the wise guidance of their children, moreover the increasingly early age at

which a child entered school, a situation in a part created by the production of the knowledge. Late in the 19th century, pointed us the need of co-operation between parents and teachers in child guidance and instruction. Every children passes more time at home than school. They can study more at home than at school. So, there must be parents support at home to their children.

In the field of education, mostly the educated and uneducated parents like each of their children seriously and consciously rather than the literate and illiterate parents, because they know the importance of education. But generally, people who are illiterate and for educational status is low do not take care of the values of education. They only send their children to school, but they do not take care of them seriously about what they are studying. Educated parents usually make efforts to maintain their social life, relatively higher social status, privilege and access to different opportunities by enhancing the education of their family members. Hence, educated parents are, more likely to educate their children and encourage them to take occupations in formal sectors. Parents' occupation provides not only regular sources of family income but it is also a good clue to the identification of children's motivations, expectations, aspirations, needs & concerns. It affects the children's access to educational and occupational statuses of the family members are directly co-related.

Usually, children of poor families remain illiterate and are destined to take traditional occupation. Education of lower cast people is increasing rapidly as higher cast people have been more and more conscious of the need of education for lower cast people.

Statement of the Problem

This study was mainly concerned with “The relationship between parents status on mathematics achievement” in primary level of grade five students. So the study intends to answer about the following questions:

-) Are there different levels of Mathematics achievement of students with respect to their socio economic status?
-) Is there positive relationship between socio-economic status and mathematics achievement of students?

Hypothesis of the Study

$H_1: \mu_1 = \mu_2$ There is no significant different between the socio-economic status of students and mathematics achievement.

$H_2: \mu_1 \neq \mu_2$ There is significant different between the Socio-economic status of students and mathematics achievement.

Significance of the Study

Mathematics is an essential part of school curriculum. So every student should study it and gain better achievement. It has been taught for all pupils as a compulsory subject at school level. Therefore every student needs fundamental knowledge of mathematics to solve his/her daily life problems. Without having the knowledge of students socio economic status family background (educational and socio-economic status of family), it was very much difficult or to some extent impossible to teach mathematics. So it has very significant to find out the effect of family background on students of mathematics achievement. Many researchers can carry out further research on the related areas. So this study has mainly following significant:

-) This study will provides information about Educational and socio-economic status.
-) This study helps to provide awareness to the parents to maintain the substantive level of mathematics achievement.
-) The relations of parent's status help the construction of knowledge further learning in school.
-) This study helps to designing and planning curriculum, the curriculum designer, planners and policy makers have to know the students needs, background and status.

Objectives of the Study

Every study and research has its own objectives. The objectives of the study were stated as follow:

-) To find the level of Mathematics achievement of students with respect to their socio-economic status.
-) To determine the effect of socio economic status in Mathematics achievement of students.

Delimitation of the Study

This study was carried out in Gorkha district. The selection of school was purposive. The study concerns only the achievements of students due to socio economic status and their involvement in academic performance of the students in primary level in grade v. The achievement of students as measured on the basis of obtain in marks of final exam (grade-v) conducted from sample school. Any study cannot incorporate all the aspects. Each of them has some limitations. This study has following limitations:

-) The study is limited to the students of primary level of sample school in Gorkha district.
-) Only the public schools are included under this study.
-) This study does not concern with the other variables which affect in students learning.
-) This study was conducted in relation of mathematics.

Definitions of the Terms

The terms uses in the present study are defined as follows:

Achievement

Achievement refers to the score obtained by the selected students in the test conducted by the school from the sample students in sample school.

Socio-economic Status

Socio Economic status refers to the position of person in the society which contains his education, his occupation, his family size and his family type. Is categorized as socio-economic related on the basis of information obtained by using student questionnaire form.

Parents Education

Parent's education refers to the formal educational degree of the family members. It was categorized by three parts such as educated, literate and illiterate.

Educated

Educated refers to those family members who have S.L.C. or above qualification.

Literate

The person who are able to read and write or the people acquiring school education below S.L.C. level.

Illiterate

The person who are unable to read and write or do not read formal education.

Parents Occupation

Parent's occupation refers to the occupation of selected students' parents. It was categorized into three parts such as Job, business and agriculture.

Parents

Parents mean father and mother or grandfather or grandmother of concerned students who save their children.

Family Size

Family size refers to the number of members in selected students' family. It was categorized into three groups as small family, middle family and large family. Family with member less than or equal to five is small, family with member greater than five or less or equal than eight is middle and family with member greater than eight is large size.

Family type

Family type of the students was categorized into two types as joint family and single family. The family with father, mother, grandfather, grandmother, uncle, aunty, uncle's sons and daughter etc .was in same house is joint family and family with only father, mother and sons or daughter is single family.

Chapter - II

REVIEW OF THE RELATED LITERATURE

This chapter deals with the literature cited before and during the period related to this study. Review of related literature is an exacting task, calling for a deep insight and clear prospective of the overall field. The main purpose of this chapter is to find out what works have been done in the particular area of the research problem under study. The related studies provide the researcher to be rational for the hypothesis and findings. It helps to conduct the new research in a systematic way by providing the general outline of the research study and avoid the necessary duplication.

There are several researches in the student's achievement in many topics of various levels. There are so many books, paper, reports, journals, and thesis of the comparative study of the achievement in mathematics of higher school level. The present chapter attempts to review the research studies and literature in the domain of mathematical achievement with special reference.

The first International Association for the Evaluation of Education Achievement Mathematics Study Project (1992) was implemented in Australia, Belgium, Germany, France, Finland, Israel, Japan, Netherlands, Scotland, Sweden, and United States. The major findings of project are:

-) Gender was related to the mathematics achievement in almost all countries, the boys scoring higher than girls.
-) Parents' level of education was positively correlated with students' achievement.
-) Parents' socio-economic status and students' achievement was properly correlated.

) Positive relationship was found between students' achievement and their opportunity to learn the mathematics need to respond to correctly.

The First International Mathematics Study (FIMS 1964) and Second International Mathematics Study (SIMS 1981-2); with sample 8091 of Japan and 6958 of US of grade eight students studied with 36 test items (Com-13, Campu-11, App-9, Anal-3) showed that the mathematical achievement of Japanese students were higher than that of American students. The FIMS and SIMS continued their study with sample size 7954 of Japan and 4671 of U.S.A. of twelve grade students administering the tools consisting of 18 items (com-6, campu-5, App-7). It was concluded that mathematic achievement of Japanese students was higher than that of American students.

According to the Wagle (1995), "Review of related literature is an integral part of the conduct of research, helping the researcher in the classification of his problem and the avoidance of duplication, the formulation of insightful hypothesis, the planning of an adequate research design and the rigorous and insightful interpretation of his findings".

Jain (1976), carried out a research on, "Interrelationship between family environment and school achievement". His study was survey type authenticated by quantitative phenomena. He used stratified sampling method for sampling, and concluded that family has significant and positive effect on students' educational achievement. There is no any relationship between socio-economic condition and achievement.

BPEP (1997), conducted a "National Level Achievement study on a sample of grade three children in Nepal". Parents' involvement in child's education related

factors focused in the study support child for education. However, the researcher observed that: a) regression analysis did not reveal any factor influence on student's achievement, and (b) helps available at home for study and frequency of parents visit to school did not reveal any influence on student's achievement.

Tharu (2004), in his M. Ed. thesis "Impact of socio-economic status on mathematics achievement" with the objectives: to find the level of mathematics achievement of students with respect their SES, to determine the correlation between socio-economic status and mathematics achievement, to determine the correlation between socio-economic status and mathematics achievement by gender. He included 140 students (79 boys and 61 girls) of grade 10 students of the selected four Secondary School in Bardiya district. He used achievement test paper to find the achievement of different socio-economic status of students. He also used questionnaire as research instrument to collect the needed information for students as well as their parents and found that mathematics achievement of students were found to be strongly associated with the socio-economic status of the children. Those students were achieved good marks in mathematics that come from the good socio-economic status and those students achieved low marks that come from poor socio-economic status.

UNESCO(2000) stated that; "Pupils who come from homes with high Socio-economic status (SES)as measured by factors such as parental education, parental occupation, family income and books in the home consistently score better on measure of achievements than pupils from low SES families. This is the pattern that applies to countries of all kinds including developed nation that have taken steps to guarantee equal educational opportunities for all".

Chaudhary (2000) conducted a study on "A comparative study of achievement of primary level students related to parent's educational status", with the major objective: to find the relationship between mathematics achievement of primary level students and their parents' education. He included 150 students studying in grade five of public school in Saptary district. He used questionnaire as research tool and the multiple correlations for the analysis of the data and found that the mathematics achievement of educated parent's children was higher than literate and illiterate parents children and the achievement of literate parents children was higher than illiterate parents children.

CERID (1998), carried out a study an "Evaluation system in the primary schools of Nepal", found that 50% parents mentioned that they do guide their children during examination. About 31% parents mentioned that they arrange for special tuition. The rest mentioned that their children prepare for examinations by studying together with peers. Only 10% of the parents reported that their children dropped out of the school without completing grade due to low family income and the need to be engaged in household activities.

Education Development service Centre (EDSC-1997), studied on the "National Achievement level of grade three students". After studying, EDSC found that: a) achievement score of private school students were found more than public schools students; and (b) student achievement was influenced by different factors such as students, teacher, parents influenced positively in the better achievement of their children.

Neupane (2006), studied on "Effect of Socio-Economic Status on Mathematics Achievement" with the objectives: to find the level of mathematics achievement of students with respect to their socio-economic status, to determine the correlation

between socio-economic status and mathematics achievement by caste, to determine the correlation between socio-economic status and mathematics achievement by gender, to find the correlation between socio-economic status and mathematics achievement. He used achievement test for students and questionnaire for their parents as research tools. He was used multiple regression for the analysis of data and concluded that mathematics achievement of Gurung and Dura children is found to be positively correlated with their father education. But the other variables are negatively correlated with mathematics achievement and mathematics achievement of boys is found higher than girls.

Mathematics achievement by socio-economic status and home educational resources as the results in this section demonstrate, students from higher socio-economic backgrounds tend to have higher mean mathematics achievement than those from lower backgrounds as evidenced by the proxy measures books in the home, items in the home, household size and mobility. In addition, the deciles of the school they attend, indicative of the level of economic disadvantage in the community in which they live, was positively related to mathematics achievement. That is students in higher deciles schools had higher mathematics achievement, on average, than those in lower deciles.

In Nepalese context, there have been some researches to investigate the role of diverse variables such as; Class size, gender, teacher's qualification and techniques, instructional materials, ethnic groups, parent's involvement etc. in the mathematics achievement with an intention of finding out mathematical achievement and scholastic performance in primary level and other grades of pedagogy. In addition to this present research will sack to find "Effect of Educational and Socio-Economic Status on Mathematics Achievement".

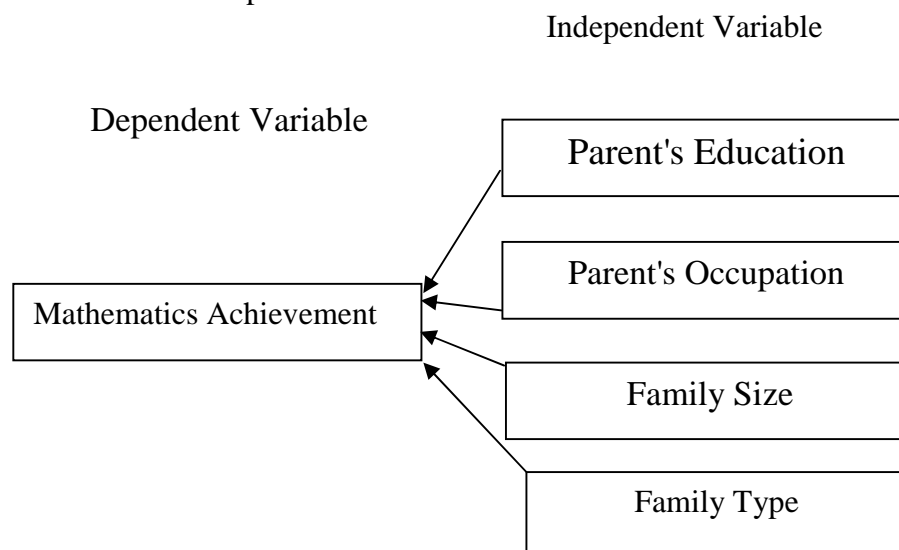
Chapter III

METHODS AND PROCEDURES

Research methodology is a scientific approach which deals with the systematic way of collection data and use of appropriate research design. It describes the design of procedure which is too carried out to achieve the objectives of the study. The present study focused on “Effect of Socio-Economic status on Mathematics Achievement of grade V students”. In this study; the variables parents’ education, parents’ occupation, family size and family type were the independent variables and mathematics achievement was dependent variables. In this chapter; it explains design of the study, population of the study, sample of the study, (Instrument) tools, data collection procedure and data analysis procedure.

Design of the Study

Design of the study was descriptive survey method and quantitative natures of data. This study was analyzed in detail the four factors; they were parents’ education, parents’ occupation, family type and family size. An achievement test marks and student’s questionnaire forms were used to collect the data and information about sample students and their parents.



Population of the Study

The population of this study was consisted of sample students of grade five on sample schools and their parents on Gorkha Distinct.

Sampling Procedure

It is very important task to derive the best sampling techniques. To draw a representative sample from the population, random sampling technique was used. In this research, six government schools were selected purposive sampling from Gorkha District. Hence, the researcher selected 120 (61 boys and 59 girls) students from six government schools; from each school 20 students were taken by random sampling. Table 1 gives the detailed description of the sample.

Table 1
Description of the sample:

S.N	Name of School	No of students		Total
		Boys	Girls	
1	Shree Bhairawashram H.S.S. PhujelGorkha	7	13	20
2	Shree Akala lower secondary school PhujelGorkha	11	9	20
3	Shree Dirgeshwor S.S. Gorkha	12	8	20
4	Shree Ratneshwor H.S.S. Darbung, Gorkha	12	8	20
5	Shree Tanglichok S.S. Tanglichok, Gorkha	9	11	20
6	Shree Bhagawoti S.S. Darbung, Gorkha	10	10	20
Total		61	59	120

Research Instruments

The student's questionnaire forms were the main tools for the data collection. It was used to know about the information of sample student's parent's status such as their parent's education, parent's occupation, their family type and family size. In this questionnaire form there were six multiple choice questions, that helped researcher to know about sample students parent's background. The validity of this questionnaire form was verified by thesis supervisor. And to verify the reliability of primary data observed about the respondent socio-economic condition and so on. also ask with some neighbor of them their answer. Again to verify the reliability of secondary data, data also verify from the school resource center. a

In this research, researcher were used student's questionnaire form as well as secondary data of achievement test score of the sampling students from the school record of grade V students in final examination. It was achieved through the school resources. For this, researcher himself was visited to the Head Master, Mathematics teacher and examination committee as well as students of grade V.

Data Collection Procedure

The researcher himself administered by constructing the household survey form upon the selected sample students in the sample schools. The researcher was visited each selected schools himself. He was visited the Headteacher, mathematics teacher, examination committee and the students of grade V. He was visited each of the sample students and schools and he explained the objectives of the visit them.

But for this study; researcher were collected secondary data. For that, the researcher visited Headteacher and examination committee of sample schools to obtain achievement sore of sample students. It was achieved from the school recorded

resources and student's questionnaire forms were also used to know about the information of their parent's for the study.

Data Analysis Procedure

The mean, standard deviation, coefficient of variance, correlation coefficient and multiple regressions was used for the analysis of data. The mean was used to find the level of mathematics achievement. The coefficient of variance was use to find the consistency of mathematics achievement. Correlation coefficient was used to find the relation between dependent and independent variables and also for inter-correlation between the independent variable. And multiple regressions were used to find the effect of independent variables on dependent variable. The mean, standard deviation, correlation coefficient and multiple regressions were calculated by using SPSS programmed.

Chapter IV

ANALYSIS AND INTERPRETATION OF DATA

This is a study on relationship between socio- economic status and mathematics achievement at primary level of students on Gorkha district with objectives: find the level of mathematics achievement of students with respect to their socio-economic status and the effect of socio-economic status in mathematics achievement of students. In this study, there were 120 students in total with 61 boys and 59 girls. And 20 students were taken from each selected school. The data for this study were collected from six government schools of grade five students on Gorkha district by visiting the head master of those schools. And the Student's questionnaire form was used to know the information's about student's father's education, occupation, family size, and family type. In this study the mean, correlation coefficient and multiple regression were used to analyze the data. This chapter deals with the statistical analysis and interpretation of data obtained by using tools questionnaire form to know the information of sample student's parent's occupation, father's education, family type and family size and was visited headmaster to obtained the achieved marks of sample students.

This data were tabulated and analyzed by using mean, standard deviation, correlation coefficient and multiple regressions and the obtained data were analyze by using the following headings:

-) Mean, standard deviation and coefficient of variance of mathematics achievement by family size.
-) Mean, standard deviation and coefficient of variance of mathematics achievement by parent's education.

-) Mean, standard deviation and coefficient of variance of mathematics achievement by parent's occupation.
-) Mean, standard deviation and coefficient of variance of mathematics achievement by family type.
-) Correlation coefficient of dependent and independent variables and inter-correlation between the independent variables.
-) Multiple regressions of independent variables on dependent variables.

The Mean, Standard deviation and coefficient of variance of the Score Obtained by the Students according to Parent's Education:

Parent's Education refers to the formal educational degree of the family members. Parent's education of the students has been categorized into three groups as: educated, literate and illiterate. Educated refers to those family members who have S.L.C. and above qualification, those parent's whose education is less than S.L.C. is literate and those parent's who do not read formal education is illiterate.

The table below shows that the mean, standard deviation and coefficient of variance of the achievement according to their parent's education:

Table 2

Mean, standard deviation and Coefficient of Variation (C.V.) of the achievement according to their parent's education

Group	No of cases	Mean	S. D.	C.V.
Educated	44	59.36	18.37	30.94%
Literate	40	49.42	15.64	31.64%
Illiterate	36	38.58	12.24	31.72%

The findings recorded in tables shows that the mean scores of educated, literate and illiterate fathers are 59.36, 49.46 and 38.58 and the standard deviations are 18.37, 15.64, 12.24 respectively. Therefore the mean score of educated father's children is higher than the mean score of literate and illiterate father's children and mean score of literate father's children is higher than those illiterate father's children. Thus the result shows that the educated father's children's achievement level is better than the other and the literate father's children's achievement level is better than the illiterate father's children's. Again from the above table show that the C.V. of educated parent's children's were less then literate and illiterate parent's children's achievement. So we conclude that the achievement of educated parent's child was more consistency then literate and illiterate parent's child. Similarly literate parent's child achievement was more consistency than illiterate parent's childe achievement.

The Mean, Standard deviation and coefficient of variance of the Score Obtained by the Students according to Parent's Occupation

Parent's occupation of the students has been categorized into three parts according to their work as job, business and agriculture.

The table below shows that the mean, standard deviation and and coefficient of variance of the student's achievement according to their parent's occupation:

Table 3

Mean, standard deviation and C.V. of the student's achievement according to their parent's occupation

Group	No of cases	Mean	S. D.	C.V.
Job	46	55.65	18.40	33.06%
Business	27	50.77	16.88	33.24%
Agriculture	47	42.38	14.63	34.52%

The findings recorded in tables shows that the mean scores of students whose father engaged in job, business and agriculture field are 55.65, 50.77, 42.38 and standard deviation are 18.40, 16.88 and 14.63 respectively. Therefore the mean score of job holder father's children is higher than the mean score of business worker and agricultural father's children. And the mean score of business worker father's children is higher than agricultural father's children. Thus the result shows that whose father engaged in job, those children's level of mathematics achievement was better than others and whose father had done business, those children's level of mathematics achievement was better than those children's, whose father had done agriculture. Again from to the above table show that the C.V. of job holder's parent's child's was less than businessmen parent's children's achievement. So we conclude that the achievement of Job holder's parent's child was more consistency then Businessmen and Farmers parent's child. Similarly businessmen parent's child achievement was more consistency than Farmers parent's childe achievement.

The Mean, Standard deviation and coefficient of variance of the Score Obtained by the Students according to Family Size:

Family size of the student's has been categorized into three types as small, middle and large. Family with member less than or equal to five is small, family with

member greater than five or less or equal than eight is middle and family with member greater than eight is large size.

The below table shows that the mean, standard deviation and and coefficient of variance of the achievement of student's according to their family size:

Table 4

Mean, standard deviation and C.V. of the achievement of student's according to their family size

Group	No of cases	Mean	S. D.	C.V.
Small	25	59.24	16.09	27.16%
Middle	51	49.92	14.82	29.68%
Large	44	45.14	14.56	32.25%

The findings recorded in table's shows that the mean scores of student's lives in small family, middle family and large family are 59.24, 49.92, 45.14 and the standard deviations are 16.09, 14.82 and 14.56 respectively. Therefore the mean score of small size families is higher than the mean score of middle size family and large size families' children. And the mean score of middle size family's children is higher than the mean scores of large size families' children. Thus the result shows that whose family is small, those children's level of mathematics achievement was better than others and whose children's family was middle, those children's level of mathematics achievement was better than the children whose family was large. Because the mean score of small size family's children's were more than the mean score of middle size families and large size family, and the mean score of middle size family was more than the mean score of large size family's children's. Again from the above table

show that the C.V. of small size family child was less than C.V. of middle and large size family's children achievement. So we conclude that the achievement of small size family's child was more consistency than large and middle size family child. Similarly middle family size child achievement was more consistency than large size family children's achievement.

The Mean, Standard deviation and coefficient of variance of the Score Obtained by the Students according to Family Type

Family type of the students has been categorized into two types as joint family and single family. The family with father, mother, grandfather, grandmother, uncle, aunt, uncle's sons and daughter etc. was in same house is joint family and family with only father, mother and sons or daughter is single family.

The below table shows that the mean, standard deviation and coefficient of variance of the students' achievement according to their family type.

Table 5

Mean, standard deviation and C.V. of the student's achievement according to their family type.

Group	No. of cases	Mean	S.D.	C.V.
Joint	48	34.5862	18.6613	55.95
Single	72	46.1452	20.903	45.29

The findings recorded in table's shows that the mean scores of student's lives in the single family and joint family are 46.1452 and 34.5862 and the standard deviation are 20.90 and 18.66 respectively. Thus the mean score of single family is higher than the mean score of joint family's students. Thus the result shows that whose families were single, those children's level of mathematics achievement was

better than whose families were joints. Because the mean score of single family's children were more than the mean score of joint family's children. Again according to the above table shows that, the C.V. of Single family child was less then C.V. of joint family's children achievement. So we conclude that the achievement of single family's child was more consistency then joint family child achievement.

Correlation between Dependent variables and Independent variables

It should be examine the effects of socio-economic related variables on mathematics achievement. These were parent's education, parent's occupation, family type and family size. Here the dependent variable was mathematics achievement which was obtained by secondary data received by school sources. And father's education, father's occupation, family type and family size were independent variables.

The following table shows that the correlation between dependent and independent variables:

Table 6

Correlation between dependent and independent variables

	FE	FO	FS	FT	Achievement
FE	1	.375	-.138	.221	.226
FO	.375	1	-.226	.593	.214
FS	-.138	-.226	1	-.162	-.284
FT	.221	.593	-.162	1	.242
Achievement	.226	.214	-.284	.242	1

Correlation is significant at the 0.01 level (2-tailed).

The above table shows that mathematics achievements of students were positively correlated with father's education, father's occupation and family type. And the mathematics achievement was negatively correlated with family size. Also the variable father education was positively correlated with father occupation and family type but it was negatively correlated with family size. The variable father occupation was positively correlated with father education and family type but it was negatively correlated with family size. The variable family size was negatively correlated with father education, father occupation and family type. And the variable family type was negatively correlated with family size and positively correlated with other remaining socio-economic related variable

Regression and Standardized Regression coefficients of Explanatory Variables of Mathematics Achievement

In this research four explanatory variables and dependent variable were used in the multiple linear regression models. The independent variables i.e. Father's Education, Father's Occupation, Family Size and Family Type were used in the multiple linear regression model. The result of regression analysis and standardized regression coefficient (β) of explanatory variables are shown in below table:

Table 7

Regression and Standardized Regression coefficients of Explanatory Variables of Mathematics Achievement

S. No.	Regression co-efficient (b)	Standardized co-efficient (β)
Father's Education	5.144	0.156
Father's Occupation	0.60	0.002
Family Size	-6.269	-0.235
Family Type	4.963	0.168

$R^2 = 0.143$, $N = 120$

From the above table $R^2 = 0.143$, i.e. the above table shows that 14% of variance of mathematics achievement was explained by four explanatory variables in the multiple regression equation. The socio-economic related variables were Father's Education, Father's Occupation and family type were found to be (most strongly) positively associated with mathematics achievement. And the variable Family Size was negatively effects on the mathematics achievement.

Chapter V

SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATION

After the analysis and the interpretation of collected data an attempts has been made to summarize to enlist of the finding and some recommendation for further study. The first section of this chapter present the summary of the research, the second section of this chapter presents its findings, the third section of this chapter present the conclusion and the last section presents recommendation based on the findings of the study.

Summary

This study was achieved with the effect of socio-economic status on mathematics achievement of grade five students with respect to their father education, father occupation, family size and family type. For this study researcher was visited the sample school's head master to collect the data (student's achievement score). And researcher developed the students' questionnaire form with help of supervisor. For the purpose to know about sample student's parent's background. Achievement score and students questionnaire form were the main instrument used for this study. The main objectives for this study were as follows:

- a) To find the level of Mathematics achievement of students with respect to their socio economic status.
- b) To determine the relation between socio economic status and Mathematics achievement.

For this study researcher selected 120 students (61 boys and 59 girls) from six government schools of Gorkha district; from each school 20 students were taken as a

survey. The data of sampled students and parents were obtained through the survey by gaining data through head master. And the student's questionnaire form was developed to get the detailed information about student's father education, father occupation, family size and family type.

Finding of the study

Statistical analysis of the collected data yielded the following results as the findings of the study:

1. The mean scores of students having educated, literate and illiterate fathers are 59.36, 49.46 and 40.58 respectively. The mean score of educated father's children is higher than the mean score of literate and illiterate father's children and the mean score of literate father's children is higher than those illiterate father's children.
2. The level of mathematics achievement of those students whose parents were educated is higher than those students whose parents were literate and illiterate.
3. The mean scores of students whose father engaged in job, business and agriculture field were 55.65, 51.77, 44.38 respectively. The mean score of job holder father's children is higher than the mean score of business worker and agricultural father's children. And the mean score of business worker father's children is higher than agricultural father's children.
4. The level of mathematics achievement of those students whose parents were job holder is higher than those students whose parents were business and agricultural.

5. The mean scores of student's lives in small family, middle family and large family were 59.24, 49.92, 45.14 respectively. The mean score of small size families is higher than the mean score of middle size family and large size families' children. And the mean score of middle size family's children is higher than the mean scores of large size families' children.
6. The level of mathematics achievement of those students whose families was small is higher than those students whose families were middle and large.
7. The C.V. of students whose parents were educated, literate and illiterate were 30.94%, 31.64% and 31.72% similarly. Thus the C.V. of educated parent's child was less than the C.V. of literate and illiterate parent's child. Thus the consistency of achievement of those children whose parents was educated is more than other ones.
8. The C.V. of students whose parents were job holders, businessmen and agricultural were 33.06 %, 33.24 % and 34.52% similarly. Thus the C.V. of job holder parent's child was less than the C.V. of businessmen and agricultural parent's child. Thus the consistency of achievement of those children whose parents was job holders is more than other ones.
9. The C.V. of students whose family was small, middle and large was 27.16%, 29.68% and 32.25% similarly. Thus the C.V. of student whose family was small was less than the C.V. of middle and larger size family's child. Thus the consistency of achievement of those children whose family was small is more than other ones.
10. The C.V. of students whose live in single family and joint family were 45.29% and 55.95% similarly. Thus the C.V. of single family child is less than the

C.V. of joint family Childs. Thus the consistency of achievement of those children who live in single family is more than joint family child.

11. The correlation in father's education, father's occupation, family size and type were 0.226, 0.214, -0.284 and 0.242 respectively with mathematics achievement.
12. The level of mathematics achievement of those students whose families was single is higher than those students whose families were joints.
13. Mathematics achievement of those students were found that it be positively associated with their father's education, father's occupation and family type.
14. Mathematics achievement of those students were found that it be negatively associated with the family size.
15. Fourteen percent of variance of mathematics achievement was explained by four explanatory variables entered into regression equation.
16. The variables family size had a negative effect on mathematics achievement and other related variable had a positive effect on mathematics achievement.

Conclusion

This study was attempted to identify the effect of socio-economic status on mathematics achievement of primary level children. For this study; the researcher visited head master of sample schools to obtain achievement score of sample students. And student's questionnaire forms were also used to know about the information of their parent's for the study. In this study 120 students were taken from six government school on Gorkha district.

From the marks obtained by students in final exam of mathematics by analyzed it was found that: the level of mathematics achievement of those students

whose parents were educated is higher than those students whose parents were literate and illiterate, the level of mathematics achievement of those students whose parents were job holder is higher than those students whose parents were business and agricultural the level of mathematics achievement of those students whose families was small is higher than those students whose families were middle and large and the level of mathematics achievement of those students whose families was single is higher than those students whose families were joint

The marks obtained by students in final exam of mathematics were found significantly correlated with father education, father occupation, family size and family type. But the correlation is positive in father's education, father's occupation, family income and the correlation is negative in family size with mathematics achievement.

Recommendation

After implementing this study, researcher has got some findings. On the basis of these findings the researcher would like to suggest some recommendation for effect of mathematics teaching learning and improvement in mathematics achievement of primary level school in Nepal.

- 1 This study was limited to the grade five students taken from six government school in one district. Hence the researcher cannot generalize the findings of this study to all grades and the whole country.
- 2 The similar study should be done district wise, regional wise as well as national wise in order to establish the findings of the study.
- 3 This type of study should be conducted at all levels of schools and in other subjects as well.

- 4 Most of the people in the remote areas are deprived from good education. The village lacks the well educated people. In each family if one people are educated then they can educate the whole members of that family. Despite this fact most of the villagers have become the centre of uneducated people. Thus we can't accept the qualitative education from our children. Therefore, the government should take some action to increase the number of people and also should help the children by providing financial support to conduct adult literacy classes and also by providing social welfare programmers.
- 5 It was found that due to the parent's education; the educated parent's children have got great chance to went school, to study at home, facility to read and good achievement in the field of mathematics rather than the children of those parent's who have uneducated. Therefore to develop the concept of those parents who were uneducated? Social awareness should be increase on those uneducated parents with the help of publicity as well as by advertisement on radio and television.
- 6 Most of the people in rural areas are poverty, uneducated, and also they have large family size. Due to the family education background, poverty and large family size, they don't provide the proper facilities for the study such as a separate study room, a study table or desk, a good light and proper reading materials etc. so that the case of their literacy the mathematics achievement is poor. Therefore, the government should take some action to increase the number of people and also should help the children by providing financial support to conduct adult literacy classes and also by providing social welfare programmers.

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Appendix I

Table I

According to family size

Small(3)	Middle (2)	Large (1)
48, 52, 48, 84, 60, 60, 44, 45, 89, 67,60, 32, 40, 72, 34, 68, 45, 92, 60, 96,92, 79, 72, 38, 34.	42,40,42,42,46,44,44,48,44,40 76,62,55,49,58,38,32,51,49,62 56,62,92,57,78,37,32,32,32,53 33,62,59,92,40,32,33,33,36,49, 52,83,50,46, 48, 43, 65, 43, 61, 40, 53.	40,40,90,38,40,39,32, 51,33,32,33,38,36,46, 86,43,37,48,72,41,34, 43,59,32,32,49,43,39, 60, 66, 39, 60, 58, 56, 36, 33, 70, 32, 53, 34, 32, 47, 32, 32.

Table II

According to Father Education

Educated(3)	Literate (2)	Illiterate (1)
55,40,90,76,51,62,38,40,48, 48,46,42,40,60,32,45,62,62, 36,46,89,57,78,86,43,33,62, 67,39,60,92,60,52,83, 60, 46, 92, 68, 70, 65, 60, 43, 96, 92.	42,42,40,52,84,60,58,32, 51, 32, 33, 49,56,38,92,37,48, 74, 32, 53, 59,32,59,49,43,40,33,36,39,58, 72, 45, 36, 33, 32, 53, 43, 79, 72, 61, 40.	40,44,44,48,44,40,49,39, 34,33,44,32,37,32,41, 34,43,32,66,32,33,32,49, 56,40, 50, 48, 34, 43, 32, 47, 53, 38, 34, 32, 32.

Table III
According to Father Job

Job (3)	Business (2)	Agriculture (1)
40,42,42,48,52,84,40,38,62, 39,58,32,33,32,60,44,45,32, 33,62,56,62,89,57,78,86,72,53,33, 62,67,60,92,60,40,83,60,40,50, 68, 43, 60, 43, 96, 92, 40.	48,76,51,46,43,59,39, 33,39,58,72, 92, 45, 33, 70, 65, 32, 53, 43, 79, 72, 61, 53, 38, 34, 32, 32.	42,40,40,46,44,44,48,44, 90,60,55,40,96,38,51,49, 38,36,92,37,32,37,32,48,41 34,43,32,59,32,32,49,43, 66,32,33,36,32,49,52,56,46,48, 34, 36, 32, 47.

Table IV
According to family Type

Single (1)	Joint (2)
42,40,40,42,46,44,48,44,52,48,48,44, 84,40,76,62,60,55,49,34,32,60,44,51, 45,33,62,56,89,92,57,78,43,37, 32,72,41, 43,32,53,59,33,59,67, 49,43,60,92,40,33,33,36,32,49,52, 83,40,50,72,46,48, 92, 45, 68, 33, 65, 60, 43, 96, 92, 79, 61.	40,42,90,38,40,39,58,32,51,33, 49, 62, 38, 36, 46, 86, 37, 48, 32, 32, 39, 60, 32, 39, 60, 58, 56, 43, 36, 34, 70, 32, 53, 43, 32, 72, 47, 53, 32, 32, 34, 38, 40,52,32, 34, 45, 32.

Appendix II

STUDENT QUESTIONNAIRE FORM

Student's Name :

Parent's Name :

School's Name :

Address : _____ **Zone** _____ **District** _____

V.D.C _____ **Ward No.** _____ **Age** _____ yrs.

Gender : Male Female

1.How many members are there in your family?

i) Male

ii) Female

iii) Total

2.How many children of your family goes to school?

i) _____ Boys

ii) _____ Girls

3.What Occupation does your father do?

i)Agriculture ii) Job iii)Business

4.What occupation does your mother do?

i)Agriculture ii)Job iii)Business

5.Write the qualification of your family members?

i)Father _____

ii)Mother _____

6.What type of family do you have?

i)Single

ii)Joint

APPENDIX-III

LIST OF SAMPLED SCHOOLS

1. Shree Bhairawashram H.S.S. PhujelGorkha
2. Shree Akala lower secondary school PhujelGorkha
3. Shree Dirgeswor S.S. Gorkha
4. Shree Ratneshwor H.S.S. Darbung, Gorkha
5. Shree Tanglichok S.S. Tanglichok, Gorkha
6. Shree Bhagawoti S.S. Darbung, Gorkha

APPENDIX-IV

Table 1:	Description of the sample
Table 2:	The mean and standard deviation of the score obtained by the students according to parent's education.
Table 3:	The mean and standard deviation of the score obtained by the students according to parent's Occupation.
Table 4:	The mean and standard deviation of the score obtained by the students according to Family size.
Table 5:	The mean and standard deviation of the score obtained by the students according to Family type.
Table 6:	Correlation between Dependent variables and Independent variables.
Table 7:	Regression and Standardized Regression coefficients of Explanatory Variables of Mathematics Achievement.