

**STUDENTS' INDIFFERENCE TOWARDS LEARNING  
MATHEMATICS AT SECONDARY LEVEL**

**Thesis Submitted By**

Shambhu Shrestha

T.U. Regd. No.: 9-2-48-984-2014

Symbol No.:7448062

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## **DECLARATION**

This thesis entitled “**Students' Indifference towards Learning Mathematics at Secondary Level**” is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions.

The work was done under the guidance of Maheshwor Pokheral at the Prithvi Narayan Campus department of mathematics.

**Shambhu Shrestha**





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## **ABSTRACT**

This study focused on Students indifference towards learning mathematics at grade IX of Kaski district Pokhara Metropolitan. This study is based on narrative inquiry under qualitative research design. In this study researchers use the method Narrative inquires by interview with students' for qualitative data. The purpose of this study was find the students' indifference towards learning mathematics and the causes of students' indifference towards mathematics at grade IX. Researcher selected five students from 3 community based schools and 2 private school by purposive sampling method and the schools were also selected by purposive sampling method. The data were collected from questionnaire and unstructured interview schedule. The collected data were organized, managing, analyzed and interpreted one by one and find out the conclusion. The responses from interview were recorded and transcribed under the headings and then were organized in themes. The result of this study showed that maybe most of the students had trouble for study mathematics and think mathematics is harder than other subject towards mathematics at grade IX but many of the students have facing so many problems such as, lack of students' confidence level, mathematical anxiety, lack of guardians' qualification, parents support, social culture, social discrimination, lack of teaching material, and due to other physical facility are the main factors that affecting students' indifference towards learning mathematics. And in the end, it turned out that students were afraid to memorize mathematical formulas and solve mathematical problems, which led to increased frustration in students towards mathematics.

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# CHAPTER I

## INTRODUCTION

This chapter highlights the background of the problem, statement of the problem, objective of the study, research question, significance of the study, conceptual framework and operational definition of terms, each of these stage will help in strongly grounding the research and given it direction.

### **Background of the Study**

Indifference towards mathematics is uninterested, unconcerned towards learning mathematics. Looking at the present time, the attitude of many children towards mathematics has changed. Maybe many students are uninterested towards learning mathematics. Most of them did not want to study mathematics subject.

Mathematics is the essential part of school curriculum (Bhattarai, 2015). So it is taught as compulsory subject at level of school curriculum. Mathematics is considered as an important subject called the queen of all science (Joshi, 2017). Nothing can be imagined without mathematics (Bhattarai, 2015). So that without mathematics, we can't imagine our daily life and future life from the various subjects we study. Even though the need and importance of mathematics is so great, if we look at the time, the indifference towards mathematics in children is found to be increasing day by day. As mathematics has emphasized like language most of students have been failed in mathematics as a difficult subject and majority of students fail in mathematics (Acharya, 2017). That's why the interest and desire of the students towards the study of mathematics as well as the attitude towards mathematics has also changed.

Benjamin pierce argue that, "Mathematics is the science which draws necessary conclusion. Different factor affect a students mathematics learning. In which attitude is the main element"(B. Pierce, 2012).

Haan (1961), argues that, " The attitude of students and teachers understanding of mathematics as the large number of teacher who desired or fear mathematics has become a factor in children attitude towards the subject"(p.12).

How did the history of mathematics begin? What is the relationship between mathematics and human civilization? There are various types of thinking in this regard. It also analyzes the importance of human life and mathematics. Mathematics is an essential subject for human life. Therefore, when man originated and a special civilization began in it, along with that, mathematics also originated in various historical evidences (Yadav, LN., Dr. Acharya, A., et.al, 2072). Mathematics has not been used in any archival history, but has been used before that, that is, mathematics was born with the birth of man. In the 21<sup>st</sup> century mathematics is an essential subject for various field of science and technology, economics, management, business, and many other fields. Most of the guardians wants their children study mathematics as well as science. They inspire even compel their children to study these subject. But most of them do not know about various psychological factor, for examples their children interest, aptitude, attitude, ability and intelligence towards those subject. Teaching mathematics without understanding the psychology of the students and lack of interest and motivation towards learning mathematics has increased the indifference towards mathematics in the students and has also weakened them in mathematics.

Mathematics has a great role in human life, our daily life and all civilization cannot be imagined without mathematics. It is used in every activity of our society. It is needed for the study most of the discipline. It is the foundation of all science (Joshi, 2017). Most of students feel that mathematics is difficult and they can't easily apply it in their daily lives. Mathematics is employed as integral part of other sciences in many areas; however it is being taught as a separate learning subject in classroom which could result in students having a poor level of understanding in this subject (Alreshidi, 2016 as cited in Ronis, 2008). If students have good attitudes about learning mathematics, they will be more likely to understand the concepts which will help them develop confidence in their ability to work mathematical operations (Curtis, 2006 as cited in Furner & Berman, 2003).

Mathematics is the way of thinking, organizing, analyzing and synthesizing the body of data. (Bhattarai, 2015) Mathematics develops the ability to think logically and creatively for the proper development. There is no science, no art and no profession where mathematics does not hold as a key position. Mathematics has grown with the development of early civilization and present modern civilization. Due to change of need and demands of society the aim of education also changes consequently, mathematics in the 21<sup>st</sup> century put grate emphasis in today's society to meet the rapidly growing needs and demands (Joshi, 2017). So, mathematics has been given a significant place at all levels of school curriculum.

Numerous researches have been carry out to identified that indifference towards learning mathematics is not only essential for practical life but also for as inspirable parts in the science and technology. There are two important aspects on mathematics program that are, mathematical aspects and social aspects. The

mathematical aspects are related to usefulness of mathematics in daily living. And the second aspect social aspect is related to our social development.

Indifference towards mathematics is defined as a general emotional disposition towards the school mathematics. This should not be confused with attitude towards the field of mathematics or towards some specific area within mathematics. An attitude development may be influenced by a number of factors operating inside or outside school, by the teacher and by the learning environment.

The national objective of mathematics in secondary level is to develop positive attitude towards learning mathematics, to apply mathematics in daily life, to develop mathematical knowledge for the further study, to appreciate as a means of communication. But interest and desire for mathematics has decreased day by day. Many of the schools have got like zero due to mathematics in the examination. The performance of the students in mathematics in secondary education examination is very poor with the average score of 27.57 and pass percentage of 41.21 (Ghimire, 2010 as cited Pokheral, 2020). By the result of mathematics at secondary level there are cooperatively low achievement in mathematics. The result of mathematics are decreased day by day and many students are drop out towards learning mathematics. Hence mathematics which always fastens its speed for further development. So in this study stress has been laid on investigating the indifference towards learning mathematics of grade IX students of Kaski.

### **Statement of the Problem**

The performance of the students in mathematics in secondary education examination is very poor with the average score of 27.57 and pass percentage of 41.21 (Ghimire, 2010 as cited Pokheral, 2020). This shows that there are major causes of

students indifference towards learning mathematics at secondary level and failure in examination and low mathematics achievement. Like that content issue in curriculum, evaluation system, and the problem in adopting effective learning strategies by the students, and classrooms instructions have been associated with the poor performance of students in mathematics (Muskin, J. A 2015 as cited Pokheral, 2020).

So that I selected the topic students indifference towards learning mathematics at secondary level and the problem of this study mainly concerns with the indifference towards learning mathematics at grade IX students. Also researcher wants to know the causes of indifference in learning mathematics at grade IX students towards learning mathematics. Also analyzed the indifference of students towards learning mathematics at grade IX. And also analyze the way to decreasing students indifference towards learning mathematics.

Thus, the study attempts to seek the answer of the following question:

- Why student's indifference towards learning mathematics at grade IX?
- How to overcome to the students from indifference towards learning mathematics?

### **Purpose of the Study**

The main purpose of this study is to explore student's indifference towards learning mathematics. And what measures can be taken to remove depression in students towards mathematics?

### **Research questions**

- What are the factors that affect the students indifference towards learning mathematics?
- What measures can be taken to remove depression in students towards mathematics?

### **Objective of the Study**

The main objective of the study as follows:

- Analyzed the students' indifference towards learning mathematics at grade IX ?
- To find the caused of indifference towards mathematics learning of grade IX.
- To find the way of students overcome from indifference towards learning mathematics?

### **Significance of the study**

What is math? Different types of philosophical thoughts have appeared in this regard. Unlike Platonism, Platonism is considered to be the main one in these thoughts. Other ideas include absolutism, fallibilism, formalism, and logic. Man began to practice many fantasies and the use of those fantasies in order to fulfill the unlimited needs of life and to solve the problems that arose in the experience of life. In this way, mathematics was born out of the activities, imagination and desire to use it.

Mathematics is a collection of discoveries without any new inventions and constructions. The basis of mathematical research is the solution of human needs that appear with the development of human civilization, the highest use of time and the

solution of problems, the development of means, the production of human will (Chhetri, 2068).

Basic mathematical knowledge is the knowledge needed not only for further study of any subject but also for making a particular business life meaningful and successful. Mathematics has become essential for a successful person today. Mathematics is implicit in every practice of human life. It is a departmental form of education on how to teach the minimum mathematical knowledge required for a successful life in a simple and easy way. It puts more emphasis on teaching and learning math. Mathematics education is a practical science, it is a subject related to human lifestyle. The main purpose of mathematics education is to produce a person who is competent and proficient in subjects and teaching methods. Thus, if we look at the importance and necessity of mathematics in human life, there is no meaning in human life without mathematics, but the indifference towards mathematics is increasing as the process of learning and learning mathematics is not right.

Mathematics is very useful and valuable subject for everyone. It should be helpful in every person's daily life. So that everyone should study mathematics and gain good achievement. For the good achievement there should be positive attitudes from every aspect towards mathematics. To gain the mathematical knowledge everyone should study in-depth. So the mathematics becomes one of the essential parts of school curriculum. Together with compulsory mathematics, optional mathematics also play a vital role in everyone's life. It is more practical and behavioral than compulsory mathematics. Mainly it should be helpful in studying higher level for several related fields.

Mathematics has been a key subject in school curriculum through the world. In the context of Nepal, it has been taught from primary to secondary level as compulsory subject. In higher study, mathematics is being taught as optional subject. Mathematics learning helps the students to understand and interpret the important quantitative aspect of the living. This is possible only when the attitude of the students towards mathematics is favorable.

Thus this study has following significance:

- This study helps to those students who has fear to study optional mathematics.
- This study is helpful for students to develop an interest in mathematics.
- This study is helpful for those students who wants to study science and technology as well as mathematics in higher level.
- The result of this study is helpful for national policy maker, mathematics curriculum designer, researcher person educational administrator, educationist and guardians of students of secondary level students.
- This study is helpful for rural areas students who doesn't give opportunity to study optional mathematics.
- This study helps to make positive attitude of secondary level students towards optional mathematics and compulsory mathematics.
- This study also provides information about why most of the students were failed in mathematics at public schools.

### **Delimitation of the study**

Each study is not rigorous, perfect and free of limitation. There are some sorts of limitation and on other they are not overcome the problems of every field.

Thus, this study has some limitations which are pointed as follows:



- This study is limited to 5 schools of Kaski district Pokhara Metropolitan only.
- One student from each school of Grade IX.
- This study is carried out within the certain particular area of Kaski district and so its findings cannot be more generalized.

### **Definition of the Key Terms**

Some of the terms used in this thesis are defined below:

**School Related Factors:** School related factors are associated with school environment, effective classroom teaching, teacher's behaviors', peers' behaviors' etc.

**School Environment:** It is related to the internal and external surroundings of the school which affects the students mind and attitudes. It concludes the school location, number of students in classroom, classroom environment and regularity of the teacher, physical facility like library, math lab and reference book related to mathematics.

**Teachers` Behavior:** Teachers` behavior is related to encourage the learners to study the mathematics, individual suggestion and gender equity in classroom.

**Effective Classroom Teaching:** Effective classroom teaching is one of the most important factors. Pleasing environment, initiation of lesson (lesson based on previous knowledge), use of instructional and material appropriateness to teaching student`s participation on discussion, teacher activities are considered as the effective classroom teaching in this study.

**Peer`s Behaviors:** It is related to peer`s help on study the mathematics.

**Out of school related factors:** Out of the school related factors are associated with the family background, interest on the learner toward mathematics etc.

**Achievement:** It is defined in terms of the score obtained by the student on achievement test prepared by the resea

**Students:** Those pupils who passed grade VIII and are studying at Grade IX

**Indifference:** Indifference is the trait of lacking interest or enthusiasm in things.

**Learning:** The acquisition of knowledge or skills through study, experience, or being taught.

**Attitude:** An attitude is a complex affair which cannot be wholly described by any single numerical index. The concept of attitude is used to denote person's inclination feeling, ideas, fear and conviction about mathematics. In this study the totality of the following variable was considered as attitude, confidence of learning mathematics, usefulness of mathematics, stereotype of mathematics as male domain subject and perception of students towards mathematics contents.

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

#### **Review of Related Literature**

Literature review is the most important component in research practice in which the previous researches are reviewed and researcher tries to differentiate the distance and similarities of their research. Reviewing related literature help researchers to limit their research question and to clarify and define the researchers in a better position to interpret the significance of their own results. Through studying related research, researchers learn which methodology have proven useful and which seem less promising. In the literature review there are two types of related literature reviews they are empirical review and theoretical review.

#### **Empirical Review**

Pandit (2007): studied on the topic “Attitude of secondary level students towards optional mathematics curriculum”. The objectives of this study were to find the attitude of secondary level students towards optional mathematics curriculum, to compare the attitudes of boys and girls towards optional mathematics curriculum at secondary level and to compare the attitude of urban and rural students towards optional mathematics curriculum at secondary level. The design of this study was survey. The population of this study was all the students of Parsa district who studied optional mathematics.

For this study researcher had selected 10 community base schools from Parsa district by using purposive sampling where five schools were from rural area and five from urban area. To collect the data researcher had used questionnaire and Likert five

point scale was used for scoring each item. Chi-square test was used to analyze the secondary level students' attitude towards optional mathematics curriculum. Also t-test was used to compare the attitude of boys and girls and to compare the urban and rural areas students' attitude towards optional mathematics curriculum at 0.05 level of significance.

The conclusion of this study was, there was a positive attitude of secondary level students towards optional mathematics curriculum, there was no gender wise difference in attitude among students towards optional mathematics curriculum at secondary level and urban area students had positive attitude than rural area students towards optional mathematics. Also find boys had better attitude than girls towards optional mathematics curriculum according to attitude score obtained by boys and girls.

Janwali (2007): Studied on topic "Causes that affect mathematics achievement of girl's students" determine the correlation between affecting factors and mathematical achievement. The researcher adopted the survey method in this study. The sample of the study was determined by convenience sampling from Rupandehi district. Researcher selected 25 sample students from different school of district situated in rural and urban area. In this study one set of questionnaires was developed and three point Likert scale for the convinces of the respondent were developed for the collection of needed information which was used for students. The conclusion of this research work was effective classroom teaching such as planning environment, less use of instructional materials, appropriateness to teaching participation on discussion, activity have strongly positive effect on mathematics achievements of girl

students. It concludes that the effective classroom teaching is very essential for increasing the mathematics achievement of girl`s students so it should be improved.

Langat (2011): studied on the topic “Students attitude and their effect on learning and achievement in mathematics”. The purpose of this study was to determine the effects of the students’ attitude towards learning and achievement in mathematics education. This study adopted a descriptive survey design. The study involved in seven sampled public secondary schools out of 23 secondary schools in Kiambu county and 140 students were selected for the sample from the target population were the form four students who were about to sit for their Kenya Certificate Secondary Examinations. The purposive and random sampling were employed in selecting the schools and the students from these schools respectively with the use of students’ questionnaires as a method of data collection. The response of students was analyzed by qualitative and quantitative approach.

The study found out that most student had a positive attitude towards mathematics and also show that perceptions and beliefs, perceived learning abilities and competencies and previous performance of students in mathematics affected their level of motivation learning to low outcomes.

Mohd &et.al. (2011): had conducted an article on the topic "Factor that Influence Students in Mathematics Achievement". The purpose of this study was to explore the level of attitude towards problem solving and mathematics achievement among students from Malaysia Institute of information technology, University Kuala Lumpur. This study also observes the relationship between the level of patience, confidence and willingness towards problem solving and mathematics achievement. This research was survey study that is conducted on 153 semester one students at

diploma program. This research uses a one set of questionnaire to gather data. The researcher findings reveal that the level of patience, confidence and willingness towards problem solving are medium. It is shows that there is a significance relationship between the level of patience towards problem solving and mathematics achievement. There is no significant relationship between the level of confidence and willingness towards problem solving and mathematics achievement. Finally, the researcher draws conclusion and recommendation based on students' attitude towards problem solving and the ways to improve students' achievement in mathematics.

Sapkota (2011): studies on "Causes of failures in mathematics at school" of public school in Lalitpur district with the objective to find the cause of failure in mathematics at secondary level to identity the strategies taken by the school in improvement of mathematics achievement. This research design was qualitative as well as descriptive in nature. The respondents of the case study were students, corresponding parents, teacher and head teacher. From the case school six low achiever students including three boys and three girls were selected according to different family background and performance in mathematics examination. To collect the primary and secondary data school documents, observation note and interview guideline were used. The result of this research was classroom practice and the curriculum was closely linked. Achievements of students is always affected by different variables such as schools learning environment, facilities at home, classroom environment, school policies, mathematics instruction, assessment at classroom. Teachers' expectation from students can have a direct influence on their learning and achievement. Teachers generally are expecting less academically from girls than from boys and treat girls quite differently from the way of boys are treated. Boys are praised for their ability when they do well, and criticized for not working hard when

they don't, whereas girls are complimented on their hard work and neat performance when they succeed in mathematics; they are told they not bright when they fail. Boys also are attended to teacher more than girls, they receive more help from teacher on area which they have problems academically and are called on more often to give answer in class. If expectations of future successes are low, or if these successes are discounted, students will withhold effort and will avoid contact with the subject in the future. The small difference found between boys and girl's performance nearly disappears when the students have taken the same courses (Chipman & Wilson, 1985).

Bhattarai (2015): studied on topic "causes of low achievement of girls in mathematics at secondary level" and conclude that

- Effective classroom teaching such as pleasing environment, less use of instructional material appropriateness to teaching, participation to discussion, activity have strongly positive effect of mathematics achievement of students. It concludes that the effective classroom teaching is very essential for increasing the mathematics achievement of girl students, So, It should improve.
- Peer's behavior i.e. peers help in learning mathematics; discussion with peers for their mathematical problem had strongly positive effect on mathematics of girl students.

Gaha (2020): Made a research entitled "A study in factors affecting in learning mathematics." With the objective to study the factor that affect in learning mathematics of Magar students. The tools for the study were administrated fallows:

- In depth interview
- Written document
- Participatory observation

In grade 6, 7, 8 only four students. And conclude the following result:

- The language plays a vital role in mathematics learning. Due the lack of proper understanding of language that's creates the difficulty in mathematics learning.
- The culture also plays a vital role in mathematics learning. Due to unmatched culture at home and school, that arise the difficulty in mathematics learning.

Culture, society, students' interest are also the major factor that affect for students in learning mathematics.

Kandel, (2067): Made research entitled "factors affecting in learning mathematics: A case study of pode students in Kaski district" in a sample of all students at grade 7, 8 & 9 and only five students were selected purposively for the study. From this research, the standard of the pode students described in course of promoting to higher grades and also find the marks obtained in mathematics by the selected students to be affected by their age factor, the environment they got at home and their growing responsibility.

### **Research Gap**

From above discussion of the related literature it is understood that the students have less interest in mathematics and no desire for mathematics studies, So many issues and causes in related indifference towards learning mathematics. The researcher wants to know. Exactly why students don't want to study mathematics and

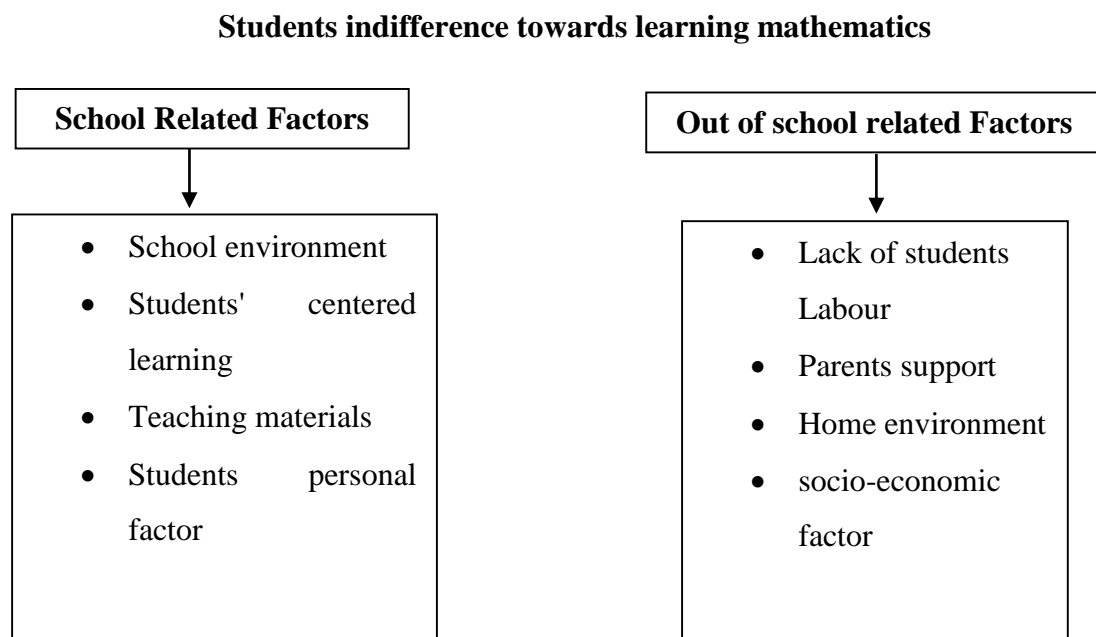


why students indifference towards mathematics learning. And so many research are already had done but there were no any research about the topic students indifference towards learning mathematics so I found that there is a research gap and I selected that topic.

### Conceptual Understandings

A conceptual framework is made to find out the causes of students indifference towards learning mathematics at secondary school in Kaski district, which deals directly or indirectly to school related and out of school related factors. Students indifference towards learning mathematics may depend under different variables. Those variables are shown the following framework.

**Figure 2.1: Conceptual Framework**



*Sources: Bhattarai, P. (2015) & Pant, G. (2014)*

Affecting Factors from the above conceptual framework, these affecting factors were as follows:

### **School Environment**

The school environment also affects students' math learning. Only if the school environment is related to mathematics learning can positive results be achieved towards mathematics learning. The school environment includes everything within the school premises.

### **Teacher's Behavior**

Teacher behavior is another factor that affects the learning of students. In most of the schools mathematics teachers are male and they give priority to talent students most of them were boys. Therefore students towards learning mathematics.

### **Effective Classroom**

Effective classroom includes teaching materials, students' participation in discussion and pleasing environment. If the classroom teaching is not affective, it decreases the performance of all students in mathematics.

### **Peer's Behavior**

If the peer's behavior is co- operative then its brings improvement in the performance of mathematics. But if the peer's behavior is not co-operative it decreases the performance in mathematics. Generally boys tease girls in school and girls feel fear from such behave and therefore their performance in mathematics become low.

### **Out of School Related Factors**

There are some student related factors which directly or indirectly influenced the achievement of Girls students in mathematics. They were Interest of learner, family background, and time variable.

**Interest of the learners**

Mathematics is one of the important subject in school curriculum. It is very difficult subject then other subject. So students are afraid from mathematics. Most of the students are interested to study Nepali and other subjects without mathematics. And then students are less interested in mathematics learning.

**Family Background**

Family background is one of the affecting factors contains in out of school related factors. It helps to make interest in learning mathematics. So it is a also main factor for learning in school.

**Time variable**

Time is also an important factor in influencing students' math learning. Many students are not able to devote time to mathematics studies due to their busy schedule. As a result, students are becoming more and more indifferent towards the study of mathematics. In this too, most of the girls are too busy with their work and cannot give time to study mathematics, which leads to depressing results towards mathematics, which also leads to increased depression towards mathematics.

This research tries to test the above model by questionnaire and interview to find the causes of student's indifference towards learning mathematics. School environment, effective classroom and teacher's behavior are strongly correlated with achievement. If school environment is suitable for teaching learning activities, then students achievement also high. On the other side interest of learner, family background, peer's behavior also directly proportional to the achievement of students.

## **CHAPTER III**

### **METHODS AND PROCEDURES**

This chapter explains the design of the study population of the study, sample of the study, the instrument used to collect the data, procedure of the data analysis, analytical design of the study and data analysis procedures used in analysis and interpretation of data.

#### **Philosophical consideration and research paradigm**

Data for this study are obtained from the face to face in-depth interview. An interpretative research paradigm was used to explain the ontological, epistemological and methodological assumption (Guba & Lindoln, 1994 as cited in Pokhrel 2020). The interpretive research paradigm is fundamentally concerned with generating meaning to students indifference in learning mathematics. This study is fundamentally concerned with generating meaning through the interpretation of the events based on the situation (Poudel, 2018).

This interpretive study focused on multiple perspectives, subjectivity and independence of the individual because the study assumed that there is a multiple meaning which may differ from person to person, society to society and no meaning is right or wrong rather all are equal important. I argue that the students opinion of this study are varying and they have different belief, events, attitudes, interests, and thoughts in learning mathematics. This study attempt to seek why students indifference learning mathematics and analyze the cause of students indifference in learning mathematics.

In this study, the nature of reality is subjective, socially constructed, internal, and external experience and meaningful (Tylor, 2005 as cited in Pokheral 2020). The ontology of this research is that multiple reality is individually constructed. I am interested with my participants to get information on why students indifference learning mathematics and what are the causes of indifference in learning mathematics. Thus I have captured the different belief, thought, interests and attitudes of the participants and the challenge towards learning mathematics concerning different sources such as home, school, society and personal sources with experience through their narrative. In my research, I have developed my epistemological consideration through an in-depth interview and through interaction between the students.

### **Design and Methods of the study**

This research aims to find the students indifference towards learning mathematics at grade IX. And also, to analyze the causes for indifference in learning mathematics of grade IX. For this study researcher had used qualitative research design, qualitative research means For the purpose of studying a situation, event, process and problems, non-statistical data measured in nominal form and ordinal scale or literally collected and analyzed by a logical method to reach a conclusion is called qualitative research. Therefore, in this study, a specific event and situation had to be studied, so the researcher had used a qualitative research design with narrative inquiry methods. Narrative research is a qualitative research method in which the researcher analyzes the details of one or more people's lives, experiences, and events, and presents the summary that emerges from it (Dr. Khanal 2076). Therefore researcher had used narrative inquiry methods. And to collect the data for this research the researcher had used in-depth interview.

Moreover through the process of participants' inquiry, at first, I took in-depth interview with each student of different phases of their story about the indifference of learning mathematics. Then I transcribed it into narrative form generated the themes. After that I proceed with the interpretation of narratives with meaning making. Narrative inquiry in a sense is a total set of participants stories and experience that helps researchers with ideas. The story told by the students in this study attempt to explain, understand and account for experience to construct stories through the process of reflection on experience (Poudel, 2018 as sited in Pokhrel, 2020).

### **Population of the study**

Every research needs a population. The population of this study was taken secondary level students of grade IX of 3 community based secondary schools (207 Schools in Pokhara metropolitan) of Kaski district. And 2 private school in Kaski district. And One student from each school had selected as a sample.

### **Sample of the Study**

There are 386 schools in Kaski district Pokhara metropolitan. Among them 179 are private schools and remaining 207 are community-based schools. For the sample of this study researcher had chosen community based schools and private based school because the problem was shown in the community based schools and private school both. Out of 207 community-based schools, the researcher had selected community base<sup>3</sup> secondary schools and 2 private school were selected for sample by purposive sampling method. Purposive sampling method is a type of non-probability sampling technique. Purposive sampling mean According to the objective that the researcher is researching. The purposeful sample selection method is the method of choosing a sample by one's own intelligence and conscience to fulfill that purpose.

This method is quite popular and widely used if complete list of population is available. Therefore, those five students are the sample population in this research.

### **Tools and technique of data collection**

To conduct the narrative inquiry, researcher had prepared a set of interview guideline (see on appendix) on the basis of conceptual framework. For this researcher set the open ended questionnaire. Questionnaires that allow respondents to openly express their opinions are called open ended questionnaires. In such a questionnaire, one can answer using free expression in one's own language style. Also taken unstructured questionnaire to take interview with students. In an unstructured questionnaire, the questions are not specifically structured and tested. The researcher can be used structured or unstructured questions to collected the qualitative data and also researcher can be asked the unstructured questions if needed. And for the record of data The researcher asked one by one question and get answer from the students and record it.

### **Meaning Making**

The data collected through interview with students was narrated in the form of a story. I have analyzed each story and interpreted the narrative relating it to the conceptual framework of the study. Five cases were analyzed and compared to the theme of each narrative. Thus, the process of data analysis of this study included transcribing, coding, constructing five narratives. Each narratives was analyzed and compared with the themes, after that meaning making was done concerning the research questions.

### **Quality standard**

The final draft of the thesis was given experts to judge the quality. This study presented a rich, thick description of data. Denzin (1989) argue that when the reach, thick description aligns with the state perspective of the researcher, the study is trustworthy. Regarding, credibility, conventionality known as internal validity, establishes the participants, perspectives as the determent of believability (Nugent, 2007, p.60 as cited in Pokhrel, 2020). Member checking was done by requesting the participants to review the transcripts of the interview. The similarities and dissimilarities of the finding were compered to previous finding to generalized with the other context. Khanal, (2076) argue that transferability is achieved by a thick, description of a wide array of information from the data collected to make transference. I have provide rich data and thick descriptions to achieve the transferability standard.

For maintaining dependability in This research, the interview were taken without any pre-assumption. I had focused upon a real view and had not affected my belief while coding, theme generating, analyzing and meaning making processes. For maintaining the conformability of my research, I had collected data in a natural setting giving the reader a clear track of data and interpretation. The raw data were collected through mobile recording, phone cell recording. Data reduce and analysis included summaries from field notes, transcripts preliminary coding and thematic analysis and inclusion of the field notes (Khanal, 2076).

### **Ethical consideration**

To maintain the ethical consideration, Firstly I make sure the participants that their privacy are secret. The study is carried out with informed constant from the



participants. However, before conducting the interview the objective and the study procedure were verbally explained to each interview individually. Only those their constant agreeing to participate in the study were interviewed. The privacy of the respondent was maintained and withdrawal for the study of the interview was accepted at any time. Codes were used instead of the participants name for confidentiality. The research was conducted with care and respect for the research participants. I used pseudo names for the participants to make sure their privacy are secret.

### **Data Collection Procedure**

Data is the foundation of any research. Therefore, collection of reliable data is very essential part of all types of research. The researcher fixed the meeting to the sample students to collect data. Where when the students can gave time researcher meet with the students and take the interview with the students By the used of open ended and unstructured questionnaire, the researcher took the students attitudes and causes of indifference towards learning mathematics. After receiving the answers from each student, the answers will be integrated and conclusions will be drawn.

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

After the completion of data collection, the responses received from each student will be recorded separately and concluded from common points and theme generated. The responses from interviews were analyze by using their own words and then researcher had described in brief. After I have taken the answers from all my participating students in my study, I organize those answers in one place and generate themes from everything. In qualitative research, as in quantitative research, numerical data is not obtained, but literal data is obtained. Such data are in the form of field notes, document information, verbatim conversion of interviews, etc. Data analysis of

this type is done by organizing, integrating, searching for important patterns and principles, and interpreting new information.

Data reduction is done from the beginning to the end of the data analysis. In the initial stage, the data is edited, separated and summarized. In the last stage, coding, memo writing, concept identification are done, while in the last stage, the theoretical concept is created and the final conclusion of the study problem is drawn.

## **CHAPTER IV**

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

This is the qualitative research related to find the students indifference towards learning mathematics. This chapter highlights the interpretation of the collective data and its analysis. In this research researcher selected 5 school by purposive sampling methods and each of them one by one students selected by purposive sampling method.

#### **Students indifference towards learning mathematics**

This is an in-depth inquiry research related to the students indifference towards learning mathematics at secondary level. This chapters present the result of collective interview data which are taken from students of grade IX at Kaski district Pokhara Metropolitan.

From the list there are 3 government school and 2 private boarding school are selected by the method of purposive sampling. Total 5 students, each students was selected from each school. The questionnaire consist twelve statements which were developed and constituted under the guidance of supervisor. Questionnaire was the main tools for the collection of data in the research.

In this study researcher used in-depth inquiry research method and to collect the data use the various sets of questionnaire. First of all researcher take the interview one by one to the students separately and grouping the collective answer. Then for the analysis of the study combine all the answer which are collect from students and finding the main reasons of students indifference towards learning mathematics.

In this study 5 students were selected as a sample and take interview by open ended questionnaire and they are as follows:

### **Ranjana's story**

Ranjana Subadi (Name change) was the students who study at Shree Barahiehigher Secondary School, Malepatan5 Pokhara Kaski. She is brilliant students in that school. She read in class IX. In this study she is one of the participants which is selected for this research and I collect the answer of my research question directly and indirectly. The story of Ranjana Subadi are given below:

It was January 28, 2022. I fixed the day and time to meet one of my participants in this study, Ranjana Subedi. She was studying at secondary school. I made a phone call to her and ask to come at my restaurant. During our first conversation, I had informed her about the purposes of this meeting. So we began our conversation with demographic information, and then the interview questions were asked seeking the information on students indifference towards learning mathematics.

First of all I requested to discuss about her educational journey, she said, "Looking at my educational status, the results are better at lower secondary level and primary level than at secondary level. In primary and lower secondary level my achievement was well than secondary level. Even the subject mathematics I achieved well result. But in secondary level my achievement is not well. I'm only a average students. Even I think mathematics was not hard up to class eight but after class eight this subject seemed hard and I started to lose interest in mathematics. Remembering formulas was difficult for me. I liked to study mathematics but whenever I think mathematical formulas then I scared."

Similarly we discussed about her opinion in mathematics and application of mathematics in our daily life, she said, “mathematics is a subject which led us to survive in daily life. I think mathematics is the important part of human life. Without mathematics we cannot amazing about human life. Anybody who did not see the school and who did not read the mathematics subject in their life they are also use the mathematical expressions in their life. So I think mathematics plays the vital role in our life.

Then I asked her about her mathematics teacher performance in classrooms, she said that “he is very wonderful person and talented man. Always trying to teach a new thing to us. He always motivated to us towards learning mathematics and always interactions with us. But he doesn't use any teaching materials are in classrooms.

Again we discussed about her interest in the mathematics, She said that “I like mathematics subject as well as other subject I am not fearing to solve mathematical problem but whenever the mathematical questions can do and solve I am excited. Only I cant remembering mathematical formulas. And also mathematics is not difficult than other subject. Mathematics is practicable subject whoever practice mathematical problem more and more they can learn easily. In my case I have not enough time to practice the mathematical problem so I did not selected optional mathematics. In other hand I heard mathematics is difficult subject and only talent student can study optional mathematics then I think I also can't study optional mathematics so I didn't selected optional mathematics.”

Again we discussed the challenges of learning mathematics related to school and the classroom. She said, “the challenges towards learning mathematics are: lack

of practice, traditional teaching strategy, remembering formulas and not teaching the basic concept of mathematics.”

At last we discussing home and society and asked her if she had sufficient time to study mathematics. She said, “if I had sufficient time to practice the mathematical problem I am selected optional mathematics. My father was farmer and my mother was house wife so our family background was not good so because of that I had to support only my brother, so I didn't have enough time for reading properly and it was difficult for me. My brother motivate me to study mathematics but when I think about mathematical formulas I scared.”

### **Suzata’s Story**

Suzata Kunwar (Name change) was the students who study at Shree Navin Higher Secondary School, Gairahapatan 5 Pokhara Kaski. She is disciplined students in that school. She read in class IX. In this study she is one of the participants students which is selected for this research and I collect the answer of my research question directly and indirectly. The story of suzata kunwar are given below:

It was February 2, 2022. I met the next research suzata kunwar. She was from Bagaletole Pokhara. I took her time and told her the purposes for my meeting. Similar question were asked to her as well.

We discussed her interests in mathematics. She said, “Nepali is the subject that I like most and math is not like rather than Nepali. The reasons behind this is, I feel mathematics is a difficult subject because it needs more and more practice and mathematical formula are hard to remember to me. Even single questions need to be practiced many times so, mathematics is not easy subject for me.”

We talked about the application of mathematics in our daily life. She said, “Mathematics is an important subject in the daily life of a person. Mathematics has made it easier for people to live. The use of mathematics is found in every subject somewhere. From the our daily life to the high level business and developmental work of nation are used mathematical term. So I think math is a part of human life.”

We also discussed the challenges towards learning mathematics then she said, “mathematics is all about practice. With out practice cannot understand mathematical term So I selected economics. A very intelligent students also can fail if the students doesn't practice it properly. I cant understand mathematical formulas. So I lose my achievement in mathematics.”

Again, we discussed the teacher of her school and she said, “when I m in primary level generally I got good marks so my teacher was happy. But now I did not got a good marks in mathematics. Our mathematics teacher was friendly he wants to read well and doesn't give his focus only to one students rather he pays attentions to each of us. Our teacher only punish the students if they commit a big mistake otherwise they counsels us. And when the teacher punish us I m afraid.”

Then I asked “school discrimination affect the learning mathematics” what did you think about that statements? She said, “I agree with the fact that school discrimination affects students in mathematics learning because students spend a lot of time in school because the school environment, classroom environment, peer group status, teacher behavior are directly connected to student learning in learning mathematics.

We also discussed her home and social factors in learning mathematics. She said, “I have sufficient time to study mathematics and I also help my mother in

household courses. My parents really help to me for learning mathematics. In my house there are my mother, father, my younger brother and myself. My father was driving taxi and mother was house wife so my father was study only literacy and my mother did not study only can study Nepali word and my younger brother was study in class seven. There was no pressure for me. They always said to me which can you do you do the best in that subject. I want to study more at school than studying at my home because in classrooms we can discuss it in my friends. “

### **Samir's Story**

Samir Subedi (Name change) was the students who study at Shree Sitaladevi Higher Secondary School, Sitaladevi Ranipouwa Pokhara Kaski. He is brilliant students in that school. He read in class IX. In this study he is one of the students which is selected for this research and I collect the answer of my research question directly and indirectly. The story of samir are given below:

It was January 26, 2022. I met with Samir Subedi. He is my neighborhood as well as like my brother. We set in his house and maintain social distancing then I started the interview. I had already told him about my purpose for this meeting. So we began our conversation and seeking the information on students indifference towards learning mathematics.

I asked him about his opinion in mathematics and the role of mathematics in our daily life. He said “it is like a game I always excited to solve mathematical problem because we easily get solutions if we know the mathematical formulas and where is have to used. Mathematics is practicable subject than other subject. If we practice mathematical problem more and more they can learn easily of the mathematics. But without practice mathematical problem can't solve. Mathematics is



important subject in our daily life. I think math is part of life. Mathematics is an integral part of human life. The use of mathematics in every sphere of life is frightening. Without math, human life cannot exist. Mathematics is an integral part of human life just like math is used when we buy some goods in the market, pay bills, do normal chores at home.”

Similarly we discussed about the teaching materials and its application in math. He said, “The role of educational materials in any learning is very big. A variety of complex processes can also be easily achieved through the use of educational materials. In terms of math learning, most complex math activities can be easily learned through educational materials. Using solid objects in geometry, its area, its volume, its perimeter etc. can be easily learned. In our class our mathematics teacher only use geometrical solid shape rather than others materials.”

Then I asked him, is mathematics harder than other subjects? He said, “Mathematics tends to be hard on human nature. I think math is not harder than other subject. I am an optional math subject student. So I think math is an easy subject to practice, but if we don't practice it than hard to study mathematics, mathematics is not as hard a subject. It depends on our practice.”

The we discussed about teacher performance in classrooms, he said “our mathematics teacher is capable and friendly but sometimes angry with us if we did not doing which he said. When he enters the classroom he checks the homework and asks if anyone has a problem. If there is a problem with someone, if there is confusion, he seek the solution from the students. Even if its solutions doesn't come from the students, he solve it by himself.”

Similarly we discussed about his family background and economic status then he said, “There are four members of my family including my sister, mother and father. The father is a teacher in a boarding school. The mother looks after the house. The sister is studying in class 12. We have our own agricultural firm. My father is a teacher, so I don't have a lot of financial problems in my house. He has fulfilled all the requirements from school to home.”

The I asked him, your teacher, parents, friends really help and support for learning mathematics? He said, “My father's hand is most behind my elective mathematics study and my sister's hand is also behind it. He always said that son should never be weak in mathematics. Even at school, my math teacher always encouraged me to study academic mathematics. So I selected optional mathematics as my elective subject.”

### **Govinda’s Story**

Govinda gurung (Name change) was the students who study at Samataa Sikshya Niketan, Parshyang 5 Pokhara Kaski. He is one of disciplined students in that school. He read in class IX. In this study he is one of the students which is selected for this research and I collect the answer of my research question directly and indirectly. The story of Govinda Gurung is given below:

It was on January 27, 2022 I was looking forward to meeting one respondent of this study who is Govinda Gurung. I called him and fixed the time at 6:30 pm and went her home for the conversation. I had already told him about the reason behind our meeting. I requested him to share his interests towards mathematics, he said “mathematics is practicable subject than other subject I feel mathematics is hard subject even in our school optional mathematics is necessary for all students. I listen

optional mathematics is more difficult than compulsory mathematics then I m loose my interests towards mathematics so my favorite subject is English. Specially the formula of mathematics is difficult for remembering for me. So mathematics is harder than other subject for me.”

Again we talked about the teaching strategy of teacher. He said that “our mathematics teacher performance in classrooms is all fine but he didn't use teaching material in mathematics class. Only theoretical knowledge which we learning in mathematics.”

Then we had a discussion on the response of teacher and his score in mathematics. He said that “my teacher encourages me, he tells that me to study well. He motivate me if I don’t know how to solve a problem, if I don’t know how to solve a problem. My teachers are encourages me but my mathematics achievement is not well rather than other subject.”

Similarly we discussed his home and social factors in learning mathematics. He said, “I have sufficient time to practice and study and I also help my mother in household courses. My parents really help to me for learning mathematics. Especially my mother motivated to me for learning mathematics. Because my father is Nepal army so he didn't stay at home up to one month during vacation. My mother didn't study sufficient so she didn't know how to solve mathematical problem but she said study well to me.”

Again we discussed about the implementation of mathematics in our daily life. He said “Mathematics is a subject. A lot of people live in the daily life of a suitable person. Mathematics is used in almost every activity in the world. Mathematics is

used in everything from development to small household chores, so the role of mathematics in our lives remains mathematical.”

Lastly we discussed the challenges and barriers to learning mathematics. He said, “many students skip the mathematical problem which they feel hard. They only solve this problem which they can be solve easily. This is because many of us can't ask the question of our mathematics teacher freely. In other hand concept should be cleared by the teacher but most of the time we are confused because of lack of concentration and also due to laziness. We didn't give properly time for reading and practice of mathematical problem.”

### **Sujan’s Story**

Sujan Kunwar (Name change) Was the students who study at Balparbhat Boarding School New Road Pokhara Kaski. He is one of disciplined students in that school. He read in class IX. In this study he is one of the students which is selected for this research and I collect the answer of my research question directly and indirectly. The story of Sujan Kunwar are given below:

It was February 1<sup>st</sup>, 2022 I was looking forward to meeting one of the students who are participate in this research Sujan Kunwar. I already told him the purposes of this meeting. At 6:30 pm I called him and fixed the time and ask to come at my restaurant. And after some time he came. He is also my students of the tuition class.

First of all I requested to discuss his thinking in mathematics and role of the mathematics in our daily life, he said, “I think mathematics is important things and subject of our life. Mathematics is an indispensable subject of our life. We cannot

even imagine our daily life without mathematics. We use mathematics in one way or another from morning to evening so mathematics is very important in our life.”

Then we discussed about his school discrimination and teachers behaviour, he said, “our school is pocketed at new road Pokhara. In our school there are science lab, library, computer lab. Our teachers are really helpful and friendly they always motivate to us towards learning mathematics even others subject. In that case of our mathematics teacher h he is helpful and energetic person he always motivate to me for learning mathematics.”

Then we discussed his family background and economic status, he said, “I have a sister in my family who is older than me. She has not studied mathematics as an elective subject. My parents have not studied much so they do not say anything about studying mathematics in the family. My mother was house wife and didn't educated. And my father was study only literacy and he is driver. He can't give properly time to me for suggesting me.”

Then I asked, “Economic background really effect in learning mathematics” what do you think about this statement. He said, “The family's financial situation at home affects not only the student's learning of mathematics but also the learning of every subject but some students with poor financial status also seem to have studied mathematics well but most of the students who do not have good family finances have to drop out of class due to financial situation.”

Lastly we discussed the challenges and barriers to learning mathematics, he said, “the challenges towards learning mathematics at secondary school are students didn't practice the mathematical problem sufficient and if students have confused any mathematical problem they are scared to asked the teacher because they did not want

to show up their weakness to others. Most of the students are run the class without understanding the mathematical expressions and terms. I also don't like asked questions to teacher because I thought teacher punished to me.”

## CHAPTER V

### MEANING MAKING AND DISCUSSION

This chapter contains a discussions of the main concept that emerged from stories.

#### **School Related Factor:**

Mathematical learning was also found to be influenced by school-related factors. The school environment, the classroom environment, the teacher's reaction in the classroom, the condition of the use of educational materials in mathematics, peer group and environment, etc., seem to have influenced the student's mathematics learning. The students' indifference was found to have increased. On the other hand, due to the perception that mathematics is difficult in thinking, students are found to be indifference towards learning mathematics.

#### **Student's Personal Factors**

After analysis of students narrative, it seemed that themes students are afraid the subject of mathematics. Students start losing their interest in learning mathematics when They ranked lower (low achievement) in an examination, or did not found its implication in daily life, and because of the fear or tension created from exam (Acharya, 2017 cited as pokheral,2020). So that the students did not give proper time for practicing mathematical problem. The remembering that mathematical formulas are difficult to remember was also found to affect mathematical learning. Suzata Kunwar, Sujan Kunwar, Govinda Gurung are felt that mathematical formulas are difficult to remember.

## **Mathematics Achievements**

Ranjana and Suzata are community school students. In primary level they got proper marks and passed exam but consistently in lower secondary level they lose their marks in mathematics and also in secondary level they lose their interest towards learning mathematics. It seems that mathematics achievement is directly related to interest in learning mathematics.

But Samir is also community school student and he knows how to practice mathematics even he wants to study mathematics and selected optional mathematics too. So, if students know how to practice mathematical problems more and more they can learn easily.

Similarly Sujana and Govinda are private boarding school students and they had got good marks in lower class and average marks in 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup> class. They said that English and social were their favorite subjects than mathematics. They didn't get marks in mathematics, so they did not like to study mathematics.

## **Teaching Materials**

Educational materials also affect students' learning. Most teachers are not interested in teaching using educational materials while teaching subjects using mathematics. While teaching the use of educational materials in subjects like mathematics, the most difficult mathematical processes can be easily understood by the students. Mathematics has not become popular among students due to lack of use of educational materials. In order to change a student's attitude towards mathematics, it is necessary to teach mathematics in an interesting way. Samir said that, his mathematics teacher used only geometrical instruments whatever available. But



comparatively Suzatas, Sujan, Ranjana's mathematics teacher are not used any mathematical instruments.

### **Student-centered learning**

Student-centered learning is promoted to improve the students' responsibility on their own learning, which will inspire their passion and achieved a better result (Chen & Yin, 2011). Appropriate learning skill is essential in ensuring students' success in mathematics courses. In a study carried out by Zakaria, Chin & Daud (2010), student-centered approaches such as cooperative learning improve mathematics achievement and attitudes towards mathematics among students and thus changing the practice of teacher-centered teaching methods to student-centered teaching methods is important. Similarly Samir said that, "our mathematics teacher is very punctual and interactions with all students in class and asked questions if have problems". But Sujan said that "I did not asked any questions to our teacher if I had problem because I feel shy". A study conducted by Ganyaupfu (2013) indicated that combining both teacher-centered and student-centered teaching methods is the most effective approach that produces best student results. He also found that, student-centered teaching method is an effective teaching approach rather than teacher-centered method which produced lower significant results.

### **Classroom Environments**

Suleman and Hussain (2014) reported that studies on the classroom environment revealed that physical environment plays a vital role in the teaching-learning process. A lot of studies have been done on how classroom environments have the influence on the success or failure of students in universities. Turano (2005) identified four factors of classroom environment namely physical environment, time

and instructional management, behavior management, and teacher effectiveness. The classroom environment includes many different features. The environment can include the placement of tables and chairs, lighting and temperature, classroom management, discipline techniques, and engaging lesson plans (Suleman and Hussain, 2014). Altamimi (2017) stated that students' performance is related to physical location and facilities, general attractiveness of the facilities, ventilation of the classrooms, lighting and colors of the learning environment. Similarly all the students said that their classrooms management are well.

Some researchers suggested the physical classroom environment had a positive influence on student achievement. McDaniels (2012) stated that a well-designed and organized classroom could help to improve morale and success of the student. According to Fiske et al. (2014), inadequate lighting, noise, low air quality, and lack of heating in the classroom are significantly related to unsatisfactory student achievement. However, the study done by Tosto et al. (2016) found that the classroom environment has no significant influence in students' achievement in mathematics once intrapersonal factors (math interest and academic self-concept) were considered in their study.

### **Out School Related Factor**

The out-of-school environment also has a greater impact on math learning. Especially things like family educational status, family support, social attitudes, socio-economic status etc. are the elements outside the school. Especially in society, it is difficult for a daughter to study mathematics. It is a difficult subject. On the other hand, even though there is no educated parent in the family, there is a problem in learning mathematics due to lack of support on how to read mathematics.

## Home Environment

Home environment is another important aspect of learning mathematics.

Home is first school of child and mother is first teacher (Acharya, 2017 p.13). In that case Ranjana's home environment is not good. All children education depends on their home environment. Good home environment enhances students' achievement in mathematics. Uneducated person unaware about the importance of mathematical knowledge in their life and they cannot force to learn mathematics to their child. Students pass in mathematics from all schools depends on their home environment and they learn everything from their family member characters and their society behaviors in this study parents are not aware in child education. On the basis of these situations the researcher concerned with students,

Suzata's and Samir's home environment are good rather than other participants.

Samir said:

*I m local citizens in Pokhara and weather the economic, social and individual condition are good. But in the case of Ranjana she left home and came to Pokhara for study. Mathematics teacher, head teacher and parents. In the line with discussion, the following views of students were stated here related to home environment. Some students say we have no any support from my home to learn mathematics. Because my parents were busy in farming and my families are illiterate I have supported in household work.*

Another supported views of mathematics teacher towards home environment of students as given students cannot give more time to learn mathematics because they are busy in household works. And parents have no concern about their child

learning. So students were weak in mathematics. Students bound in other subject instead mathematics.

Similarly, the supported views of head teacher towards home environment of students are given as we are illiterate and we cannot support to child education. So it did not prescribed him to pass in mathematics, another view of head teacher is most of the students our school are from poor and uneducated family background. The children are busy in household work instead of doing homework so that they become weak in mathematics and they are bounded in other subject. On the basis of above mentions view of students' mathematics teacher, head teacher and parents, students are busy in their household work. Students cannot read in home. Students have no any support person in their home to learn mathematics.

### **Parent's Supports**

Parents' support is one of the important aspect of parents factors studying mathematics. Parents who play supportive role to their children learning and it is helpful for improve students' achievement and changing behavior parents' support can play a vital role at all stages of education. Parents achieve support for their child's learning can make good achievement in education (Acharya, 2017p.11). School can befit from positive partnership with parents by involving decision making. process which affected students pass in mathematics. The supportive views respondents on this problem are as follows.

Sujan and Ranjana said that:

*Our families economy condition is low class regularly and my family cannot able to support in mathematics learning. So we did not study mathematics very*

*well. Others students replied as mathematics is harder than other subject. So we can not study mathematics". The children of those families are busy in household work instead of doing homework. Students become weak in mathematics and they are bounded in other subject. The views of some parents regarding above response as mentioned as I am illiterate man I don't know what mathematics is and what others subject is. Also I cannot able to support in child learning. Other parent replies as in our family there are no any people to support learning mathematics. (Interview recorded; January 28, 2022).*

These above views represent the real situation of students. Most of the parents of public secondary school they are illiterate. They cannot able to support children in learning mathematics. The children of those families are not interested to learn mathematics due to family support. Consequently, students did not Pass in mathematics in secondary level. So, students pass in mathematics is low. Ghimire (2011), argue: "family support play vital role in children education." Students need and interest are determined by their family support. In this regard Ausubel argue that students learning achievement depend on their need and interest." The researcher concluded that those students who could not take support from their families. They did not pass in mathematics. Hence one major cause of low students passes rate mathematics in school level.

### **Socio-economic Factors**

There are gender disparities that also affect achievement in mathematics. Studies revealed the belief that boys do better in Mathematics than girls. This belief tends to affect the attitude of girls towards Mathematics. In comparative studies, comparing girls to boys, girls lacked confidence, had debilitating causal attribution

patterns, perceived Mathematics as a male domain and were anxious about Mathematics (Ayebale et.al. 2020). So Girls were found to have lower self-confidence in Mathematics than boys. Similarly Ranjana said that her social aspect is boys students only can study mathematics than girls students.

Suzata said:

*Her society thought girls can't study mathematics, science like that subject so she thought she was also can't study optional mathematics so I didn't selected optional mathematics.*

### **Lack of Student's Labour**

It is another and importance aspect of out school related factors that affect in students in learning mathematics. Mathematics is needed practice which has different theory and several formulas. So learning of mathematics, students should be manages extra time for practice. Generally mathematics achievements determine students labour in present situation; students are not laborious in mathematics learning (Acharya, 2017). Consequently, mathematics achievement of students was diseasing. It was affect on student slow pass in mathematics. Student's labour is responsible for students following views of mathematics teachers were stated here related to students labour in learning process of mathematics. In that case the supportive views respondents on this problem are as follows.

Suzata and Govinda said:

*Time is enough tousfor practicing the mathematical problem but we feel boring and did not practice mathematical problem. There are many formulas which have to remember and use it. Which I think hard and only homework are doing*

*for overcome the teacher punishment. We did not give properly time for reading and practice of mathematical problem.*

Some mathematics teacher says students do not try to learn mathematics and do not want to do extra labour. They are engage in unnecessary task in the class room during learning process. Mathematics is more complex subject to understand then other subject. But students are not serious to do hard labour in the process leaving mathematics but in reality students did not give more time to learn mathematics the supported views of head teacher towers above response as given students aim to pass the exam without doing hard labour. Than tend to spend few time to prepare exam. So, most of the students choose economics and geography instead of choosing mathematics and another support view of parents towards student's labour in learning mathematics is given as our economic condition is weak because of traditional agriculture. Our children are bound to help us in farming. Children have no time to learn in home. The above view of mathematics teacher, head teacher and parents indicate that most of the student did not have sufficient time to learn mathematics. Students are engaged in unnecessary task instead of teaching activates. Some students are busy in their house hold work because they are busy in house hold work and farming. Students have no time in their home to learn mathematics. They want to pass the exam without doing hard labour and practices in mathematics. Consequently, students did not interest to study mathematics. In this regards Thapa (2011) argue that students should ready for extra practices for batter performance in mathematics. Those students are not manage extra times and ignore for doing practice. Obviously, they would be weak in mathematics and they are unable to pass in mathematics.

## **CHAPTER VI**

### **FINDINGS, CONCLUSION AND IMPLICATION**

This chapter is basically concerned in deriving some findings and conclusions from the discussion of the previous chapter. Besides findings and conclusions, it has some recommendations which would be useful for further studies and educational implications.

#### **Findings of the Study**

Mathematics is the most useful subject in our daily life. So it is taught at every level of our formal education. But most if the student fails in this subject. It is due to lack of qualified teacher, lack of math lab, access of internet, lack of trained teacher, lack of teaching material, due to backward society due to lack of educated guardians all these factor becomes cause of low achievement in SLC examination. So that researcher had tried to study with purpose to determine the factors that affect student indifference towards learning mathematics at Kaski district Pokhara metropolitan.

For this study 5 students from 3 community based schools and 2 private school of Kaski district were selected by the method of systematic sampling for taking data by interview. For this researcher set the open ended questions were asked for interview with students to find students indifference towards learning mathematics. And To analyzed the impact of indifference towards mathematics learning of grade IX.

On the other hand, 12 open ended question were designed for interview with students and the questions were asked for purposively. The narrative inquiry methods



was used to find the students indifference towards learning mathematics at grade IX. For this first of all collect the data one by one and analyze separately. And also open ended questioned were asked to find impact of student towards learning mathematics. The collected data were analyzed following major findings of the study.

- It is found that gender basis society is main factor for students indifference towards learning mathematics.
- It is found that the thinking of mathematics is harder than other subject is main factor of student's indifference towards learning mathematics.
- It has been found that teaching learning process, use of teaching materials, social aspect, and teacher performance as well as parents' expectation, and beliefs impacted student towards learning mathematics.
- It has been found that home environment such as gender bias at home, parents' education, practice time given to students, parents economic background, study hour at home impacted the student towards learning mathematics.
- The school environment, such as physical facilities, classroom management, teacher student interaction, teacher behavior towards student affect the student towards learning mathematics.

From analysis most of the students think that mathematics is harder than other subject and feel difficulty in solving mathematical problems and comparing the overall meaning of mathematics and make mistake in solving the problems.

## **Conclusion**

This study tries to find out the students indifference towards learning mathematics of grade IX. After the analysis and interpretation of the data from primary sources it was found that most of students are thought mathematics is hard. It is also found that student confidence level, their anxiety towards mathematics, lack of guardian qualification, home environment, school environment, social variables as social discrimination, social culture is appeared as main affecting factors that impact student towards learning mathematics.

Thus, this research concluded that government should provide teaching materials to all schools and must give training to teacher and guardian should give more time to their children for practice in home. Also they should interact with mathematics teacher and principle to know student participation in classroom learning. Also society should change their behaviour towards children and behave equally to all children even they are girls as well as boys.

## **Implication for Further Study**

The conclusion of the study cannot be generalized to all areas due to the limitation contained in this study. Thus after analyzing the conclusion and implication of the study the researcher has made the following recommendations or suggestions for further studies.

- The study is done only in Kaski district Pokhara Metropolitan as a case. For generalization of case the study similar study should be done in a wider scope and large sample.

- In the backward society many people have narrow mind so government should have to launched the new programs which can help to change their thinking and do equal behaviour to all children.
- School should provide Orientation program and free extra classes of mathematics who did not want to read mathematics.
- Trainings are provided to all teachers and it should be made more effective.
- Government should provide mathematical lab for every secondary level school.
- Guardians should provide more time for practice to their children in home and care children what to do.
- Society should stop the social discrimination and gender bias to all children.
- Teacher should study the curriculum and follow the teacher's guide during teaching and use materials as possible and available.

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## **APPENDIX A**

### **Interview Guideline**

- What do you think mathematics is? What role does mathematics play in human life?
- Does your teacher use mathematical teaching materials in the classroom?
- Does this teaching material help in mathematics learning?
- Is mathematics harder than other subjects?
- Are you afraid to solve your mathematics problem, if so why?
- Is your teacher do interactions with you when teaching mathematics in classrooms?
- Does your parents really help to you for learning mathematics?
- “Economic background really effect in learning mathematics” what do you think about this statement
- “School discriminant really effect the learning mathematics” what do you think about this statement.
- How is your Mathematica teacher performance in classroom?
- Are you attending mathematics class regularly and do your homework regularly? If not why?
- Does your parents, friends, teacher motivate to you for learning mathematics? If not why?

### **List of the sample school**

- Shree Barhie secondary school
- Shree Sitaladevi higher secondary school
- Shree Navin higher secondary school
- Shree Samata sikshaniketan
- Shree Balparbhat secondary boarding school