

**IMPACT OF HOME ENVIRONMENT ON MATHEMATICS LEARNING  
ACHIEVEMENT**

**A  
THESIS  
BY  
SITA DEVI KHOJWAR**

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

**SUBMITTED  
TO  
DEPARTMENT OF MATHEMATICS EDUCATION  
CENTRAL DEPARTMENT OF EDUCATION  
UNIVERSITY CAMPUS, KIRTIPUR  
TRIBHUVAN UNIVERSITY  
KATHMANDU, NEPAL  
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## LETTER OF CERTIFICATE

This is to certify that Miss. Sita Devi Khojwar a student of academic year 067/068 with campus Roll No. 2912, T.U. Registration Number 9-2-568-166-2006, Thesis No. 915 and Exam Roll No. 281581 (2068), has completed her thesis under my supervision and regulation of Tribhuvan University Nepal. The thesis entitled “**Impact of Home Environment on Mathematics Learning Achievement**” has been prepared based on the result of investigation conducted during the period of July 2013 to August 2014 under the Department of Mathematics Education, University Campus, Kirtipur, Kathmandu. I recommend and forward this thesis for the evaluation as the partial requirement to award the Master Degree of Education in Mathematics.

.....

**(Mr. Eka Ratna Acharya)**

(Supervisor)

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**(Mr. Laxmi Narayan Yadav)**

(For Head)

Date: 20<sup>th</sup> July, 2014

# LETTER OF APPROVAL

**Thesis Submitted**

**By**

**Sita Devi Khojwar**

**Entitled**

**"IMPACT OF HOME ENVIRONMENT ON MATHEMATICS  
LEARNING ACHIEVEMENT"**

has been approved in partial fulfillment for the requirements of Master Degree of Education in Mathematics.

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Prof. Dr. Hari Prasad Upadhyay

(Member)

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Mr. Eka Ratna Acharya

(Member)

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Date : 25<sup>th</sup> August, 2014

## DECLARATION

I here by declare that the work in this thesis entitled "**Impact of Home Environment on Mathematics Learning Achievement**" submitted to the Department of Mathematics Education, University Campus, Tribhuvan University is my original work in the form of partial fulfillment of the requirement for the Degree of Master of Mathematics Education under the supervision of Mr. Eka Ratna Acharya, Laxmi Narayan Yadav of Department of Mathematics Education, Kirtipur, Kathmandu

.....  
Sita Devi Khojwar

Date : 25<sup>th</sup> August, 2014

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Date : 25<sup>th</sup> August, 2014

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Sita Devi Khojwar

## **ABSTRACT**

This is a case study related to the “Impact of Home Environment on Mathematics Learning Achievement in Magar Students of Basic School Level at Jaubari VDC of Nawalparasi District.” The objective of this study was to identify the major factors and causes involved in the home environment of Magar students which impact their mathematics learning achievement. This study was qualitative and descriptive in nature. The study was conducted with the sample size of ten Magar students among them 5 from grade IV and 5 from grade V selected from the Shree Udaya Secondary School Bhadauri, Nawalparasi. This case study has been organized into five chapters. The first chapter gives the introductory information of the study. The second chapter, mainly the review of related literature deals with empirical, theoretical and conceptual understanding of the study. The third chapter includes design of the study, selection of school, respondents, tools for research, data collection procedure, data analysis and interpretation of the data. The fourth chapter deals with the analysis and interpretation of the collected data were acquired from the parents, school administration, students and teachers with the help of interview and class observation. The fifth chapter deals the analysis and interpretation of the collected data according to design an attempts has been made to summarize and enlist the findings, providing some recommendation for pedagogical purpose. This study carried out with the tools class observation with teacher, interview with selected students, their parents, mathematics teacher and focus group discussion with selected parents of the students.

The Magar students are socially, economically, educationally backward. Their learning achievement is very low in mathematics. The major factors involved in home environment were the parent's education, parent's occupation, family size, household workload, homework checking. Therefore Magar students were affected by their home environment to gain knowledge in mathematics. Mathematics learning achievement of basic school level students was found greatly affected by the home environment.

Thus home environment plays the important role by achieving good education. Mathematics learning achievement of basic school level students was found greatly affected by the home environment.

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## LIST OF ABBREVIATION

VDC	:	Village Development Committee
NGO	:	Non- Government Organization
INGO	:	International Non-Government Organization
FGD	:	Focus Group Discussion
UNESCO	:	United Nations Educational Scientific and Cultural Organization
CERID	:	Research Centre for Educational Innovation and Development
B.K.	:	Bishwa Karma
M	:	Magar
O	:	Other
G	:	Girls
B	:	Boys
T	:	Total

# CHAPTER I

## INTRODUCTION

### Background of the Study

Mathematics like reading is an important skill in our everyday lives. Mathematical reasoning is something we all do from simple counting to complex calculation. Its basic elements are logical and intuition, analysis and construction generality and individuality (Upadhyay, 2064).

People have been using mathematics from the beginning of human civilization. It is believed that mathematics was originated along with the origin of men. Human beings themselves created mathematics in the need for application to counting and measuring in relation to both of quantities. It plays central role in a new employment structure in daily lives activities.

So that today's world cannot move and nobody can live without mathematics. People have been utilizing mathematics to solve the difficulties comes from natural calamities, political purpose, economic developmental planning and other social events perceived from the early history of mathematics of different civilizations.

Nowadays, mathematics is considered as an important subject called the queen of all sciences, arts of all arts key and gateway of all science. It is directly related to the cultural, political, social and geographical aspect of the society. Mathematics is the way of thinking, organized structure of knowledge, practical science.

Learning takes place through birth to death that enables the learners for gaining skills to solve his/her daily problems and adjust his/her life. Everyone learns from his/her family and social environment. So learning is not the measurable sudden change in behavior but the gradual change in behavior through experimental experiences, physical and mental development which is life long process. Thus learning is the change in behavior but every behavior change is not learning.

Learning as a change in human disposition of capability which can be retained and which is not simply accessible to the process of growth. Learning as the permanent change in behavior potential which occurs as a result of reinforce practice. Two theories of learning

mathematics are most important in the level of Basic school such as Piaget's learning theory and Bruner's theory of teaching learning mathematics.

Achievement is the tool for evaluating the students which helps to determine the quality of the students in their related areas. The popular and reliable evaluating tool for students is examination. The different levels of students are determined by evaluation applying different tools of achievement. The tools of achievement are examination such as oral, written, practical etc.

Environment is broad concepts compose the whole range of diverse surroundings in which we perceive, experience and react to events as well as changes. Environment isn't static, it is dynamic and changes occur even if there is no interference. According to Oxford Dictionary, the word environment refers to the surrounding or condition in which a person, animal or plant lives or operates. So that the conditions that affect the behavior and development of somebody, the physical conditions that somebody exists in a pleasant working learning environment.

There are many aspects that impact of the gain knowledge as well as mathematics achievement such as teacher personality, instructional materials, individual differences, peer group, political changes geographical structure, socio-economic status, home environment etc. Among all these aspects, home environment is an important factor may affect the achievement in mathematics learning. There is a quotation "home is the first school and parents are the first teachers of every child." So for better in achievement mathematics learning of a child depends on the good home environment. Therefore, "Home Environment" refers to condition of home that affect the behavior and development of everybody.

Parents education, occupation, study time, library time, reading room television, poverty, household workload, radio, family size, family income, homework checking and school visiting by parents are found in home environment (Encyclopedia of Education). So that home environment is well then easy to progress in each field of mathematics and also affects on mathematics achievement.

The best way that the parents can contribute towards the continued progress in study of their children is to provide them with secure and happy home and them feel that they are loved and well take care of the same time. They must take available almost unlimited facilities for free reading room from well graded children's books and magazines. Time to

study, encouragement to study and materials to study are necessary conditions that can accelerate the process of the learning for children (Malakar, 1989).

Positive home environment and educational activities are supportive to learning. The learning activities supported by parents are related to student learning. According to Epstein (1986) the following parenting strategies help children to learn.

- ) Reading to children regularly or listening to them read aloud.
- ) Taking children to the library.
- ) Getting children to talk about what they did during the class day.
- ) Watching a special television program with children and then discussing show.
- ) Including children in any of parents own educationally enriching activities.
- ) Supervising and assisting children in completing homework tasks.
- ) Providing children with spelling practice, mathematics, drills and practices activities.

Nawalparasi is a district in Lumbini Zone of Western Development Region with Parasi as its district headquarter. It lies 147km West of Kathmandu. My study area Jaubari VDC of Nawlparasi District lies in the Hill region of Nepal and the North Pole of the Mahendra highway which is not developed area. Mainly Magar caste lived in there more than other castes. Most of Magar children are in school but their mathematics learning achievement is not good. So this study indicates that such home environment factor is significant to mathematics learning achievement of Magar students.

In this VDC, students are highly affected by home environment. Children go to the cutting grass either get up in the morning or come back from the school in the evening. They have no any time to do their homework. They take the mathematics is very hard complicated, irritating, time consuming and boring subject. But my assumption mathematics is neither hard nor complicated subject, if we give some time to read mathematics and also do our homework and used in practice. Researcher want to be share that mathematics is simplest and clearest way of thinking means of increasing logical ability of learner.

### **Enrollment of Class Wise Students**

Students come from different castes in this school such as Magar, Gurung, Thakuri, Bansi, Sen, Pariyar, Nepali, Bishwa Karma (B.K.) etc. They have own culture, tradition

customs and rituals. In this way, the school seems multicultural and multi social itself. The class wise structure of student of the Udaya Secondary School in 2070 is given below :

**Table : 1.1**  
**Enrollment of class wise students of the school in 2070**

Grade	Magar Students			Other Students			Total Students		
	G	B	T	G	B	T	G	B	T
One	6	6	12	10	10	20	16	16	32
Two	6	6	12	5	4	9	11	10	21
Three	13	11	24	6	9	15	15	19	39
Four	7	6	13	6	4	10	13	10	23
Five	16	5	21	4	10	14	20	15	35
Six	10	20	30	11	8	19	21	28	49
Seven	5	17	22	7	7	15	12	24	36
Eight	11	7	18	8	9	17	19	16	35
Nine	22	18	40	6	7	13	28	25	53
Ten	12	13	25	3	7	10	15	20	35
Total	111	109	220	67	74	141	178	183	361

Source: School Document

Note : G = Girls, B = Boys and T = Total

Above table shows that Magar and other students are having enrollment in the academic year of 2070. The number of Magar students were 220 which more than 79 the other students 141.

## Result of Grade IV and V

Following table shows the grade IV and V result of past two years 2069 and 2070.

**Table : 1.2**  
**Result of Grade IV and V (2069/2070)**

Years	Grade	Admit students			Regular pass students			Promoted students			Total passed students		
		M	O	T	M	O	T	M	O	T	M	O	T
2069	IV	14	10	24	4	3	7	6	5	11	10	8	18

	V	28	8	36	7	7	14	15	1	16	22	8	30
2070	IV	13	10	23	2	3	5	7	4	11	9	7	16
	V	21	14	35	2	6	8	7	5	12	9	11	20

Source: School Document

Note : M = Magar, O = Others and T = Total

Above table shows that in 2069 and 2070, promoted students more than regular pass students in grade IV and V. Result of grade IV and V indicated that the school has gained poor result of Magar students than the other students.

This research actually seeks to study impact of home environment on mathematics learning achievement among Magar students at Basic school level (Grade IV and V) in Jaubari VDC, Nawalparasi.

### **Statement of the Problem**

This study was mainly concerned to assess “Impact of Home environment on mathematics learning achievement in Basic school level students.” By considering the home environment as a main factor, researcher persuade a study on the title. Impact of home environment on mathematic learning achievement of Basic school level students. This study concerned on investigating the following researchable questions:

- ) What are the factors involved in the home environment of Magar students?
- ) How does the home environment affect the mathematics learning achievement of students?
- ) Why Magar students are low achievers in the mathematics learning?

### **Objectives of the Study**

Main objectives of this study was to examine the impact of home environment on mathematics learning achievement among Magar students of Basic school level. Specific objectives were given as below:

- ) To identify the major factors involved in the home environment of Magar students which impact their mathematics learning achievement.

- ) To find the impact of home environment on the mathematics learning achievement of Magar students.
- ) To find the causes that impact to the mathematics learning achievement in Magar students.

### **Significance of the Study**

Mathematics is a compulsory subject for students at the level of basic schools. Many environmental factors which affect the mathematical learning achievement. In Jaubari VDC many parents are not aware of their responsibilities towards the education of their children. They think that school and teacher are fully responsible for their children's education. Parents forget that the children go to school only for six hours and they stay at home about eighteen hours, it means that the children spend more time at home with family members. So to know the relation of home environment and expectations on the children's learning outcomes. Thus this study concerned the home environment for students learning achievement in mathematics.

Magar students do not have a suitable learning environment at home. They are very poor in mathematics. There is no any research based on the problems, why Magar students cannot success in mathematics up to now. So this study is useful to improve home environment for students. The finding from this study can be useful for various educational sectors. Some usefulness of this study has the following significance:

- ) This study identified how the home environment affects the mathematics learning achievement of Magar students.
- ) This study helped parents to manage learning environment at home.
- ) It created awareness to provide responsible facilities at home and supportive learning home environment.
- ) This study results supports for NGOs, INGOs and other researchers.
- ) It helps to create learning friendly environment at home of the students.

### **Delimitation of the Study**

Each study is not rigorous, perfect and free from limitation. So every study has its own limitation due to limited resources, time and physical aspects. The limitations of the study were stated as follows:

- ) This study was limited Basic school level students of only one government school in Jaubari VDC, Nawalparasi.
- ) This study included only Magar students and respective parents selected for the study.
- ) This study focused on impact of home environment on mathematics achievement at Basic school level (Grade IV and V) among Magar students.

## **Definition of Terms**

The terms related to this study defined by the researcher are as follows :

**Low Achiever** : It refers to the student is achieving to under 33 marks in annual examination of the mathematics.

**Home Environment** : It means of condition of home or family with different facilities.

**Achievement** : This term is used for marks obtained by the students of previous annual examination of the mathematics.

**Impact** : The action of one object coming forcibly into contact with another.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

Mainly the review of related literature deals with previous thesis books, journal, theories, researcher studies and internet documents. This section deals about the research that impact of home environment on mathematics learning achievement among Magar students. Further, some theoretical literature including policies and programmers and empirical literature are stated which is previously conducted in the related field.

#### **Empirical and Theoretical Study**

Home can be taken as the child's first and most influential school because a child spends much time at a home than at formal school. So appropriate guiding information of providing necessary help is an essential factor for the better learning of children. It is the responsibility of parents to provide with necessary facility for their children to study at home.

Bom (2009) conducted a research on the title "Affect of home environment in mathematics learning among the Badi community of Pipal VDC in Rukum district." The objectives of that study were to identify the learning environment for Badi students in the school, to identify the major factors involved in the home environment of Badi children which affects the learning achievement of mathematics and to access the exiting learning achievement of Badi children in mathematics of lower secondary level of Rukum district. The researcher had used qualitative research design and purposive sampling method. This study population was used one girl and one boy from class 8, one boy and one girl from class 7 and one girl from class 6 at the school Janakalyan Higher secondary School. The main tools of data collection were interview, class observation and school survey form. Findings of research form were most of the parents of Badi students are under S.L.C., Badi students are not regular in the class because of household workload, sometimes Badi students are dominated by class friend and villager, they do not discuss the Mathematical problem with their friends expect the exam time, family background of children of the community is too backwards in each aspect.

CERID (2001) in the report "Instruction improvement in primary school" has mentioned that: "The quality of education that a student receives depends not only upon the relevance and appropriateness of curriculum, textbook and school activities but also affected

by attitude and behavior of his/her parents towards education. Parent's positive attitude towards various aspects of education and their capacity to provide necessary facilities for children education are two important factors in ensuring quality education, one another is parents support at home."

Joshi (2010) conducted a research on the title "Impact of socio-economic status on mathematics achievement among Muslim community of public secondary school at grade IX, Nepalgunj Banke district." The objectives of that study were to find the mathematics achievement of Muslim students, to compare achievement score of Muslim students who are from different socio-economic status and to find the level of mathematics achievement of Muslim students with respect to their descriptive and quantitative method to analyze the data of the study. The researcher had selected 142 students from questionnaire. Findings of research were the mean score of educated parent's children is higher than the score of literate and illiterate parent's children and mean score of literate parent's children is higher than that of illiterate parents children, 13% of variance of mathematics achievement was explained by five explanatory variables entered into multiple regression equation.

Khanal (2012) conducted a research on the title "Mathematics classroom environment of affective school of Kathmandu district." The objectives of that study were to identify the classroom environment provided to the students in an affective school and to explore the classroom environment directing students toward successful learning. The researcher had used the design of qualitative research at grade X. Findings of this research were talented students wanted more feedback while weak ones needed more support, teacher always discussed about the issue and problems related to mathematics, students solved their problems by discussion and with the help of talented in the classroom, mathematics teacher has emphasized on more class work and assignment for mathematics practice.

Neupane (2008) conducted a research on the title "Impact of socio-economic status on mathematics achievement of ethnic tribe Kumal in Arghkhanchi district of grade V students." In this study he found that the study of Kumal who are from good socio-economic status have better achievement and who are from poor background have poor achievement.

Poudel (2010) conducted a research on the title "Affect of feedback after homework correction on mathematics achievement at secondary level in Pyuthan district." The objectives of that study were to find the affect of feedback after homework correction on

mathematics achievement at secondary level and to compare the achievement of students taught with and without using feedback after homework correction. The researcher had used the design of experimental research and purposive sampling method. This study is grade nine, there were 26 students in Kalika Secondary School and 68 students in Bhanu Bhakta secondary school. Findings of research were homework correction as well as feedback was found to be affective in order to have better achievement among the group of students, the teachers should play active role in feedback after homework correction rather than simply providing homework.

Rawat (2011) conducted a research on the title "Affect of home environment on student's achievement in mathematics at secondary level in Marma VDC of Salyan district." The objectives of that study were to identify the major factors involved in the home environment of Kami students which affect the achievement in mathematics and to find the affect of home environment in the mathematics achievement in Kami students. The researcher had used the design of descriptive nature. The researcher had selected 18 students of higher secondary level and 36 students of secondary level. Findings of research were most of Kami parent are poor in economic and having no land for farming, they are backwarded in every aspect, they always preparing appropriate size and shape of daily used utensils like sickles and spade.

Sharma (2011) conducted a research on the title "Impact of home environment on mathematics achievement of primary level students of Manka VDC, Sindhupalchok district." The objectives of that study were to find the mathematics achievement of students with respect to their home environment and to determine the correlation between home environment and mathematics achievement. The researcher had used the design of study with survey type specially correlation study and random sampling method. This study population was used two governmental schools. The main tools of data collection were open and close type of questions. Findings of research were 27.23, 20.23 and 18.64, the mean score of students from educated, literate and illiterate fathers respectively, mean score of students whose parent visit school a time, two times, more than two times were 21, 24, 15, and 26.1 respectively.

Sharma (2011) conducted a research on the title "The relation of home environment and mathematics achievement of Dalit community at lower secondary level in Baglung and Parbat district." The objectives of that study to find out the correlation between the facilities

provided at home and children's mathematics achievement, to analyze the correlation between the family structure and children's mathematics achievement, to analyze the achievement of a student with his/her parent's education expectations and to suggest for making Dalits better home environment. The researcher had used the design of that study descriptive and analytical both. The researcher has taken 50 students from 50 families and 5 schools have been taken as the sample. Findings of research were most of the parents expected their children to get their SLC level education and it was found that a significance relationship between parental expectations and the students achievement in mathematics, the mathematical achievement of Dalit student was found to be strongly associated with the variable of facilities at home and parental expectation, the mean score of the availability of the facilities at home was positively correlated with mathematical achievement of the children.

By reviewing above mentioned literature, it was helpful select topic, objectives, methodology and analysis of the data, findings and to arrange all thesis proposals. There are no any researchers about mathematics learning achievement by impact of home environment among Magar students of Basic school level. It was encouraged for involving in this research work. So it was helpful for the further researcher also.

Feeling the great importance that need to be given to parental support for children's education. The Research Center for Educational Innovation and Development (CERID, n.d.), conducted a three year research project on the "Instructional Improvement in Primary Schools (IIPS). The following were some of the suggestions given to a group of parents who were sampled for research project.

- ) Together sessions
- ) Parents should have enthusiasm for children's education
- ) Parents should establish a good relationship with child
- ) Children should feel free to talk and interact with elder
- ) Parents should always encourage children in their studies by asking them about their lessons, school, teachers and other co-curricular activities.
- ) Parents should frequently visit the school where their children study and contact the head teacher or the concerned teacher.
- ) The home environment should be healthy and clean, if possible a separate quiet corner should be provided for children to study at home.

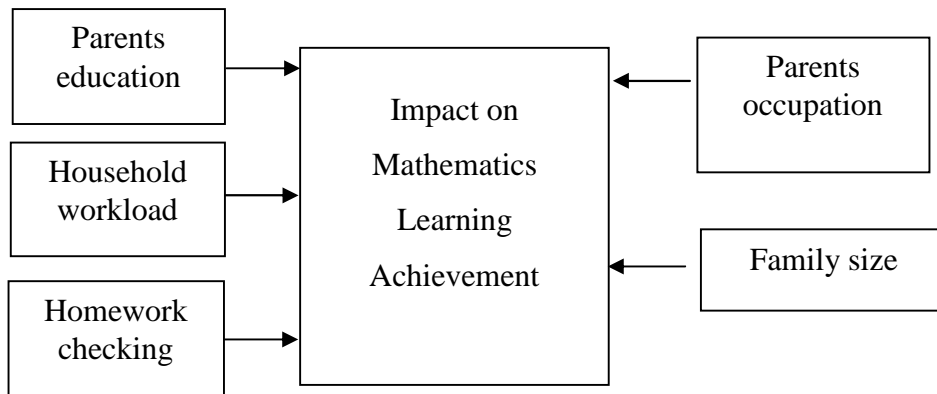
All of these above studies and theories of parents' involvement in education show its important implication on education.

### **Conceptual Understanding of the Study**

This case study related on the impact of home environment on mathematics learning achievement among Magar student of Jaubari VDC in Nawalparasi district at Udaya Secondary School. The target of this study was identifying the major factors involved in the home environment of Magar student which affects their mathematics learning achievement. This case study is mainly for the affective learning procedure to develop the new knowledge for Magar students which indicate in a framework for this case study. This study tried to identify the major factors involved in the home environment of Magar students which impact their mathematics leaning achievement. The researcher tried to find how the home environment impacts the mathematics learning achievement of students.

The factors affecting on mathematics achievement for Magar students to leads the data collection and analysis for the purpose of this study was given as below:

**Table 2.1**  
**Conceptual Understanding of the Study**



The above table supported to prepare a conceptual understanding of the study. These factors affects the home environment for learning achievement in mathematics. All these factors are interrelated to each other for supporting learning achievement in mathematics.

The education of the parent affect to their children's education. If parents were educated basically in mathematics they support to their children's learning activities, homework preparation, homework checking. Similarly, households workload also affect to learning in home because they did not get sufficient time for learning, homework preparation, examination preparation, etc.

Mostly Nepali peoples are based in agriculture so they invest important time for farming with catching weather situation. Due to large family size and limited rooms or small home the students can not get separate study room and sufficient space. So either they learn in crowded environment or they do not learn. In either cases they can not get sufficient knowledge or can not practice, so they becomes weak in learning achievement in mathematics. So this study concerning the affectiveness of parent's involvement as facilitator on mathematics learning achievement in basic school level students.

## **CHAPTER III**

### **METHODS AND PROCEDURES**

Methodology is process to discover new facts and information about a particular subject matter. It helps to find out reliable and affective conclusion. So that research methodology is a strategies which determines how the research becomes systematically complete. This chapter presents the procedure of the study, which carried out to achieve the objective of the study and get the answer of research question. This chapter includes design of the study, selection of school, selection of respondent, tools for research, data collection procedure, data analysis and interpretation.

#### **Design of the Study**

This study is qualitative research and purposive sampling method. This was the case study about impact of home environment on mathematics learning achievement among Magar students of Basic school in Jaubari VDC, Nawalparasi district. The researcher was taken only one school which is Udaya Secondary school, Bhadauri, Nawalparasi district. All the expressions of home environment factor about mathematics learning achievement and the respondents were subjective for this study. It was qualitative as well as descriptive in nature.

#### **Selection of Respondent**

The respondent of the study was Magar students, their parents and mathematics teacher. All these respondents selected purposively to fulfill objectives of the research, various literatures were reviewed. After reviewing the reports, journals, research studied etc. It had come across the analyze procedure. The research was done in Magar community based on Magar students located at Jaubari VDC-8, Bhadauri, there was secondary school which Udaya secondary school. Researcher selected ten students among them 5 from grade IV and 5 from grade V whose learning achievement is poor in mathematics their respective parents, mathematics teacher as a sample purposively. The data were collected through class observation, some structured interview and focus group discussion. The researcher had maintained the reliability and validity of these tools with the help of supervisor and the continuous evaluation of mathematics class of the school and recorded information was analyzed.

## Demography of Focused Classes Students and their Parents

The selected student's name, class, gender, date of birth and their parent's name, occupation, education, family size, address are shown in the below.

**Table : 3.1**  
**Focused Classes Students and their Parents**

S.N	Student's				Parent's			Family size	Address
	Name	Grade	Gender	Date of Birth	Name	Occupation	Education		
1	Khem Raj Rana	V	Male	058/05/16	Pittamber Rana	Farmer	Illiterate	9	Jaubari-8
2	Dil Maya Saru	V	Female	057/03/28	Hom Bahadur Saru	Carpenter	Literate	15	Jaubari-8
3	Bhim Bahadur Thapa	V	Male	060/01/12	Keshari Thapa	Farmer	Illiterate	10	Jaubari-8
4	Resham Maya Khandaluk	V	Female	059/10/24	Bhim Bahadur Khandaluk	Farmer	Illiterate	21	Jaubari-8
5	Goma Rai	V	Female	059/07/18	Khum Lal Rai	Army	Class 8	4	Jaubari-8
6	Til Kumari Pulami	IV	Female	060/08/25	Lok Bahadur Pulami	India Labor	Illiterate	11	Jaubari-8
7	Ashish Thapa	IV	Male	061/06/03	Nar Bahadur Thapa	Village worker	Illiterate	7	Jaubari-8
8	Bhoj Kumari Baima	IV	Female	061/02/10	Rewati Baima	Shopkeeper	Literate	10	Jaubari-8
9	Cham Bahadur Chitaure	IV	Male	062/05/01	Dhan Bahadur Chitaure	Farmer	Illiterate	5	Jaubari-8
10	Rekhi Ram Lamchhane	IV	Male	060/09/12	Chhabi Lamchhane	Made Nepal	I.A	6	Jaubari-8

Above table shows the focus classes of Magar students and their parents of Udaya Secondary school, Jaubary VDC, Bhadauri in Nawalparasi district who were impacts by the factors of home environment such as parents education, parent's occupation, household

workload, study time, reading room, family income, homework checking. So researcher concerned about this factors.

## **Tools of the Study**

The outcomes of this study depends upon techniques of data collection because the technique provided cultural way to study. The validity of the study also depends on the techniques of data and tools. Data obtained from the selected school, written document and previous research report. But the primary data collected from target group using class observation, interview and focus group discussion (FGD). Tools of this study developed by the researcher with the already described objectives of the study and conceptual understanding related to this study. The tools used for data collection were as follows :

### **Class Observations**

The main tool of this study was observation (Appendix-A, D) which developed by the researcher with the already described theoretical literature in chapter two and objective of this study. Class observation tools were used to know about mathematics teacher's behavior towards Magar students, student's regularity, performance, learning behavior of Magar students in mathematics class and school environment were observed on the basis of the observation form as shown in appendix A.

### **Interview**

The next tool of this study was interview (Appendix-B, C, D) which developed in unstructured question on the basis of objectives to this case study and theoretical literature related to this study. The main respondents of this case study were students, mathematics teacher and parents to find out the impact of home environment in mathematics learning achievement. It was carried out among the ten Magar students of basic school from the selected school to identify the major factors involved in the home environment of Magar students which affects their mathematics learning achievement. To help this purpose, respective parents of the selected students and mathematics teacher were selected by the researcher for interview with the interview guidelines.

## **Focus Group Discussion**

A focus group is typically 7-10 people who are unfamiliar with each other. These participants are selected because they have certain characteristics in common that relate to the topic of the focus group. The researcher creates a permissive and nurturing environment that encourages different perceptions and points of view.

Focus group discussion was also the tools of this study. It was held among the parents to take information about their students. The main focus group discussion (Appendix-E) with parents taken to interview guidelines and answer of the interview noted in diary for collected about the parents education, occupation, household workload, study time, family size, homework checking in Magar community .

## **Data Collection Procedure**

Researcher visited the selected school and met head teacher as well as subject teacher and took the permission to collect the data by in depth, open ended interview on the basis of the questions related to factors of home environment that affect the learning achievement in mathematics with the help of direct observation and written documents. The researcher recorded activities of the focus Magar students and teacher in the classroom for everyday to know students activeness, participation, and regularity in fifteen days duration.

The researcher took interview with the students, teacher and parents of selected students. Answer of interview was noted on the diary. Focus group discussion administrated to give emphasis to parents education, parents occupation, household workload, study time, family size, homework checking. School documents related to the study of school such as teacher's profile, physical facilities of school, students attendance, result of two years examination (069 and 070) of grade IV and V were acquired from school administration for the purpose of collecting data.

## **Data Analysis Procedure**

The data analysis procedure of this study had been similar to qualitative research in descriptive nature. For that the researcher had taken interview with selected students, their parents and mathematics teacher. Also in this study researcher had taken class observation with mathematics teacher and focus group discussion with parents of the selected students. The students feeling, parents response and mathematics teacher view analyzed in a descriptive way. The noted information described on the basis of the participation of the students activities, discussion about mathematics problem, parents supporting and their perspectives. The researcher was careful to make the study more reliable. The data were analyzed and interpreted by using the framework developed by the researcher in conceptual understanding.

## CHAPTER IV

### ANALYSIS AND INTERPRETATION OF THE DATA

This chapter deals with the analysis and interpretation of the collected data that were acquired from the parents, school administration, students and teachers with the help of interview and classroom observation. Those collected data were categorically tabulated and analyzed on the basis of factors related to home environment which affect the mathematics learning at Basic school level

#### **Home Environment for Mathematics Learning Achievement**

A person is neither good nor bad by birth. The environment that makes him/her what he/she is. The character of a person is formed by what he/she in his/her family. If a family member smokes, drinks and quarrels with each other, it gives bad impression to the child. If the children are not taught to behave properly at home and in the schools, obviously bad habits may develop. Good behavior and proper guidelines lead a child to right path so home is the first school and parents are the first teachers of every child.

In Magar community, if we observe the condition of Magar students children they are disorganized and unsystematic because they might not know about family management. The main causes behind such as parent's occupation, parent's education, family size, study time, homework checking, household workload etc. Thus, the collected information was analyzed and discussed under the following factors:

- ) Parent's education
- ) Parent's occupation
- ) Family size
- ) Household workload
- ) Homework checking

So researcher has tried to know about 'what', 'how' and 'why' impact the home environment on mathematics learning achievement of Magar students.

## **Parents Education**

Parent's education plays an important role in their child's learning, educated parents provide a home environment that affect learning. Parents can serve as a home environment that can affect learning. Parents can serve as a model for learning; determine the educational resources available at the home which hold particular attitudes and values towards education. In the field of education mostly the educated parents take care of their children seriously and consciously rather than the literate and illiterate parents because they know the importance of education. On the contrary that illiterate parents do not care of their children. They only send their children to school but they do not care of them seriously about what they are studying. Educated parents make efforts to maintain their social life, relatively higher social status, and access to different opportunities by enhancing the education of their family members.

Hence educated parents are more interested to educate their children and encourage them to engage within academic profession. Parents education provides not only regular sources of family income, but it is also a good due to the identification of children's motivation, expectations, aspirations, needs and concerns. Although it is difficult to examine the home of each student.

## **Interview with the Parents**

The researcher discuss with the parents about their education and its affect to their children's learning achievement in mathematics. The following responses were found that on the question asked to the parents 'Are you suffered by any problem at the time of educating your children?'

The parents said,

"I cannot guide the academic problem of my children." (Parent)

"My children are out of control." (Parent)

"Everyday my children says that mathematics is harder than other subject." (Parent)

"I cannot provide required ideas for the study of my children." (Parent)

"Sometime my child is dominated by their friends and teacher." (Parent)

"I have not any formal education so I do not guide her." (Parent)

“Every subject is easy for me but mathematics is difficult subject so I cannot teach her.” (Parent)

“I am illiterate so that I cannot guide them.” (Parent)

“I haven’t ability to do Mathematical problem as well as I haven’t leisure time to teach her so that she is weak in mathematics.” (Parent)

“I can able to teach them. So there is no problem.” (Parent)

From the above responses, the researcher concluded that parent’s education plays vital role in children’s learning achievement in mathematics. So that parent’s education is the first factor which impact of home environment on mathematics learning achievement.

### **Interview with the Students**

The researcher discuss with the students about their parent's education and its affect to their learning achievement in mathematics. The following responses were found that on the question asked to the students ‘Do your parents/guardian help you for the solve Mathematical problem?’

The students said,

“My parents are illiterate so that they are unable to help me.” (Student)

“My father always drinks alcohol so he always forbids me to go school then what he taught.” (Student)

“Taught me only addition and subtraction not other.” (Student)

“My parents are not literate.” (Student)

“My parents do not help me to solve mathematical problems.” (Student)

“Sometime they help me.” (Student)

“Nobody is there to teach me.” (Student)

“My parents help me go to the school only.” (Student)

“My parents work every time so that they are unable to help me.” (Student)

“Always my parents guide me for solve Mathematical problem.” (Student)

From the above responses, researcher concluded that some parents are unable to help their children for the solve mathematical problems.

## **Parent's Occupation**

Parent's occupation is the main resources of family income. So it impact on children's learning as well as their achievement. Parents of Magar students involve in the agriculture like farmer more than other occupation like Army, Teacher, Carpenter, Shopkeeper etc. Children's from economically marginalized families do not have assess to educational opportunity.

If a children from a well family or family income is good, the home environment stimulate him/her curiosity and encourage him/her to learn. He/she has all the necessary books and other learning materials. Him/her parents watch over him/her progress and guide him/her. Thus, his /her performances at school are satisfactory.

If a children from poor family or family income is not good likely to be entirely different. The child receives neither proper attention at school nor careful guidance at home. Consequently, his/her progress tends to be slow.

## **Interview with the Parents**

The researcher discuss with the parents about their occupation and its affect to their children's learning achievement in mathematics. The following responses were found that on the question asked to the parents 'How does parent occupation impact the mathematics learning achievement?'

The parents said,

“Always to do work in the field.” (Parent)

“I am a carpenter. I should make table and chair in the other homes. I do not know my children have gone to school or not when the result came they become fail.” (Parent)

“If the parents are making agricultural tools, their children are also involve in parent's skills which impact the study on mathematics.” (Parent)

“The parents who are engaged in their agro occupation they cannot support and guide their child's learning of mathematics learning.” (Parent)

“My daughter always ask to me live in a home to teach her but what to do I have not good job.” (Parent)

“I have to go field work so that I cannot give any time to my son’s study.” (Parent)

“If the parents are shopkeeper their children also support in shop and they cannot manage to study in mathematics.” (Parent)

“I have more experience of pain, so I want to see the progress of mathematics of my children but sometime I cannot give them required materials.” (Parent)

“If the parents are job holder they can support their children in education and to get better achievement in mathematics for the post of job. But I am a village worker so I unable to fulfill her needs.” (Parent)

“I say to better in mathematics but I have no leisure time to guide them.” (Parent)

From the above responses, researcher concluded that all the parents do not have a governmental job. They want to live with prestige in the society. To fulfill their basic need they have been going to India for labour work. They have to work with others to fulfill the need of morning and evening. So that parents occupation plays vital role in children’s achievement in mathematics. Sometimes it also inspires in mathematics learning and to make decision.

### **Interview with the Students**

The researcher discuss with the students about their parent's occupation and its affect to their learning achievement in mathematics. The following responses were found that on the question asked to the students ‘Does your parent’s occupation help/impact in your mathematics learning achievement ?’

The students said,

“We have no field, out parents has been survived by the labor of my parents. So that I also go to work with others.” (Student)

“My parents have no leisure time to guide me because they make agro-tools and earning money.” (Student)

“My parents unable to buy copy and required materials.” (Student)

“My parents are involved in agro-firm they needed my help and I help them.” (Student)

“My parents always busy in their business, they can’t give me time.” (Student)

“My father goes to India to earn money and when he stays at home he inspires me to learn mathematics.” (Student)

“My parents always have to do work in the field.” (Student)

“My father is quarrelsome so that disturbs my study.” (Student)

“My Parents are farmer so that they focus only their farms rather than my study.” (Student)

“My parents occupation help me. They provided me many learning mathematical material but I can't use them properly.” (Student)

From the above responses, the researcher concluded that most of their parents work in to others land, and they have no time to guide their children. The parents are jobless they do not give more facilities their children to learn mathematics. But the job holder parents can help their children's on mathematics learning.

## **Family Size**

The number of family member affects in every aspect of family life. Where is large number of family there are different kinds of problems. They always have so fight against of basic needs. Parents who have the small family size can provide the educational, economical and other facilities than middle and large family size. Family size is also the factor of home environment which impact on mathematics learning achievement. (Table 3.1 and Appendix-B)

## **Interview with the Parents**

The researcher discuss with the parents about their family size and its affect to their children's learning achievement in mathematics. The following responses were found that on the question asked to the parents 'How do you invest for your children's learning?'

The parents said,

“Small family inspires to teach and learn mathematics.” (Parent)

“I have many children's so I cannot give good environment for their learning.” (Parent)

“It is very difficult to guide and manage the different things related mathematics to many children.” (Parent)

“We are joint family so we unable to invest properly for their study which they need.” (Parent)

“It should be easy to give time then if children are few but it’s difficult to give time to more children.” (Parent)

“Neither we are single family nor do we have any income.” (Parent)

“There is much difficult to care if there are many children.” (Parent)

‘Our family income is very poor.’ (Parent)

“It is easy to teach and guide if they are few children.” (Parent)

“We invest in their learning (study) but they did not follow our suggestion.” (Parent)

From the above responses, the researcher concluded that most parents have realized that small family is good environment because it inspires them to teach and facilitate materials.

### **Interview with the Students**

The researcher discuss with the students about their family size and its affect to their children's learning achievement in mathematics. The following responses were found that on the question asked to the students ‘ Does the family environment impact in your mathematics learning?’

The students said,

“In my family there are many children so my parents cannot invest money for us.” (Student)

“It is more difficult to the parents to manage their children.” (Student)

“It’s good to learn mathematics having a few brothers and sister.” (Student)

“It is easy to get producing creative from their parents in few children.” (Student)

“We are suffering from poverty.” (Student)

“There is vital role of family to improve our every aspect so that the home environment impact in mathematics learning achievement.” (Student)

“In educated family there is good environment for the study but it’s not like this in my home.” (Student)

“My parents quarrel every night so I have no interest to read at that environment.” (Student)

“It is easy to collect mathematics instruments and other requirements in small family.” (Student)

“Every day my parents work hard to survive.” (Student)

From the above responses, the researcher concluded that large family has many problems. It is difficult to manage and fulfill their requirements, to collect their mathematical instrument besides of this small family inspires to do better in mathematics.

## **Household Workload**

Household workload directly impacts the children education. In the context of Magar community the children have to help their parents in their manual work. Magar parents need the help of their children. Magar students have to spend more time helping their parents. So they have to absent in the school and they do not have more time to do mathematics homework, exercise etc. They could not get enough time to practice on the mathematical problems. So their performance in mathematics is not good and it’s also more responsible to do progress as not in mathematics. So household workload is the main factor to impact their achievement of mathematics learning.

Most of the students have understood the importance of mathematics even though factor of homely environment obstacle for that. So they have not got success in mathematics.

## **Interview with the Parents**

The researcher discuss with the parents about household workload and its affect to their children's learning achievement in mathematics. The following responses were found that on the question asked to the parents ‘Does the house hold work load impact the achievement of the mathematics learning?’

The parents said,

“I am busy in my manual work which is related to agricultural tools. I don’t know they prepare themselves or not.” (Parent)

“Usually I go to India to earn money when I am at home that I suggest them to do homework of mathematics.” (Parent)

“Always, I become busy in my land lord’s work. So at that time I cannot help them.” (Parent)

“My children’s have no any time for the study.” (Parent)

“To much work at the home so that they cannot read any time.” (Parent)

“They could not give more time to study due to house hold work.” (Parent)

“We are farmer so our children’s should help us.” (Parent)

“Every day, we are busy in our field.” (Parent)

“The time is enough but they did not read.” (Parent)

From the above responses, the researcher concluded that most of parent wants to make better their children’s mathematics but they don’t sufficient time to guide them and usually they are busy for their household work load.

### **Interview with the Students**

The researcher discuss with the students about household workload and its affect to their learning achievement in mathematics. The following responses were found that on the question asked to the students ‘How do you manage your study time without everyday household work?’

The students said,

“It is not fixed, sometimes I spend all the day in working.” (Student)

“I always miss my class.” (Student)

“I have to help my parents for the house work and remaining time is used for the study.” (Student)

“I have not fixed time for study.” (Student)

“I cannot give any time for the study.” (Student)

“Every day I read only 1 hour.” (Student)

“I have no time for the study beside 9 o’clock at night.” (Student)

“Sometime, I studies in the morning.” (Student)

“I cannot get the environment for the study at home.” (Student)

“Only in the exam time.” (Student)

“I do not read at home.” (Student)

The above responses, the researcher concluded that Magar students have to spend most of the time in everyday working for living which is the main cause of low learning achievement of mathematics.

## **Homework Checking**

Homework is a kind of work as the mother work in the home. Homework such kind of practices which brodes mind. There is the quotation practice makes the men perfect. The teacher gives the homework to check the ability of the students when the students do their homework their ability power become more and brodes of mind. When they do their homework, their ability to do such question in exam. In mathematics subjects the teacher give home works but students do not do their homework. They are always dependent on the teacher whenever the mathematics subject needs more practice but students do not give any time for mathematics subject. So that they become low achievement in the exam.

## **Interview with the Parents**

The researcher discuss with the parents about homework checking and its affect to their children's learning achievement in mathematics. The following responses were found that on the question asked to the parents 'Do you go to school to meet the school teachers to know about your children’s mathematics learning achievement?'

The parents said,

“I did not go to school.” (Parent)

“I have no time to meet the teacher.” (Parent)

“Sometimes I go to school to watch the school program not for know the learning achievement on mathematics of my children.” (Parent)

“I have gone to school only at the result day of final exam.” (Parent)

“Sometime I go to school to meet the school teachers so that improve her learning achievement class-IV than class-V.” (Parent)

“I am busy in my house work.” (Parent)

“My children are week so that I do not like to go to school.” (Parent)

“School is very far from my home.” (Parent)

“I am not educated, if I go what can I do there.” (Parent)

“Every day I take the goats and cows out for grazing.” (Parent)

From the above responses, the researcher concluded that most of the parents are not responsible for their children education learning achievement.

### **Interview with the Students**

The researcher discuss with the students about homework and its affect to their learning achievement in mathematics. The following responses were found that on the question asked to the students ‘Do you discuss mathematical problems with friend in class or outside school.’

The students said,

“Sometime I ask the difficult question to my class friends.” (Student)

“I never do.” (Student)

“Only in the exam time, I discuss the mathematical problem with my friends.” (Student)

“I am not qualified in the class, so I fell difficult to ask with my friends.” (Student)

“Not regularly, when I have given the homework then I discuss about the Mathematical problem with my friends.” (Student)

“My friends are not qualified for solving mathematical problems.” (Student)

“I do not discuss about Mathematical problem with my friends so I can’t pass it.” (Student)

“Mathematical problems are very difficult so I do not discuss about it.” (Student)

“If teacher help me to solve the problem then I do otherwise not.” (Student)

“Sometime I ask mathematical problem with my friends.” (Student)

From the above responses, the researcher concluded that everybody feel the Mathematical problems are very difficult. Most of students only read mathematics at the time of examination.

### **Interview with the Mathematics Teacher**

The researcher discuss with the mathematics teacher about homework checking and its affect to the students learning achievement in mathematics. The following responses were found that on the question asked to the mathematics teacher ‘Why Magar students are low achiever in the mathematics learning achievement?’ and ‘How much do you check homework?’

The mathematics teacher said,

“Students do not have a pre-requisite knowledge so it is difficult to teach. At the other hand most of the students parents are farmer so that students should help them therefore students couldn’t give more time to study.” (Mathematics teacher)

“It is difficult to check the homework of all students so they cannot get sufficient feedback.” (Mathematics teacher)

From the above responses, researcher concluded that less study hour of students at home, pre-requisite knowledge, students are not inspired by mathematics teacher.

### **Focus Group Discussion with the Parents**

The researcher discuss with the parents about the causes to be low participation of their children in mathematics. The following responses were found that on the question asked to the parents ‘What are the causes to be low participation of your children in mathematics learning?’

The parents said,

“We did not give any help to our children.” (Parent)

“We cannot provide all the facilities they need.” (Parent)

“Our children say that mathematics is harder than other.” (Parent)

“They have no fixed time for the study.” (Parent)

From the above responses, the researcher concluded that poor economic condition, house work and hard subject are the main cause having low participation of their children.

### **Focus Group Discussion with the Parents**

Again the researcher discuss with the parents about the ways to increase the participation of their children in mathematics. The following responses were found that on the question asked to the parents ‘What are the ways to increase the participation of your children at school?’

The parents said,

“We should make good home environment for the study.” (Parent)

“We should get economic support from the governments.” (Parent)

“Government should provide full scholarship.” (Parent)

“School family should be responsible with our children.” (Parent)

From the above responses concluded that parents have expected the economic help of the government and school to increase the participation of their children at school.

### **Focus Group Discussion with the Parents**

Also, the researcher discuss with the parents about the behaviour of mathematics teacher to their children. The following responses were found that on the question asked to the parents ‘Do you feel the equal behavior to your children from mathematics teacher?’

The parents said,

“Mathematics teacher behaves equally.” (Parent)

“If they do not do their homework then mathematics teacher punished them.” (Parent)

“Mathematics teacher gives suggestion to the week students.” (Parent)

“Mathematics teacher do not discriminate them.” (Parent)

From the above responses the researcher concluded that mathematics teacher do not discriminate the students and he always inspire the students to get the better learning achievement.

## Achievement in Mathematics Learning

Students come from different castes in this school such as Gurung, Malla, Nepali, Bishwa Karma, Bansi, Magar, Pariyar etc. Magar students spend more time in the household work than the study. They have no time for the study. They are affected by the factors of home environment such as parent's education, parent's occupation, household workload, family size etc. They have got poor achievement in the mathematics. So, that Magar students are low achiever than the other students in the mathematics. Following table shows the condition of student's achievement in mathematics learning.

**Table : 4.1**

**Condition of Students Achievement in Mathematics Learning**

Years	Grade	Total Students			Pass Students			Fail Students		
		M	O	T	M	O	T	M	O	T
2069	IV	14	10	24	2	4	6	12	6	18
	V	28	8	36	8	6	14	20	2	22
2070	IV	13	10	23	3	7	10	10	3	13
	V	21	14	35	10	11	21	11	3	14

Source : School Document

Note : M = Magar, O = Others and T = Total

Above table shows that grade IV and V result in 2069 was better than the result in 2070. Therefore, above table indicate that Magar student's achievement in mathematics learning affected by home environment. Above table also shows that Magar students were low achiever than the other students in mathematics.

The responses obtained from the interviews to the parents, students and teachers together with the class observation shows the impact and affect of the home environment of mathematics learning achievement. This study of Magar students of Udaya Secondary School, Jaubari VDC would be suffered by the home environment and consequently their achievement in mathematics becomes low which was justified from the above table. Here the analysis is interpreted by the cross checking the interviews with parents, students and teacher together class observation.

## CHAPTER V

### SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATIONS

After the analysis and interpretation of the collected data according to design an attempts has been made to summarize and enlist the findings, providing some recommendation for pedagogical purpose. Especially, this chapter presents the following sections.

- ) Summary
- ) Findings
- ) Conclusion
- ) Recommendations

#### **Summary**

In Nepalese society, there is a religious diversity, occupational verities, caste hierarchy etc., caste and class based stratification are still in practice in the society. So called poor-economic situation have placed Magar in disadvantage position. Magar castes are settled in the most of the district all over the country such as Nawalparasi,

Educationally, Magars are backwards. In the Jaubari VDC-8, Bhadauri of Nawalparasi district, Magar children are very weak in mathematics. In this context, this research was under taken to find out the factor related to home environment which affect the mathematics achievement of Magar students at Basic school level.

#### **Findings**

The following results are the major findings of the study:

- ) Parents of Magar student's are unable to help/guide their children for solve the mathematical problems.
- ) Magar students spend most of the time in every day working.
- ) Margar students and their parents realized that small family has good environment for the study.

- ) Parents do not have sufficient time to guide them and usually they are busy for their household workload.
- ) Students have no sufficient time for the study.
- ) Less study hour of students at home, no pre-requisite knowledge about mathematics.
- ) Parents expected the economic help from the government.
- ) Parents want to be increase the participation of their children at school in mathematics by the help of teacher.
- ) Mathematics teacher do not discriminate the students and he always inspire the students to get the better learning achievement.
- ) Parents could not check their children homework.

## **Conclusion**

The school environment is appropriate but it is difficult to go to the school for all students because most part of the Jaubari VDC is hilly area. In this school, students come from villages Lapak, Raikot, Sandada, Kutiya, Jaubari, Bhadauri, Bobak etc. These villages are fully hilly area.

There are the students of different socio-economic status. Among them Magar students are socially, economically, educationally backward due to the affect of home environment. Their learning achievement is very low in mathematics. From this research, researcher found that the impact factor related to home environment of Magar students were parent's education, parent's occupation, family size, household workload, homework checking, timing.

## **Recommendations**

After conducting this study the researcher got some finding. On the basis of those findings, the researcher would like to suggest some recommendations for the improvement in mathematics learning achievement:

- ) Parental expectation should be higher and parent should always encourage their children to achieve a high level education.

- ) Most of the people in rural area are under the agriculture; they lived in joint family and have low income. They do not provide the proper facilities such as separate study room, desk and table, many more reading materials. Therefore it is necessary to raise family income with the application of appropriate facilities.
- ) School support of skills and knowledge parents need for affective involvement in homework checking.
- ) Establish physical and psychological structures for the child's homework checking performance by parents as well as teachers.
- ) The mathematical learning achievement seems to be more affective in the case of regular homework checking by the parent than irregular checking.
- ) The study was limited only one school of Nawalparasi district where Magar children are reading. So the researcher would not generalize all grades and whole district as well as whole country. So similar study should be done district wise as well as national wise.
- ) In rural area, parental attitude towards education is low. So we should encourage the parents for sending children to school.
- ) The classroom management should be proper, that the entire students could equally and easily participate in the classroom activities.

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**Appendix A**  
**CLASS OBSERVATION FORM**

Name of teacher:

Class:

Date:

Address:

Lesson:

Time:

No. of students:

Lesson Topic:

Period:

S.N	Observation Topic	Very good	Good	Satisfactory	Poor	Remarks
1	Personality of the teachers a. Neat & Clean b. Self confidence c. Clearness speech d. Friendly					
2	Initiation of lesson a. Based on previous lesson b. Interesting of the lesson c. Objectives of the lesson					
3	Presentation of the lesson a. Knowledge of the content b. Integrating the content c. Standardization d. Use of example					
4	Class activities a. Activeness of students b. Class arrangement c. Appropriate of question					
5	Teaching method a. Lecture method b. Discussion method c. Problem solving d. Discovery method e. Others					
6	Evaluation a. Class work b. Others					
7	Homework					

**Appendix-B**  
**INTERVIEW SCHEDULE FOR PARENTS**

Name of Parent's:

Family size:

Relation:

Addresses:

Occupation:

Education:

1. Are you suffered by any problem at the time of educating your children?
2. In which occupation do you involved?
3. How does parent occupation impact the mathematics learning achievement?
4. How do you invest for your children's learning?
5. How does household workload impact the achievement of the mathematics learning?
6. Do you go to school to meet the school teachers to know about your childrens mathematics learning achievement?
7. How many family members in your family?

**Appendix-C**  
**INTERVIEW SCHEDULE FOR STUDENTS**

Students name:

Class:

Date of Birth:

Address:

Gender:

Parents education:

Mother tongue:

Parents occupation:

1. Do your parents/guardian help you for the solve mathematics problem?
2. Does your parent's occupation help/impact in your mathematics learning achievement?
3. Does the family environment impact in your mathematics learning?
4. How do you manage your study time without every day household work?
5. Do you discuss mathematical problems with friend in class or outside school?

**Appendix-D**  
**INTERVIEW SCHEDULE FOR TEACHER**

Name:

Level:

Address:

Appointment:

Qualification:

Training:

1. Why Magar students are as low achievers in the mathematics learning achievement?
2. How much do you check homework?
3. How much Magar students activeness/participation in the mathematics class ?
4. Which method do you use for the mathematics teaching ?
5. Are they coming regular in the school ?

**Appendix-E**  
**FOCUS GROUP DISCUSSION**

Name of Parents:

Date:

Address:

Gender:        Male         Female

1.        What are the causes to be low participation of your children in mathematics learning.
2.        What are the ways to increase the participation of your children at school?
3.        Do you feel the equal behavior to your children from mathematics teacher?

## Appendix-F

### TEACHING STAFF AND NON-TEACHING STAFF

S.N	Staff's name	Post	Qualification	Level	Appointment	Training
1	Ram Narayan Prasad Gupta	Head Teacher	I.A	Lower secondary	2052	10 months
2	Hirasing Pariyar	Teacher	B.Ed.	Secondary	2065	TPD
3	Hom Bahadur Saru	Teacher	B.Ed	Secondary	2064	TPD
4	Nil Kanth Pokhrel	Teacher	B.A/B.Ed	Lower secondary	2066	-
5	Sharda Parajuli	Teacher	B.Ed.	Lower Secondary	2066	-
6	Lil Bahadur Khandaluk	Accountant	I.Ed.	Primary	2066	-
7	Jhuma Gurau	Teacher	B.Ed.	Primary	2067	TPD
8	Bhima Thapa	Teacher	I.Ed.	Primary	2068	-
9	Shiv Thapa	Teacher	I.Ed.	Primary	2069	-
10	Govinda Prasad Chaudhary	Teacher	B.Ed.	Lower Secondary	2070	-
11	Phulmaya Shrestha	Teacher	SLC	Play group	2065	-
12	Til Raj Khanna	Teacher	SLC	Primary	2070	-
13	Uma Thapa	Teacher	SLC	Primary	2070	-
14	Tul Bahadur Thapa	Helper	Under SLC	Temporary	2059	-