

CAUSES OF LOW ACHIEVEMENT OF STUDENT IN MATHEMATICS

A

THESIS

BY

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DEGREE OF MASTERS OF EDUCATION**

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Letter of Approval

This thesis entitled "**Causes of Low Achievement of Student in Mathematics**" submitted by Mr. **Rajesh Pandey** to partial fulfillment of the requirement for the degree of master of Education has been approved.

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Recommendation for Acceptance

This is to certify that **Mr. Rajesh Pandey** has completed his thesis entitled "**Causes of Low Achievement of Student in Mathematics**" under my supervision during the period prescribed by the rules and regulations of Tribhuvan University Kirtipur, Kathmandu, Nepal. I recommend and forward his thesis to the department of Mathematics Education to evaluate in the final viva-voce.

.....

Prof. Dr. Bed Raj Acharya

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Date: 24 February 2023

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Dedication

Honestly dedicated

To

My parents

Declaration

This thesis contains no material that has been submitted for the award of another degree in any institution. To the best of my knowledge and belief, this thesis contains no previously published materials by any authors, unless due acknowledgment has been made.

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Rajesh Pandey

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Rajesh Pandey

Abstract

This is a case study research entitled “Causes of Low Achievement of Student in Mathematics”. The objective of this study was to identify the causes of low achievement of student in mathematics and to explore the way to improve student achievement in mathematics.

This is qualitative research method based on case study. This study was bounded on Bag Devi Secondary School, Mulabari Bhumlu, Kavrepalanchok. This study was only related to the student in secondary level and also respondents of the study were mathematics teacher, five students and their parents. The respondent of the study was selected on the basis of purposive sampling method. Classroom observation, in-depth interview and document analysis were used as tools of data collection.

This study found that lack of previous knowledge in subject matter, the learner does not have interest, learner does not have learning environment, student does not spend much time for learning mathematics, lack of teaching techniques, student have anxiety and exam fear, parents' education is not good, lack of use teaching technology and family poor economic condition are the main causes of student difficulties to learn mathematics.

The students have less motivation towards learning mathematics because the concerned bodies like their school, parents, teachers have given less concern for developing student friendly teaching and learning environment. To use student centered method, use teaching techniques for cooperative learning, teach mathematical problem in practical way, student spend necessary time for learning mathematics, to create learning environment in school and home are the main ways to improve student achievement in mathematics. This study is beneficial for secondary mathematics teacher, student and researcher.

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List of Symbols and Abbreviation

ERO	: Education Review Office
NEB	: National Examination Board
SEE	: Secondary Education Examination
T.U.	: Tribhuvan University

Chapter I

INTRODUCTION

This research focuses on causes of low achievement of student in mathematics. This chapter present the background of the study, statement of the problem, the objective of the study, rational of the study, delimitation of the study, and definition of related terminology.

Background of the Study

Mathematics is one of the fundamental academic subjects in the school-level curriculum. It has a significant contribution to each person in his/her everyday life. Mathematics especially deals with properties and relationship of number (Kunwar, 2021). Numerous students consider mathematics as an uninteresting and disengaging subject and they hated mathematics and try to keep away from it because of mathematics anxiety (Colgan, 2014). Poor performance of student globally in mathematics is mostly linked to perception than any other variable (Royster et al., 1999). Most of the student in Nepal are still found failing in mathematics at school level of education. The ERO report (2019) shows that a large number of students is at underperforming level in school-level education especially in mathematics, and achievement of the student is also decreasing for some year. The ERO report (2017), shows that average score in grade VIII mathematics in year 2017 was 49.2 while the score in 2013 was 50.8. The report suggests that the reasons behind such underperforming as well as downfall in mathematics achievement demand a further investigation to get the root of the fact. The student, who consider mathematics as a difficult subject or negative, were found to a low achiever in mathematics. Likewise, the student who have a positive perception of mathematics are also found as higher achievers in mathematics (Kunwar, 2021).

Mathematics is an indispensable subject for human life. Early humans used mathematics to solve practical problems of daily life.(Acharya, 2017). It is argued that student academic performance has been considered as an output of the learning process and its quality (world Bank, 2018). Most of the student fail or achieve a low score in mathematics. According to NEB 37.28% student get Grade E which has low achievement by comparison of another subject. It shows that student get low achievement in mathematics (SEE statistics, 2075).

Academic achievement differs from one student to another due to individual and family background difference. There are many factors behind the reason low achievement of mathematics. School-level factor are class size, school resource, trained teacher, school location and student level factors are Mathematics self-concept, educational aspiration, language speaking at home, gender, home educational resources, parents' education factor directly close to impact student achieving.

Bhusal (2021) in his research entitled “Student Difficulties in learning mathematics: A Case Study”. In this study, it is explained that low achievement in mathematics is a common problem that affects many students. There are several potential causes of low achievement in this subject, which can include poor instruction. Ineffective teaching methods or inadequate teacher training can lead to students struggling to understand mathematical concepts and techniques. Another factor can be a lack of foundational knowledge, where students do not have a strong foundation in basic mathematical skills, making it challenging to understand more advanced concepts. Motivation can also play a significant role in low achievement, as students who do not see the relevance of mathematics to their lives or find it uninteresting may not be motivated to put in the effort required to succeed. Additionally, anxiety and fear can negatively impact a student's performance and

ability to learn. Learning disabilities, such as dyscalculia, can also contribute to low achievement. Cultural and socio-economic factors can be another challenge, as some students may come from backgrounds or cultures that do not prioritize education, or may not have access to the resources and support needed to succeed in mathematics. Environmental factors, such as poor classroom conditions or a lack of resources, can also negatively impact a student's ability to learn and achieve in mathematics. My research moved forward to identify the causes of low achievement of mathematics student and how to improve student achievement in mathematics by removing these factors.

Statement of the Problem

I am still studying mathematics because I like mathematics. Most of them feel mathematics is very hard subject only talented student can learn. According to SEE result 2078 above 50% student get less than 35 marks (SEE statistics, 2078). Every year mathematics result was poor and interest of student in studying mathematics is decreasing at higher education. Student perception about mathematics is difficult subject.

Student feels it is difficult subject and student feel anxiety to learn mathematics I frequently consider the main causes of low mathematics achievement at the secondary level. In order to increase student performance, my study seeks to pinpoint the causes that lead to secondary-level mathematics underachievement. And I hope result of mathematics subject is better and increase the student studying mathematics at higher education. And I want to listen student voice mathematics is my favorite subject.

Objectives of the Study

The research objectives of this study were as follows;

1. To identify the causes of low achievement of student in mathematics.
2. To explore the way to improve student achievement in mathematics.

Research Questions

The research questions of this study were as follows;

1. What are the causes of Low achievement of student in mathematics?
2. How to improve student achievement in mathematics?

Justification of the Study

Mathematics student were unable to get satisfactory achievement in mathematics subject. Mathematics results are not better than another subject. The student has to apply mathematical concept and skills in daily life, in their professional and vocational field as well as in their higher study. But it is generally accepted that students are weak in day-to-day life application of mathematics. Mathematics results are not better compared to another subject. The attitude of students towards mathematics is negative. Student think mathematics as a difficult and burdensome subject. There are many fields of mathematics, but when the results of student in mathematics are weak, they are deprived of studying many fields. Since mathematics is also a logical subject. If student ability is good in mathematics, then it helps to another subject. I did this research to find out why the students' achievement in mathematics is decreasing and what are the aspects that make mathematics difficult.

-) This study assists to identify the various causes of low mathematics achievement of secondary level student.
-) It helpful for mathematics teacher to select effective teaching strategies.
-) The finding of this result help to teacher, parents and student itself.
-) The parents can create a learning environment for their children to use the information from this study.

) This study could be helpful for data bank reference.

Delimitation of the Study

Delimitation is a process in which the researcher determines the scope of his research area and what kind of tools to use in the study based on the available resources and time. I delimited this study as follows:

) This study has used qualitative research method.

) I took children studying in class 10 of secondary level for my research.

) I took a school in Kavrepalanchok district for my studies.

) I took five students for the research, their parents, and a mathematics teacher teaching at the secondary level.

Definition of Key Words

Causes. The term causes is defined as the factors, such as practice, environment, instructional techniques, and motivation that have an influence on the student's academic performance.

Learning. Learning is the process of acquiring, modifying or reinforcing new knowledge, behaviors, skills, values or preferences and can involve integrating different types of information.

Low achievement. The student who gets below 50 marks in final exam.

SEE. Secondary Education Examination, which is a grade 10 final assessment.

Teacher. In my research, teachers are meant to teach mathematics at the secondary level.

Chapter II

REVIEW OF RELATED LITERATURE

The review of related literature is systematic identification and analysis of documents containing information related to research problem (Niure,2018 cited in Bhusal, 2021). A literature review is a summary of the works that are related to a given area of study. It offers a thorough overview of earlier studies on the subject. In a literature review, academic books, papers, and other resources relevant to a particular field of study are examined. It's a piece of research that presents knowledge and comprehension of the relevant academic literature in the appropriate perceptible. A critical analysis of the sources is also a part of a literature review. There are some studies related to factor affecting in learning mathematics. The review of related literature helps to make the concept clear for the study and also directed to analyze and interpret the data sufficient.

The main purpose of the literature review was study about what is the reason behind low achievement of mathematics and how to improve or progress it. And also, what is the factor affecting behind the mathematics result was poor.

Empirical Literature

I reviewed the literature of Acharya (2017) published a study titled "Factors Affecting Difficulties in Learning Mathematics by Mathematics Learner" in the International Journal of Elementary Education. This study's main objective was to investigate the causes of math learning challenges. Case study research is the foundation of this study's qualitative methodology. Three schools in the Arghakhanchi district were visited to observe classrooms in order to fulfill the research goal. Additionally, research participants were interviewed. The study's main conclusion was that learning mathematics is challenging because of mathematical anxiety, lack of

interest, and negative feelings toward the subject. The student's lack of prior knowledge makes it difficult for them to study mathematics, and their parents' lack of knowledge and interest in the subject has an impact on how much math their kids choose to learn. The study's findings indicate that a number of factors contribute to the poor math performance of public-school students. Students' enthusiasm for math and good feelings about it help them perform better on math tests. a failure to take into account students' interests and needs in relation to their prior knowledge and skill levels. Lower achievement in mathematics is also heavily influenced by attitudes toward mathematical concepts. Due to various factors like these, students perceive mathematics to be a challenging subject.

I reviewed the literature of Rijal (2020) conducted the study "Causes of low performance in mathematics." The objective of this study was to identify the factors causing to secondary students' poor mathematics learning outcomes and make recommendations for ways to address them. For, using stratified random sampling, 90 students were chosen from three secondary schools. The thematic method was used to examine the qualitative data, while descriptive statistics like frequency, percentage, and mean were used to assess the quantitative data. The study's main conclusion was that student mathematics performance was directly influenced by prior knowledge of the students, practice, and engagement, teacher involvement and training, technique, motivation, and materials, and the teaching-learning environment of the school.

I reviewed the literature of Bhusal (2021) The research titled "Students' Learning Difficulties in Learning Mathematics" was conducted with the aim of investigating the reasons behind the challenges that students face while learning mathematics, as well as exploring ways to increase their interest in the subject. This qualitative research was based on a case study conducted at Mahendra Ratna Campus

in Tahachal and Sanothimi Campus in Bhaktapur, and it focused solely on students pursuing a B.Ed. in mathematics. The study involved two mathematics teachers, six mathematics students, and their parents as respondents, and utilized classroom observation, in-depth interviews, and document analysis as data collection tools. The study revealed that students faced difficulties due to misconceptions and weak perception of the subject, insufficient time spent on learning mathematics at home, inadequate prior knowledge of the subject, lack of interest, ineffective teaching techniques, failure to connect mathematical problems to daily life, neglecting to motivate students to learn mathematics, and prioritizing good students over weaker ones. To improve the learning experience, the study suggested the use of cooperative learning methods, practical teaching approaches, motivational strategies, digital technology, student-centered approaches, and support for economically disadvantaged students.

I reviewed the literature of Pokharel (2019) the research titled "Causes of Low Performance of Students in Mathematics" aimed to investigate the reasons behind poor performance in mathematics and identify strategies implemented by schools to improve mathematics performance. The research question focused on identifying the causes of poor performance in mathematics and exploring ways to enhance performance in the subject. This qualitative and descriptive research used a case study approach, specifically targeting secondary level education at Shree Bhawani Higher Secondary School in Gurkha District. The study involved a purposive sample of four grade X students from diverse family backgrounds and different levels of mathematics performance. The data analysis primarily relied on descriptive methods. The study found that traditional teaching styles, inadequate student-centered learning environments, negative attitudes towards mathematics, lack of school policies to

address mathematics learning, insufficient extra classes for struggling students, underutilized libraries, low parental engagement, lack of encouragement and motivation, and gender inequities contributed to poor mathematics performance. The study concluded that language proficiency, economic status, and learning environments significantly impacted mathematics performance, and inadequate environments at home and school hindered mathematics learning.

I reviewed the literature of Yadav (2021) carried out the research entitled “Determinant factors of low achievements in mathematics at secondary level”. The main objectives of this research were to identify determinant factors responsible for low achievement in mathematics at secondary level and also to find the strategies by school mathematics teacher to improve achievement in mathematics. This is survey research conducted at secondary level mathematics achievement in five school of rupandehi district. This study focuses on inside and outside school factors which are responsible for low achievements in mathematics. Questionnaire, observation note, In-depth interview, document review was used as tools of data collection. Data obtained through the research instrument were analyzed using Average value to reduce the mistakes and it was easy to use reliable, valid, easily available, economic and popular enough. This research found that school related factors and out of school related factors both are responsible for low achievement of students in mathematics, teaching method, teacher’s qualification, size of class room, peer group’s behavior, teacher’s behaviors affected the achievement of the student, motivation, continuous practice, review and application of mathematical concept effect on learning mathematics also Effective classroom , learner’s interest and financial condition are affected to learner to learn mathematics. In conclusion, the researcher recommended several strategies for improving students' performance in mathematics. These

strategies include adopting cooperative learning methods in the mathematics classroom, utilizing digital technology in teaching, creating an interactive learning environment between students and teachers, and connecting mathematical problems with students' daily lives to increase interest in the subject. Additionally, providing scholarships for economically disadvantaged students and adopting a student-centered teaching approach were identified as effective measures for improving student achievement in mathematics.

I reviewed the literature of Adhikari and Subadi (2021) The article published in the Siddhajyoti Interdisciplinary Journal was focused on investigating the difficulties faced by grade X students in learning trigonometry. The main objectives of the study were to identify the most challenging areas of trigonometry and explore the difficulties experienced by grade X students who had opted for mathematics as an elective subject. The research methodology used for this study was mixed research design, specifically explanatory design. The researcher surveyed a total of 155 grade X students to identify low achievers in trigonometry, who were randomly selected from two community schools (55 students) and two institutional schools (100 students). The findings indicated that students struggled to understand trigonometry concepts and perform well on achievement tests. Notably, the study found that students from community schools performed worse on trigonometry tests than students from institutional schools. The challenges faced by grade X students in learning trigonometry were found to be diverse, ranging from retention of data and understanding of innovative approaches to transforming verbal problems into geometric figures, derivation and proof of trigonometric formulae, identities and theorems, and unfamiliarity with problem-solving processes at the application and higher levels. The study also revealed that the majority of students faced difficulties in

solving problems at the application level, which prevented them from constructing appropriate figures to solve the verbal problems provided to them. In conclusion, the major causes of difficulties in learning trigonometry were attributed to poor attention to mathematics formulae, not paying attention to the teacher's instructions, misconceptions in trigonometric concepts, prioritizing achieving the highest marks in exams over conceptual understanding, and a lack of practice and prior knowledge.

I reviewed the literature of Al-Zoubi and Youns (2015) conducted the research article in the international Journal of Elementary Education entitled “Low academic achievement: Causes and Results”. The main objective of this research attempts to discuss definition of failure, causes of academic failure and its aspects, suggested solutions for academic failure and way to success. The research aimed to identify the causes and results of low academic achievement from teacher, parents and student perspective as well as providing possible solution to this problem. They found that the pupils' academic performance has weaknesses. The factors that contribute to students' poor academic performance include, for example, the use of traditional methods rather than modern ones in instruction and the poor relationships between teachers and students that result in a hostile learning environment and prevent students from accepting the learning process as a whole. Reason for academic failure is Lack of clear plan, Medical and psychological reasons, Reason related to the learner, parental and educational reason, exam's anxiety, The issue of low academic achievement is often related to a lack of motivation for success. To address this problem, it is important to identify the root causes of failure, establish specific goals and guidelines for success, and acknowledge the potential of each learner. The researcher suggests that parents must remain informed of their child's progress and provide support to help them achieve their academic goals. Additionally, it is recommended to prioritize

the student's physical, mental, and emotional well-being, foster a comfortable learning environment, and employ engaging teaching techniques and activities to motivate students to learn.

I reviewed the literature of Chaudhary (2022) carried out the research entitled "Problem faced by students in geometry at secondary level" was conducted using a qualitative research design. The study focuses to identify the difficulties faced by students in learning Geometry and also to explore the challenges faced by teachers in teaching Geometry. The researcher utilized multiple data collection tools, including observation forms, questionnaires, and interviews with teachers, guardians, and school administrators. Additional support was obtained through discussions with students. The findings of the study revealed several problems in learning Geometry at the secondary level, such as a lack of instructional materials, overcrowded classrooms, inadequate feedback, neglect of poor-performing students, students spending more time on household work, teachers failing to provide clear explanations of concepts, insufficient time for checking homework, poor management of the teaching-learning environment, a lack of trained teachers, and inadequate encouragement for studying.

I reviewed the literature of Yadav (2022) The study titled "Student's difficulties in learning school algebra" was conducted with the aim of determining the obstacles faced by eighth-grade students in comprehending algebra, as well as examining the factors that contribute to these challenges. The research was designed as a case study. So, In-depth interview and observation was the main tools of this study but written test was also be the tools for this study to verify of the statement of respondents. This is qualitative research design. The major finding of this study was language problem between student and teacher, Lack of parent's teacher meeting,

home environment, student irregularity in the school, discontinuity between practice of mathematical concept at home and school are the reason of student's difficulties in learning mathematics.

I reviewed the literature of Panthi and Belbase (2017) carried out the research entitled "Teaching and learning issues in mathematics in the context of Nepal". This article discusses about major issues of mathematics teaching and learning in Nepal. The issues coming from theories such as social and radical constructivism suggest that teachers are not trained to use such approach in teaching mathematics, and lack of teaching materials and technological tools. Gender difficulties, linguistic challenges, social justice concerns, and achievement gap issues are all tied to social factors. Cultural difficulties are connected to linguistic and ethnic diversity. The issues related to political aspects are equity and access, economic status, pedagogical choice, and professional organizations and union. The usage of technology, technical skills, and technological affordance are some of the challenges associated to technology.

Theoretical Literature Review

As Bhusal (2021) notes, a theoretical framework is developed by a researcher who selects relevant theories related to their research topic in order to explain their findings and draw concrete conclusions based on the collected data. According to Niure (2018), the theoretical framework involves selecting appropriate theories to guide the research process. There are several learning theories that can be used to understand why some students achieve lower results in mathematics, including behaviorism, cognitive learning theory, constructivism, social cognitive theory, and many others. In my research, I focused on the constructivism learning theory.

Constructivism Learning Theory

The theory of constructivism was first introduced by Vygotsky in the 1960s. It proposes that learners use their existing knowledge to create new knowledge, and that mathematics knowledge can be constructed through social interaction (Pandit & Bhattarai, 2011). This theory explains how people learn and suggests that individuals construct their own understanding and knowledge of their surroundings through experience. According to constructivism, students are encouraged to solve problems in their own unique ways and can develop authentic knowledge by engaging with their environment and other people. Knowledge is not considered a fixed objective, but rather something that is constructed through one's own experiences. Therefore, constructivist learning theory emphasizes social interaction, double interaction, learner-centered approaches, collaborative teaching and learning, contextualized learning, scaffolding, and the Zone of Proximal Development. Mathematics teachers can use a learner-centered approach to teach mathematical concepts, taking into account the individual abilities and needs of their students.

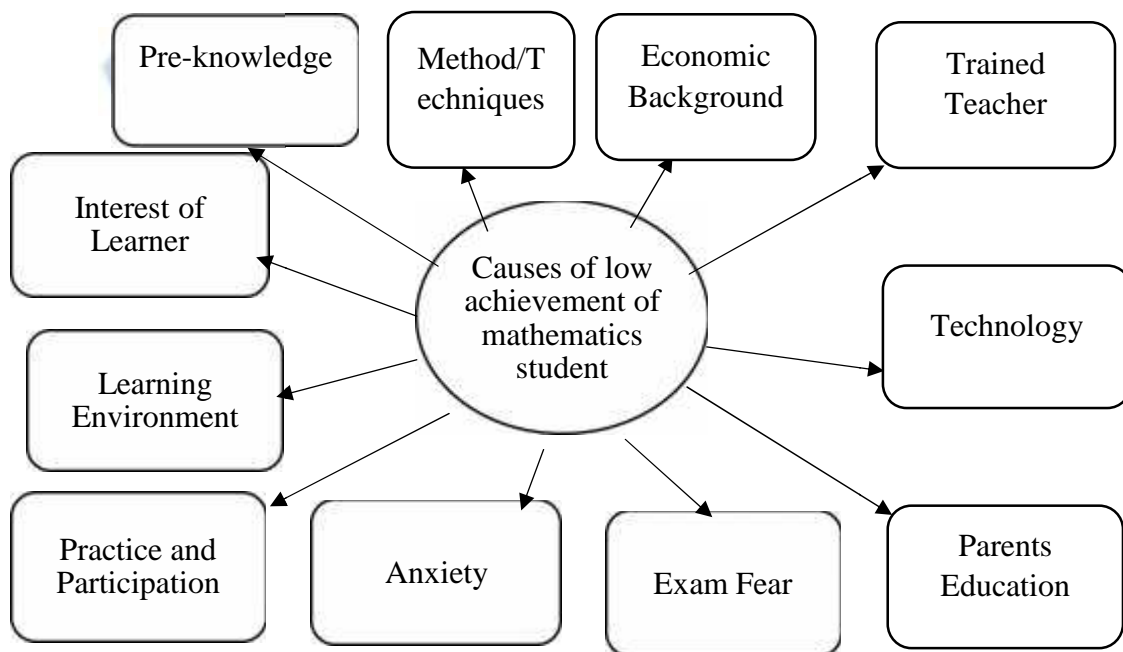
Constructivism is a significant concept in education, and its implications for teaching and learning are vast. To achieve success in education, it is crucial to focus on student-centered learning. The most significant contribution of constructivism is its emphasis on student-centered learning. According to this theory, mathematical knowledge can be constructed from our context and society, and social interactions are more effective in building knowledge than cognitive structures and processes (Bhattarai, 2017).

Research Gap

Similar research had been done previously by Pokharel, (2019). Some perform research relating students only while others perform relating teachers. I am trying to relate both students, teachers as well as parents and school infrastructures in my research. According to SEE result 2078 above 50% student get less than 35 marks (SEE statistics, 2078). Every year mathematics result was poor and interest of student in studying mathematics is decreasing at higher education. Student perception about mathematics is difficult subject. I am curious to know the reason behind low achievement of students of class 10 in mathematics. The area of my research is community's government school in Kavrepalanchok district. Moreover, the sample suggested in this study would differ from other studies as the researcher involved mathematics teachers, students, head of schools and parents.

Conceptual Framework

According to Khanal (2019), a conceptual framework is a visual representation based on theoretical concepts that illustrates the relationships between the concepts and variables relevant to the research. Through a review of empirical and theoretical literature, the researcher developed a conceptual framework to achieve the research objectives. The conceptual framework is a collection of concepts, assumptions, expectations, beliefs, and theories that provide support and information for the study. In my educational research, I utilized the following conceptual framework.



I had developed this conceptual framework collect the various type of variable which is affected by low achievement in mathematics. I collected data according to research objectives of the study and related to above framework and analyze to obtained data. This study describes about the factor affecting the student's low achievement from classroom and home environment. Pre- knowledge of student with subject matter, interest of learner, learning environment, practice and participation, anxiety, exam fear, Teaching method/technique, technology, parent's education, economic background is the major factor determining the causes of low achievement of mathematics students. These above studies and theorem helped me to complete my research.

Chapter III

METHOD AND PROCEDURES

In this chapter, the study's design, study area, data collection tools and methods, data collection procedures, data analysis procedures, and ethical considerations are described.

Design of the Study

According to Carol (2016) cited in Bhusal (2021), a qualitative research design is useful for uncovering individual perspectives through data collection methods such as group discussions, individual interviews, and other forms of participation. In contrast to quantitative methods, it can be difficult to measure and calculate issues related to teaching and learning mathematics. Therefore, for my research, I have chosen a qualitative research method with a case study approach. This approach allows the researcher to collect, interpret, and analyze data to achieve the research objectives (Pokharel, 2019).

Research designs refer to the plans and procedures used in research, which cover the decisions from broad assumptions to specific methods of data collection and analysis (Cresswell, 2009). There are various types of qualitative research, such as case studies.

Area of Study

Each research requires a designated location to conduct the study. In this particular case, I opted to select a public school in Kavrepalanchok district as my study area. The choice of study area is critical as it facilitates easy accessibility to obtain relevant information and collect data that directly aligns with the research

objective. In this study, the focus was on secondary level students within the selected area.

Selection of Respondents/Participants

When conducting qualitative research, the researcher's decision on the sample size is dependent on several factors such as the research question, purpose of inquiry, credibility of the study, and available resources and time (Shrestha, 2016). For this particular study, I selected Bag Devi Secondary School in Kavrepalanchok for convenience purposes. To participate in the research, I selected one mathematics teacher and five grade 10 students using the purposive sampling technique.

Data Collection Tools

In order to gather necessary data and information, researchers rely on a variety of tools. For this particular qualitative research study, I selected several tools to aid in data collection. These tools included in-depth interviews, observation notes, and document analysis, all of which were chosen with the purpose of fulfilling the study's objectives.

In depth interview. In qualitative research, in-depth interviews are often referred to as informal interviews due to their unstructured format and flexible time frame. For this study, I conducted in-depth interviews with teachers, parents, and students using a combination of open-ended and structured questions. The purpose of the interviews was to gather information about the personal gestures, habits, and attitudes of students towards mathematics, as well as to identify any learning problems they may have encountered (Bhusal, 2021). To ensure consistency and accuracy, an interview guideline was prepared for each case respondent. The in-depth interviews were specifically designed to address the research questions at hand.

Classroom observation.Class observation notes were used in this study to evaluate the participation and performance of the respondents. Additionally, an observation form was used to assess the attendance and activities of both the students and teachers. The purpose of these observations was to identify various aspects such as students' activities, teacher activities, school and classroom environments, relationships between students and teachers, as well as student-student interactions. Other factors that were observed included student behavior in the classroom, teacher attitude, family background, economic conditions, and parents' professions.

Document review.To gain a comprehensive understanding of the research topic, I conducted a review of various journals, articles, and school documents that were closely related to my study. The review of these documents provided me with valuable guidance and information to successfully complete my research. Document review is a research approach that involves analyzing the content of a given document to gain a detailed understanding of the research setting (Bajarcharya, 2009).

Data Collection Procedure

Both primary and secondary sources were utilized to collect data and information for this study. Initially, I visited schools and established relationships with teachers, students, and parents. To collect qualitative data, I used a combination of questionnaires, in-depth interviews, and observation forms during visits to each of the sampled schools. I also kept a record of school-related information such as student ledgers, teacher profiles, and school facilities. For three days, I conducted class observations and selected five students from one school to participate in the research. Interview schedules were organized with related individuals, including mathematics teachers, mathematics students, parents, and educated members of society. Secondary data and information were collected from articles, journals, books, reports,

newspapers, and other relevant sources. Data was collected separately through in-depth interviews with related individuals and students, and I also observed mathematics classrooms with the head teacher's permission.

Data Analysis Procedure

In this study, the data analysis procedure followed a conceptual framework. The collected data was presented individually, but the data from documents and classroom observations were directly analyzed within the framework. As this was a qualitative research study, the primary method of data analysis was descriptive analysis. Niure (2018) suggests a data analysis process involving organizing, editing, coding and recoding, theme building, reporting, and finding procedures. I followed this procedure, starting with organizing and editing the collected information from interviews and classroom observations. Next, the information obtained was separated according to the topic of my conceptual framework of my research and written using a in deductive approach. Finally, I analyzed and interpreted these themes using the constructivism theory and conceptual framework developed during the literature review.

Quality standards. Once the research tools have been constructed, it is crucial to uphold quality standards throughout the research process. In order to ensure that these standards are met, there are specific criteria that must be followed. In my research, I have adhered to these criteria to maintain the desired level of quality.

Credibility. In order to uphold the credibility of my research, I allocated a significant amount of time to conducting interviews, spending a week on classroom observation, and giving focused attention to document analysis. During the observation period, I ensured that I devoted sufficient time to engage with different

individuals and observe their work practices. I also took extensive notes to capture all the relevant information, asked similar questions to other participants, and sought to identify any common themes or patterns that emerged. My aim was to gather as much accurate and reliable information as possible.

Transferability.In a positivist approach, transferability serves as a substitute for external validity. To ensure that transferability was maintained in my research, I employed several techniques. For instance, I captured photos of classroom teaching and recorded the voices of participants during the interviews. Additionally, I provided a detailed and comprehensive description of the observations, interviews, and my own interpretation of the findings. My goal was to document and convey as much information as possible so that the research could be replicated and applied in other contexts.

Dependability.In research, dependability takes precedence over reliability as it indicates that the findings are consistent and can be replicated. This standard represents the stability and consistency of the research process used over time. To maintain dependability, I placed a strong emphasis on ensuring credibility and transferability in my research. By adhering to these standards, I sought to establish a consistent and reliable research process that could be repeated and replicated.

Conformability.The fourth standard for judging the quality of research is conformability, which refers to the degree to which the results of an inquiry are supported by the members involved in the study as well as independent events. To maintain conformability, I took extra care in reviewing the information multiple times before drawing any conclusions. In addition, I sought feedback from colleagues or friends to ensure that my interpretation was accurate and unbiased. By adhering to

these practices, I aimed to produce results that were well-supported by the evidence and the perspectives of those involved in the research.

Ethical Considerations

When conducting research that involves people, it is crucial to pay special attention to their rights, dignity, freedom, and privacy, as highlighted by Khanal (2019) cited in Bhusal (2021). In my study, which involved observing a classroom, ethical considerations were of paramount importance. Obtaining permission from the school administration, informing students of the observation, interview, and document review, and protecting the confidentiality and identity of the respondents were among the major ethical considerations in the study. I made sure that the views of the participants were not violated, ignored, or modified in any way, and provided assurance that their privacy and confidentiality would be protected throughout the research process.

Chapter IV

ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of collected information related to research. This is qualitative method research with a case study approach. The main research question of this study was what are the causes of low achievement of mathematics student? How to improve student achievement in mathematics? For the collection of information, I had used an in-depth interview, classroom observation, and document analysis as tools of data collection. I had observed mathematics classroom in sample school. The in-depth interview was taken for related teacher, students, and their parents by using open ended or semi-structured questionnaire. Each and Every activity and behavior of the student and teacher were carefully observed and noted during face- to- face interview. The interview was taken to the head teacher, mathematics teacher, sample student, and their parents. The responses of the respondents during face-to-face interview were carefully noted. I had observed about student's mathematics class 10 first term result and also observed class 10 SEE result of the year 2078. And observed sample student attendance from school document.

The descriptive method is mainly used in this research for analysis and interpretation of collected data. First of all, the collected data and information is categorized. The collective data and information are analyzed and described under the introduction of sample school., introduction of case students, pre-knowledge and interest of learner, learning environment, parents' education, practice and participation, technology, economic background, method and techniques, anxiety and exam fear, and trained teacher.

Introduction of Sample School

The school I have chosen for my studies was Bagh Devi secondary school. This school is located in Bhumlu rural municipality, kavrepalanchok District. This school was officially established in the year 2028 BS. As the school was established near the vagdevi temple, the name of the school became Shree vagdevi secondary school. The school was approved for primary education from 2028 BS, lower secondary from 2053 BS and secondary from 2056. The students appeared for the first time in the S.L.C examination of the year 2057. The school had a diverse student population with varying family backgrounds. The surrounding communities were also diverse, with a mixture of different ethnicities. Among the student population, the Tamang community was the largest in number compared to other communities.

Based on the statement from the head teacher, there are students at this school who speak various languages such as Nepali, Newari, and Tamang. The teacher mainly employs a lecture-based teaching approach, resulting in a lack of student engagement and only the teacher being active in the classroom. The school employs qualified math teachers, but during classroom observation, it was noted that there was limited interaction between students and between students and teachers. The school's infrastructure has improved in recent times, although in the past it was poor. However, the math achievement of the school, as indicated by the SEE results for 2078, was very low. According to SEE result 2078 out of 12 student, 9 student get E grade, 2 students get B grade and only one student get B⁺ in mathematics.

Introduction of Case Student

The research focused exclusively on secondary-level mathematics students at Bag Devi secondary School, and the study's participants consisted of five students

who were examined as a case study. It is important to note that the participants' personal information and location were only shared with their consent.

Respondent A. He was a 15-year-old student enrolled in tenth grade, who had to commute for 30 minutes to reach his school from his residence. His household consisted of four members who followed the Hindu religion, including his father, mother, and younger brother, who was in seventh grade. His father worked as a farmer, while his mother was a homemaker, and their economic situation was not favorable. Due to his busy schedule, he did not get to spend much time at home, and since he lacked interest in math, he devoted little time to learning it. His aspiration in life was to serve in the army, but he did not receive adequate support from his family for his academic pursuits. Football was a sport that he was highly passionate about.

During the classroom observation time. In his class, his interest in mathematics is less. I think, that's why his homework is not complete. A clear understanding of the content of the mathematics subject was not being developed.

I asked him, "*why you thinking mathematics difficult?*" In this question he told me;

"My mathematics has become very poor due to lack of practice in mathematics. I have no one to help me with mathematics except at school."

I asked one question for mathematics teacher, "why his mathematics is poor?" In this question, teacher replied that;

"He does not have pre knowledge of mathematics, so his mathematics is very poor. And also lack of practice in mathematics is one of the common problems for him."

The above evidence, it can be claimed that lack of previous knowledge in mathematics content, lack of practice and lack of interest of learner and Changing

mathematics teachers in school quickly are some reasons of student feel that mathematics is a difficult subject and he get poor marks.

Respondent B. He was a 15-year-old boy who was in tenth grade and had to travel for 15 minutes from his residence to reach his school. He belonged to a Hindu family of five members, including his father, mother, younger brother, and sister. However, his parents were away from him due to work commitments, and he was currently studying at his relative's house. Unfortunately, his family was not financially stable. Despite his lack of time at home, he did not have an interest in mathematics, which resulted in him devoting very little time to it. The individual's aspiration in life was to become a professional singer, and although he did not receive adequate support from his family for his studies, he was extremely passionate about football.

During the classroom observation time, it was seemed that he was inactive towards studies. He is not interested in mathematics, so he didn't seem to submit homework regularly. It came to know during the interview, his peer knowledge is also not good. So, he has been failing mathematics ever since he was in elementary school. I asked him, "*why your mathematics is poor?*" In this question he replied that;

"I have been weak in mathematics since I was a child and I have no one to teach me at home and neighborhood. I have no interest in mathematics and I do not understand mathematics."

From the above information I came to know that he is not able to study with his family, it seems that psychologically he is affected in his studies. He did not seem to get guidance and support from his family. He is not even seen regularly in school.

Respondent C. She was a 15-year-old girl who was enrolled in tenth grade and had to travel for 15 minutes from her home to reach her school. She belonged to a Hindu family of four members who shared the same religious belief. He

had father, mother, one sister in his family. Her father work in agriculture and her mother is housewife and her sister read in grade two. Her family's economic status is not good. he spends little time learning mathematics. The goal of her life was to became a Nurse. She had good support from his family for her studies. she is very interested to read new things.

During the classroom observation time, it was seemed that he was active towards studies. But she is not interested in mathematics, so she didn't seem to submit homework regularly. She is regular in Class.

I asked her, "*How does mathematics feel?*" In this question he replied that; "*Mathematics seems very difficult. I don't understand mathematics, so I am not interested in mathematics.*"

I also asked another question for her, "*Can you practice mathematics properly?*" In this question she replied that;

"I start reading only after doing my housework. I sometimes practice mathematics."

From the above evidence I came to know that, she used to dread mathematics exam. Her family does not seem to be very interested in her studies. If she continuous to practice and to improve peer knowledge of mathematics then I hope her mathematics capability was be developed. She believes that the teacher's lack of attention to the students is also the main reason for poor mathematics learning.

Respondent D. She was a 15-year-old girl who was enrolled in tenth grade and had to travel for 15 minutes from her home to reach her school. She belonged to a Hindu family of four members who shared the same religious belief. He had father, mother, brother in his family. Her father work in agriculture and her mother is housewife and her brother read in grade five. The goal of her life was

to become a dancer. She had good support from his family for her studies. she is very interested to read new things.

During the classroom observation time, it was seemed that he was active towards studies. But she is not interested in mathematics, so he didn't seem to submit homework regularly. She is regular in Class.

I asked her, "*How does mathematics feel?*" In this question he replied that; "*Mathematics seems very difficult. I don't understand mathematics, so I am not interested in mathematics.*"

I also asked another question for her, "*Can you practice mathematics properly?*" In this question she replied that;

"I start reading only after doing my housework. I don't like to practice mathematics."

From the above information I came to know, she used to dread mathematics exam. Her family does not seem to be very interested in her studies. If she continuous to practice and to improve peer knowledge of mathematics then I hope her mathematics capability was be developed.

Respondent E. He was a 15-year-old boy who was in tenth grade and had to commute for 20 minutes from his home to reach his school. He belonged to a Hindu family of five members, which included his father, mother, younger brother who was in third grade, and younger sister who was in fourth grade. His father worked as a farmer while his mother was a homemaker. Unfortunately, the family's economic situation was not favorable. The boy did not get to spend much time at home due to his busy schedule. However, he lacked interest in mathematics and therefore, devoted very little time to learning it. His ambition was to serve in the army, but he did not

receive much support from his family for his academic pursuits. Despite this, he had a great passion for football.

During the classroom observation time. In his class, his interest in mathematics is less. I think, that's why his homework is not complete. A clear understanding of the content of the mathematics subject was not being developed.

I asked him, "*why you thinking mathematics difficult?*" In this question he told me;

"My mathematics has become very poor due to lack of practice in mathematics. I have no one to help me with mathematics except at home."

I asked one question for mathematics teacher, "why his mathematics is poor?" In this question, teacher replied that;

"He does not have pre knowledge of mathematics, so his mathematics is very poor. He is not focused on studies is one of the common problems for him."

The above evidence I came to know that, it can be claimed that lack of previous knowledge in mathematics content, lack of practice and lack of interest of learner, family economic background and home environment create mathematics difficult so the achievement of the mathematics is poor.

Pre-Knowledge of Learner

A common problem faced by instructors in secondary education is the lack of critical prior knowledge and skills required by learner. Prior knowledge is the information and educational context a learner already has before they learn new information (Glossary,2017). When relating what the informant said, Prior knowledge has been considered the most important factor influencing learning and student achievement. If you try to learn something without enough background knowledge, or worse, with a misunderstanding, the results can be memorized. This type of surface

learning can occur when students are unable to relate new knowledge to existing knowledge frameworks. During the interview time, I had asked the question “*What is the student’s prior knowledge?*” In this question I have listed head teacher views in the following lines;

“Since students do not have pre knowledge, so they feel very difficult to learn mathematics. Most of the students studying in class 9 and 10 do not know the mathematical operation of multiplication, Division, Addition, subtraction ($\times \div \pm$). They do not seem interested in mathematics.”

(Head Teacher)

I asked one question for student, “*What is your prior knowledge of mathematics and how is it affecting your current learning?*” In this question, student replied that;

“My pre knowledge of mathematics is very weak. Whenever I try to solve a mathematical problem, I have a lot of trouble because my prior knowledge is very weak.”

(Respondent A, B, C, D and E)

From the above information I came to know that, prior knowledge is an essential. for good achievement in mathematics. It creates lot of trouble for learning.

During the interview time, I had asked the question for mathematics teacher,

“*Whether mathematics is a difficult subject or not?*” In this question, teacher said that;

“Mathematics is not a difficult subject but it has become difficult because of not being able to understand and put it into practice. Due to the lack of pre knowledge in mathematics in the lower classes, it has been seen that it has affected the upper classes, so that when student reach classes 9 and 10, it is found that student feel difficulty in mathematics. According to the concept of

simple to complex, if mathematics is made from general to specific and prior knowledge is emphasized, then mathematics is actually easier than other subjects.”

From the above information I came to know that, Prior knowledge is an essential element for students to learn mathematics. Based on prior knowledge, it seems that students' math results will be better. Student have lack of pre knowledge of mathematics so it creates more difficult to learn mathematics. It seems that the students' prior knowledge has an effect on the current learning of the students. Taking the teacher's words, when student pre knowledge is good, then the students' learning is easy and meaningful. If the student's pre knowledge is good, it is easier for the teacher to teach. Therefore, from the evidence, it concludes that lack of previous knowledge of student can create difficulties in learning mathematics.

According to constructivism, learners actively construct their own understanding of new information by building upon their existing knowledge and experiences. Learners use their prior knowledge as a foundation to construct new knowledge (Bhattarai & Padit, 2072). A similarly situation is seen in my study, learner's prior knowledge and experiences, as these provide the foundation for new learning. Student cannot able to assimilate or relating new mathematical concept and previously learned mathematical content. That's why student feel to learn mathematics difficult, then the achievement of student gets very low.

Interest of Learner

According to Al-Zoubi and Youns (2015) to increase students' interest in physical, mental and health, to provide a comfortable environment to the school and to motivate students for learning. Interest is a powerful motivational process that energizes learning, guides academic and career trajectories, and is essential to

academic success. People learn better when they are interested in a subject, so educators should start by helping students develop an interest. Based on the experience of the information donors, all the students in the class are average, there is no competition between friends in mathematics. And students are not paying attention in mathematics class. Student feel mathematics subject is very boring and uninteresting subject. In the mind of the student, mathematics is a difficult subject, only capable students can study this.

I asked one question for Head teacher, “*What does a student’s interest in mathematics look like?*” In this question, teacher replied that;

“Student have very less interest in the content of the subject. Student are more influenced by multimedia, so most of their time is spend playing game on mobile. There are wasting their time to play mobile game. I see myself and our fellow teacher as main culprits of student playing games on mobile phones. If teacher had provided that situation, students would not have spent more time playing games. We could not keep student interested in studies. First the responsibility of the teachers and parents, then the responsibility of the student’s themselves.”

(Head Teacher)

I had asked the question for the student “*Do you like mathematics?*” In this question, student replied that;

“I don’t like mathematics. This subject is very difficult. That’s why I am not interested in mathematics. So, in my spare time I read another subject.”

(Respondent A, B and E)

“My prior knowledge in mathematics is very poor which makes it very difficult for me to learn.so, my interest in mathematics learning is also weakening.”

(Respondent C, D)

Therefore, from the above responses of the student, it can claim that they have little prior knowledge of mathematics and They do not interest in mathematics learning. Student feel boring to learn mathematics. I had asked the question for the mathematics teacher *“What does the student’s interest look like?”* In this question, Mathematics teacher replied that;

“In general, most students have little prior knowledge and it is not enough for mathematics learning. Therefore, they are not interested in learning mathematics. Most of the students are passive in the classroom and they spend more time in games.”

Based on the information of the beneficiaries received above, it was found that the students did not like to read the mathematics subject because they did not like the subject and did not give time for the mathematics subject. Due to the lack of prior knowledge among the students regarding mathematics, it was seen that they did not want to study mathematics.

In this context, the interest of the learner plays a crucial role in creating a learning environment that supports the principles of constructivism. When learners are interested in a subject or topic, they are more likely to actively engage with it, explore it in depth, and construct their own understanding of it (Shrestha, 2016). Based on the facts obtained from our informant, what we can say is that external factors such as mobile phones have a direct effect on the factors that affect students' eagerness towards learning. Student prior knowledge in mathematics is very poor which makes it very difficult to learn. It creates not interest in learn mathematics.

Learning Environment

The learning environment played a vital role in better performance in learning mathematics (Pokharel, 2019). Environment of the school and the home is influencing the learning of the students. Therefore, it is appropriate to see the effect of these two aspects on the learning on students separately. Which are presented as follows;

Home environment. Home is the first school for students to learn. If there is a suitable environment for learning at home, the student's interest in learning was increase as well as the learning ability level also increase (Acharya, 2020). As student spent most of their time at home, they can learn a lot knowledge from their parents and the neighbors. If parents provide a favorable environment for learning by monitoring the child's progress in home, helping with homework and supporting the child in overcoming learning difficulties.

I had asked the question for students *“What is the environment for learning mathematics at home?”* In this question the student had different view, which as presented as follow;

“I have enough time to study but I have no one to help me with mathematics learning. I don't have anyone to talk to about unknown topics.”

(Respondent C)

“I have to help my parents in the home, so I could not complete my homework. Also, I have no one at home to teach me mathematics. So, I feel mathematics is difficult for me.”

(Respondent D)

The above view of the student indicate that student don't get suitable environment for learning mathematics. Parents are not able to support their child mathematics learning Also, I had asked question for student's parents *“How have you*

helped your Childs learn mathematics.” The viewpoints of the parents regarding the matter at hand were distinct and can be elaborated as follows:

“I am busy with housework. I don’t want to see whether they study or not. And also, I can’t help them for study because I have illiterate.”

(Parents of respondent C)

“I am his grandmother, his father and mother work in city, he doesn’t seem to study much. he is busy on his mobile phone to play game. I am not paying much attention to his studies.”

(Parents of respondent D)

The above-mentioned view of parents indicate that Parents are not able to support their children in their studies due to housework and due to the lack of education of the parents, they are not able to support their children. Along with studies, the school has created an environment for extra activities. Some students are unable to create a learning environment at home. Some parents fall into the Alcoholic trap, it seems to have a negative effect on the student. It has a dangerous effect on students psychologically. Society does not seem to have a positive effect on student. So, all student who pass SEE do not pursue higher education. Many students who have passed out seem to be doing labor work.

School environment. If the relationship between teachers’ parents and students is good, the school environment is considered to be good. Since school is the main place of learning for student, if the learning in school is good, the level of students was be talent. The school environment consists of two crucial components: the physical and the psychological environment. The physical environment comprises the school's infrastructure, which indirectly aids students in their learning process (Acharya, 2020).

I had asked the question for teacher “*what physical facilities does your school have?*”The viewpoints of the head teacher regarding the matter at hand were distinct and can be elaborated as follows:

“Overall, there is no problems with the physical infrastructure in the school. The necessary Classroom for student has been provided sufficiently and the benches have also been well arranged. There seems to be a lack of sufficient playgrounds for students to play. Separate toilets for boys and girls have been arranged in the school. Sufficient pads also provided for girls’ students as required. Students are forced to come to school after traveling an hour’s distance. Students coming from far away are wasting their time as they have to prepare quickly. Some students come by public transport.”

(Head Teacher)

I had asked the question for student “*what physical facilities does your school have?*”The viewpoints of the student regarding the matter at hand were distinct and can be elaborated as follows:

“The school library does not have the books we need.”

(Respondent B, C and D)

From the above evidence, the facilities of infrastructure of the school were well. But there is lack of playground. And also, there is not sufficient books in the library. If there is a suitable environment for learning in the school, learning was be facilitated. For learning, the relationship between students and teachers should be smooth. Student cannot learn unless they have an environment conducive to learning. Even if everything is available, if the learning environment is not adequate, then his learning was be hindered.

According to Pandit and Bhattraï (2011), students can acquire practical knowledge through their interactions with individuals or their surroundings. Based on my research, a suitable environment for students to study at home has not been created, an example of which can be taken as the illiteracy of the parents. The learning environment plays a significant role in shaping the learning experiences of individuals and the construction of their knowledge. In a constructivist learning environment, learners are encouraged to explore and discover new knowledge and ideas through hands-on experiences, problem-solving, and inquiry-based learning. Overall, the learning environment and constructivism theory are closely related, as the learning environment can significantly impact how learners engage with new information and construct their own understanding of the world. A well-designed learning environment can facilitate the construction of knowledge by providing opportunities for learners to explore, experiment, and collaborate with others in a flexible and adaptive manner.

A suitable environment for students' studies is not available at home. It was seen that there is no relationship established in the three-way process between teachers, student and parents. Parents did not seem to be responsible for their children's education. A suitable environment for learning was also not created between student and teacher. As a suitable environment could not create for student, it was seen that his/her achievement in mathematics were very poor. It creates difficulties to learn mathematics.

Parents Education

Student spent most of the time at home. Parents become facilitators for student learning. The student can learn many things like behaviors, moral education from their parents. Research has shown that children whose parents have higher levels

of education are more likely to succeed academically (Pokharel,2019). The learning outcomes of student depend not only in teacher, it is also affected parent's education. Not only the teacher's role in the student learning, but also parental awareness is required. Parents teach their children essentials element, practical aspects of life, good vision, appropriate norms and values. Parents education is positively correlated with children's educational outcomes and future success. Educated parents tend to provide more resources and support for their children's education, such as access to books, computer, and extra-curricular activities. Additionally, educated parents are more likely to be involved in their children's schooling and have higher expectation of their children's academic performance.

I had asked the question for student "*Can your family support you in your studies?*"The viewpoints of the student regarding the matter at hand were distinct and can be elaborated as follows:

"My parents are literate but they do not get Secondary level education so they should not be able to support me."

(Respondent A, B, C and F)

"There is no one at home to teach me about the content of the subject, I am helpless."

(Respondent D)

According to opinion of respondent student, the parents are not graduated, so they should not be able to support in child's education. That's why, the parents did not seem to be very interested in the student's academic performance. Parents are not able to create the right environment for the child. One reason is that students are weak because lack of support from their parents in mathematics learning.

I had asked the question for respondent parents “*Can children get help from you in mathematics subject?*” The viewpoints of the parents regarding the matter at hand were distinct and can be elaborated as follows:

“My education is 10th standard but my mathematics is weak I can’t help him.”

(Parents of respondent E)

“I have studied only four grades so I can’t support the children in mathematics learning.”

(Respondent of parents A)

“I am very sad that I cannot help the children in mathematics learning because I have less education.”

(Parents of respondent B, C, D and F)

According to the respondent of parents, even though we set aside time for them to study, we are not able to support them in their studies. Since this place is a rural backward place, people here are not fully educated due to which there is a not support on learning in children. In the interview time, During the interview, I had posed a question to the mathematics teacher, “*How does parental education affect student learning?*” The viewpoints of the mathematics teacher regarding the matter at hand were distinct and can be elaborated as follows:

“Education is a tripartite process involving the teacher, student, and parents. When all three processes work together, student learning is enhanced. It doesn’t mean that the students learning was be better if the teacher wants it. The first thing is that the student should be ready. The second is that family should support him\her.”

I asked same question for Head teacher, she replied that;

“Firstly, parents are not able to support their children in their studies.

Secondly, parents are not responsible for their children’s education. They do not come to school to know the academic achievement of children.”

The above- mentioned view of teacher indicate that parents are not able to support their children due to poor education condition. When teachers, students and parents are not held accountable for learning, learning is seen to be weak. Student are not getting a suitable learning environment at home. Lack of guidance, support and lack of sufficient time at home become learner weak in mathematics. Constructivist theory explains that if student have good educational guidance, they were performed better in mathematics, and if they do not, they were performed poorly.

Research found that, parents are not able to support their children. He does not want to take responsibility; its direct effect is a negative nature of the student's learning environment. Diversity does not arrive in the custody of the parents. Even the arrival arrives, their Parents literacy cannot completely fully help the student. Schools do not understand the environment. For such dignity, the student's learning environment is facing negative influence. Influence of such negative influences of negative effects affect the achievements of the mathematical subject matter.

Magar (2018) explains that as per the constructivism theory, students can achieve a high level of proficiency in mathematics only when they receive proper educational guidance. If the guidance is inadequate, the students may not perform well in the subject. Similarly, to this in my research, overall, the relationship between parents' education and constructivism theory highlights the importance of parents' understanding of how children learn and the role they play in supporting their child's construction of knowledge.

Practice and Participation

Practice makes perfect or practice makes impossible to possible. Any difficult task can be made easy with practice. The important role behind the student's success is determined by the practice he does. Repeated practice brings the learner to perfection. Mathematics is a complex subject that requires significant time and effort to comprehend and solve problems. Poor academic performance in mathematics is often attributed to a lack of effort and dedication. During the interview, I had asked question for students "*How much time you spend in daily practice for mathematics?*" responses of the interviewees are as follows:

"I give a maximum of one hours for mathematics learning. Other time I spend for other subjects and I interested to play game. Some time to do work in home."

(Respondent A)

"I am not very interested in mathematics. so, I spend some little time for mathematics. I have not spent regular time for mathematics."

(Respondent E)

"First, I complete my housework, then I spend time for practice of mathematics. I am less interested in mathematics so it is difficult to allocate time for mathematics practice. I Like to play a lot so I Spend must of time in play football."

(Respondent B)

From the above information I came to know that, students are not able to submit their homework regularly. It was observed that the students did not allocate enough time to practice at home and at school. In class observation period, I see that Student do not seem to be paying attention in class when teacher is teaching. I think

student are taking mathematics hard and doing little practice. In interview time, I asked the question for students *“How is your participation in class?”* responses of the interviewees are as follows:

“I find mathematics difficult so I don’t ask mathematics question in class.”

(Respondent E)

“Most of the time I haven’t done my homework so I am afraid to ask questions.”

(Respondent B)

“My pre- knowledge is not good so I write that the teacher teaches but does not participate in the class.”

(Respondent C)

“The teacher gives attention in the class only to the able student and does not pay much attention to us. So, my participation in class is very poor.”

(Respondent D)

The above- mentioned view of student indicate that participation in the class is very low. It is seen that they are participating in the class because lack of their pre- knowledge and student have no interest in learning attention and teacher only focus to the able student and does not pay attention to weaker student. Students have not submitted their homework regularly. So, they do not seem to be participate.

Active participation of the student in the class, interaction of student teacher association and repetition of idea affects the result of many students. Constructivist suggest that learning is more effective when a student is actively engaged in the learning process (Acharya, 2072). According to our research, lack of knowledge in the students and lack of prior knowledge related to math subjects, they do not want to

be involved in mathematics. Even if they are forced to be forceful is not very effective. Due to the effective participation of students in the classroom class, their learning achievement due to non-learning achievement caused.

In a constructivist approach to learning, practice and participation play a significant role in the construction of knowledge. Practice, in the context of constructivism, refers to the repeated engagement with tasks or activities that allow learners to apply what they have learned, test their understanding, and refine their knowledge. By engaging in meaningful and relevant activities, learners can make connections between new information and their prior knowledge, building a deeper understanding of the topic.

Educational Technology

Educational technology refers to the use of technology to support and enhance teaching and learning. This includes, for example, online learning platforms, Mobile apps, educational software and interactive whiteboards. The goal of educational technology is to improve the effectiveness and efficiency of education by providing new and engaging learning opportunities for students and new and effective teaching methods for teachers. The impact of the educational technology is to increase student engagement, and improve learning ability of mathematics.

I see that this school is geographically difficult and it has insufficient resources of educational technology material. Due to the lack of training in teacher, it is not seen that the technology related educational materials are used in mathematics learning. I asked the question for mathematics teacher, "*In today's technological era, what mathematics is taught using educational technology?*" In this question he replied that;

“I have not been able to connect with technology related to mathematics so I am not able to provide maximum learning opportunities for student but I try to teach using whatever resources I have.”

The Head teacher opinion about educational technology is;

“I have never seen a math teacher teach math using an ICT technology. A student never says I don't understand the subject. Student did not ask me to explain this topic.”

From the old-style teaching methods are used in education. If new educational techniques are used in mathematics, it can be making it easier for students to learn mathematics. It is clear from the above statement that there is need for education technology related training for mathematics teacher. At the same time, it is necessary to provide the necessary resource for this.

Educational technology refers to the use of digital tools and resources to support teaching and learning. In the context of Vygotsky's constructivist theory 1986, educational technology can be used to facilitate social interactions and collaborative learning among students. This can help to support students' development by providing opportunities for peer-to-peer learning, feedback, and reflection. Additionally, educational technology can support differentiated learning experiences that can cater to individual students' needs and abilities.

Economic Background

Child's socioeconomic background can have a significant impact on their educational outcomes. Children from low- income families have less access to educational resources and opportunities (Thapa,2022). On the other hand, children from higher- income families generally have greater access to resources and opportunities that can enhance their educational experiences and outcomes. It is not

unusual for students in Nepal's public schools to assist with extra domestic chores. Due to an abundance of housework, students are unable to study at home, which hinders learning. Students in a classroom may have varied educational, cultural, economic, or linguistic backgrounds. Also, it is really difficult to adapt and educate those diverse kids. Hence, one of the reasons for low accomplishment is thought to be the socioeconomic position of the family.

In interview time, I had asked the question for the respondent student “*what is the financial status of your family?*” In this question student replied that;

“My father work in agriculture and my mother is housewife. There is a problem to fulfill the basic needs.”

(Respondent A, C, D and E)

“My father work in labor and my mother is housewife so our family income is low. There is a problem to meet basic need.”

(Respondent B)

In the above statement says that family economic background of the student is not good so parents can't support child in financially. It is affecting the education of student. Economic background is affecting providing all the necessary source for students.

Vygotsky's constructivist theory 1986 suggests that a student's family economic background can have a significant impact on their learning experiences and opportunities, but that social interactions and collaborative learning can help to support students and bridge the gap in opportunities and experiences. Student were from poor background so that they were not able to pay tuition fee. Students who were very poor family background they couldn't buy practice book and other

reference material. So economic background is another cause of low achievement of mathematics.

Teaching Material

Khadka (2014) states that teaching is an art, and the teacher is perceived as an artist who utilizes various teaching materials and techniques to perfect their craft. It is evident that when teachers do not use educational materials during teaching and learning activities, the academic performance of students tends to decline. The use of teaching materials has been shown to enhance the learning outcomes of students. Therefore, teaching materials are regarded as crucial tools in the teaching and learning process. During my observation, I noticed that the mathematics teacher did not employ any teaching materials in the classroom. In interview time, I had asked the question for the teacher *“What was be the effect if the education goes to teach in the classroom without teaching material?”* In this question teacher replied that;

“If the teacher teaches without teaching materials, it may not be good.

Educational materials do not necessarily have to be expensive materials purchased immediately, as in entering without educational materials, if this teacher is teaching the area, he can also teach by showing the whiteboard, while teaching the cylinder, the teacher can also teach by showing the marker he has. If you can use educational materials that are available at low cost or no cost material, children can learn by familiarizing themselves with the materials. It is better for teachers to use educational materials. We should try to meet the specific objectives we have taken by using educational materials that are relevant to the subject matter”

But the head teacher was not agreed with these views. Head teacher says that;

“Teacher do not seem to use educational materials. The teachers do not even produce the necessary materials of low-cost, no cost material and do not even request the necessary materials to be provided to the school. There is no idea on the fact that students can learn the content in a fun and joyful way by using educational materials, but teacher also have no knowledge that they can teach in a fun way using educational material. It seems that the teacher is limited to the teacher centered method.”

In interview time, I had asked the question for the student *“Does the teacher use educational materials?”* In this question student replied that;

“Teacher should not use educational materials”

(Respondent C and D)

During my classroom observation, I noted that the teacher solely relied on the textbook and did not employ any teaching materials. According to the students, this approach made mathematics more challenging to comprehend. Based on these observations, we can conclude that the insufficient use of teaching materials in mathematics classrooms is contributing to the subject's difficulty for students.

According to Panthi and Belbase (2017), teaching activities cannot be effective due to a lack of teaching materials and technology tools. In this study, it was seen that the teachers did not use educational materials such as no cost and low cost for schools. The main reason for this is that the teacher has not fulfilled his responsibility towards the profession. As a result, the concept of clear learning has not been developed in the students.

Based on this, it is clear that, effective teaching materials for constructivist learning should be designed to support active engagement, exploration, and discovery, and should be flexible and adaptable to meet the unique needs and interests of

individual learners. By providing students with materials that encourage collaboration and dialogue, and that are relevant and meaningful to their experiences and interests, teachers can help to create a learning environment that supports the principles of constructivism and promotes deep and meaningful learning.

Teaching Method and Techniques

Acharya (2017) stated that Vygotsky recommended student-oriented, discussion-oriented, and discovery-oriented teaching methods. Similarly, the result of my study, the teacher is using only the teacher-centered method in the class. Teachers are teaching without the use of educational materials, so that learning is not being effective. It seems that the teacher ignores the weak students and helps only the talented students. Due to which weak students are always falling behind.

Also, to make the teaching process effective, easy and effective methods to make student understand every study subject. Student can understand the problem if teacher use appropriate teaching method and make teaching learning easy and interesting.

When teachers use tricky methods, students can understand the problem. A trained teacher can engage student in a variety of mathematics-based teaching skills in the classroom learning process. I had asked the question “*Which method do you find suitable for mathematics?*” The mathematics teacher views, which in the following lines;

“George Polya’s Problem solving method seems very effective for solving the mathematical problem.”

But student do not agree with mathematics teacher views. I had asked the question “*How is the teacher’s teaching method?*” The student had different views, which are presented as follows;

“The teacher most of the time use teacher centered method.”

(Respondent C)

“The teacher teaches directly without using educational material. Teacher should never pay attention to our problem. So, my interest in mathematics subject is decreasing.”

(Respondent D)

“Teacher only solve the problem. Even if the teacher does not give us the opportunity, we feel that we are behind. A clear understanding of mathematics is not being developed in me.”

(Respondent B)

“We see that the teacher pays attention to the talented students and ignores weak ones. As the teacher teaches, the teacher should never ask questions”

(Respondent C and D)

I had asked the question *“Which method Teacher apply?”* The Head teacher views, which in the following lines;

“It seems that the teacher is limited to the teacher centered method.”

In classroom observation time, I saw that teacher only focus on teacher centered method and there was no proper interaction between teacher and student. So, the above evidence say that only use traditional lecture method and problem-solving method are the main causes that student feel mathematics difficulties.

Bhusal (2022) explained that, in constructivism, mathematical knowledge is built through social interactions. Based on my study, effective teaching methods and student-centered teaching seem to be suitable for conducting the following activities. They also provide opportunities for students to collaborate with their peers, ask questions, and share their perspectives and insights. In order to promote the principles

of constructivism. Which involves offering students guidance and support as they acquire new skills or understand complex concepts. The implementation of effective teaching methods and techniques is crucial in creating an optimal learning environment.

Anxiety and Exam Fear

Acharya (2017) stated that anxiety is a frequently encountered problem among students and can be a factor contributing to their difficulties in learning mathematics.

My research result also states that, Student are finding mathematics difficult due to anxiety. Anxiety in learning mathematics can be common issue for students.

Mathematics learning anxiety can be related to previous negative experiences or a lack of confidence. Anxiety refers to the feelings of worry, tension or dread that are associated with academic tasks. Student feel uneasy about studying in the groups in the class. If mathematics teacher can help a student in identifying the reason of their anxiety and work on solving it. In the classroom observation Period, I see student feel anxiety for learning mathematics. I had asked the question for respondent student,

“*Why do you feel mathematics difficult?*” In this question respondent replied that;

“I want to study mathematics subject but I cannot solve mathematics problems. My friends are weak in mathematics as well as me. I am afraid of mathematics. Teacher teaches by lecture method. Since my childhood, I had the mentality that mathematics is a hard and difficult subject, so I did not give much time to it.”

(Respondent B)

“I am very afraid of the exam; I forget some of the subject topic in the exam.”

(Respondent A)

“I feel like I should not study mathematics.”

(Respondent E)

“I sit down to practice mathematics but I don’t solve the problem then it makes me sad and I am afraid of mathematics. I wish I had never studied mathematics. A clear attitude towards mathematics is not being developed.”

(Respondent D)

In the above views of respondent, student feels mathematical content are complex because it is not to be relate in our daily problem, teacher priority only talent student and ignore weak student, student pre knowledge is also weak and also teacher always use lecture method, properly use problem solving method. So, student have created anxiety and feel fear for exam. Thus, the student faces difficulties to learning mathematics.

What is clear from this line is that, teacher can play a crucial role in helping student manage anxiety by creating a supportive and inclusive learning. By fostering a positive attitude, offering suitable resources and support, providing additional assistance for students with anxiety, utilizing student-centered approaches, and encouraging problem-solving, it is possible to reduce student anxiety surrounding mathematics.

Furner and Duffy (2002) suggest that mathematics teachers should tailor their instruction of mathematical content to each individual student's ability level, utilizing student-centered methods and promoting collaboration between students to solve problems. Teacher who applies constructivist principles can help students to develop coping strategies for managing anxiety and exam fear, and can create a supportive learning environment that encourages risk-taking and exploration. By Constructivism theory suggest that, teachers can help students to develop a deeper and more

meaningful engagement with the learning process, which can help to mitigate the negative impact of anxiety and exam fear.

Trained Teacher

The purpose of this study is to identify the factors that contribute to low academic performance among students in mathematics. It is not enough to have knowledge of the content of the teacher but also, they need to have pedagogical knowledge and ability to know the psychological condition of children and their interest (Thapa,2022). Student achievement also depends on the new methods used by the teacher and the presentation of the content. It is not enough for the teacher to be perfect in the subject, for effective learning, the teacher should use new methods to improve the student-teacher relationship. Professional development opportunities through recurrent training led to increased professionalism, commitment, and motivation, and are believed to have a positive impact on academic performance. The availability of training is essential if teachers are trained by subject experts on how to present the content, how to teach easily, and how to make meaningful and effective learning. In the interview time, I had asked the question “*How to improve student’s mathematics achievement?*” The Head teacher views, which in the following lines;

“Each and every student are unique and every time student facing some problem. It is very beneficial if students’ problems are made into cases and action research is done. The teacher lacks the habit of doing research. So, Teacher should regularly conduct action research. There is a lack of training for teachers, and it is necessary for the relevant agencies to provide training. Teacher training programs should provide opportunities for aspiring teachers to gain hands-on experience in the classroom through student teaching or other supervised teaching experiences.”

I had asked the question “*Why do teachers need training?*” The mathematics teacher views, which in the following lines;

“After initial teacher training, it is important to provide ongoing professional development opportunities to help teachers stay current in their field and continue to improve their teaching skills. And also help to effectively teach students from diverse backgrounds and cultures.”

In the above evidence indicate that teacher training puts the teacher in perfect condition. Necessary training for teachers has not been arranged in the school, so teachers are not better at teaching and learning.

Various types of education and training on the productivity of teacher in promoting student achievement Harris and Sass (2011). In this context, a trained teacher who understands the principles of constructivism can be a crucial factor in facilitating effective learning. Teachers who are trained in constructivist principles are typically skilled in designing learning experiences that promote active engagement and inquiry, and in creating a classroom culture that encourages students to ask questions, explore new ideas, and collaborate with others.

Moreover, trained teachers who understand the principles of constructivism are often skilled at providing students with timely and effective feedback that supports their learning, and in promoting metacognition, or the ability to reflect on one's own thinking and learning processes. Trained teacher who understands and applies the principles of constructivism can be an important factor in creating a learning environment that promotes the active engagement, exploration, and discovery that are central to this learning theory.

Episode 1

During my observation, I visited the mathematics class of grade 10 at Bag Devi secondary school. Upon the teacher's arrival, I entered the classroom where all students stood up and greeted the teacher with a "good morning, sir". The teacher instructed them to sit down, and I noticed that only four out of the nine students enrolled in the class were present. The physical environment of the classroom appeared to be average. The teacher was present in the class without a lesson plan. The teacher gave general information about the subject matter before teaching. The teacher took a question from the book and solved that question by using problem solving method. And some time teacher uses discussion method in the mathematical classroom. The teacher gave a question to the student and asked them to solve the question, but none of the student could solve the question. Teacher did not seem to give feedback to student. I saw the teacher solve only one question. It was seen that the teacher did not used any educational materials while teaching the chapter area.

Episode 2

During my observation of a mathematics class in grade 10 at Bag Devi Secondary School, I noticed that upon entering the classroom after the teacher, all the students stood up and greeted the teacher. After the teacher instructed them to sit down, I observed that only four out of nine students were present in the class. The physical environment of the classroom was good. During the class, the teacher began by reviewing the previous lesson on area and then proceeded to write a problem from the textbook on the whiteboard and solve it. The teacher gave a problem to the student and asked them to solve the problem. Most of the time teacher used problem solving method and sometime used lecture method. It was seen that the students were passive and the teacher was active in the class, while the attention of the student was not seen.

Student did not pay attention to their studies. The teacher has not used educational materials by the classroom environment is controlled by the teacher.

Based on the classroom observation, the main reasons behind low student performance in mathematics learning were identified as follows: weak mathematics skills among most students, inadequate use of teaching materials, lack of active participation and interaction between students and teacher, students' disinterest in mathematics learning, and unequal opportunities provided by the teacher to all students.

In conclusion, the two episodes of classroom observations in grade 10 mathematics at Bag Devi Secondary School revealed some common issues affecting student performance. Despite the students' respect for the teacher, the low attendance in the first episode and disinterest in the second episode are clear indicators of a problem. The use of problem-solving and lecture methods by the teacher was not enough to engage the students, and there was limited use of teaching materials. The lack of active participation and interaction between students and teacher is a significant issue that needs to be addressed. Furthermore, the unequal opportunities provided by the teacher to all students is a concern that must be resolved. Therefore, it is crucial for teachers to identify and address the underlying reasons behind low student performance in mathematics learning to create a conducive learning environment that motivates students to engage and learn effectively.

Chapter V

FINDINGS, CONCLUSION AND IMPLICATIONS

This section presents a comprehensive overview of the entire research study, summarizing the key findings and conclusions drawn from the analysis and interpretation of the previous chapters. Additionally, it offers recommendations on how the major findings and conclusions of the study can be applied in future academic research. This chapter addresses the study's findings, conclusions, implications, and recommendations for further research.

Findings of the Study

The study revealed several problems related to the development of mathematical concepts among students. Firstly, it was found that students have weak prior knowledge of mathematics, which poses difficulties in their learning process. In addition, due to the lack of a conducive learning environment at home and various external factors such as parental addiction to alcohol, students face psychological challenges that further impede their learning.

Another concerning finding was that the quality of education provided to students in the area was inadequate. The training provided to mathematics teachers was not sufficient, which meant that they were unable to incorporate educational technology in their teaching methods effectively. Furthermore, there was a lack of educational materials in the school, and the teaching method employed by the teacher was primarily teacher-centered, which did not prioritize the needs of weaker students.

The study also revealed that students' interest in mathematics was low, and they spent very little time practicing the subject. The lack of prior knowledge and anxiety further contributed to their disengagement in class, and they were not active in peer interactions or asking questions. To address these issues and improve students'

interest in mathematics learning, it is recommended that mathematics teachers use student-centered teaching methods in the classroom. Additionally, providing opportunities for students to learn mathematics at home and at school, and providing necessary resources to students through scholarships would be helpful. These measures can help create a more supportive and engaging learning environment, which could lead to better outcomes for students in mathematics.

Conclusion

This case study research tries to examine the causes of low achievement of students in mathematics. From the minute analysis, interpretations, and findings, the researcher concluded that many reasons that are playing a vital role for shrinking the students' performance in mathematics. As there are various factors, this particular study found that most of the learners have less interest in learning mathematics, they have lack of proper pre knowledge in mathematics, they like to spend less time for learning mathematics at home. Likewise, fear and anxiety about abstraction of mathematics, parent's economic status, lack of trained teachers and innovative teaching learning strategies, lack of manipulative and innovative materials, teacher's motivation, competence and dedication towards students learning are also works as the causes of low achievement of the students in learning mathematics in our context.

Based on above finding, we can conclude that most of the students have less motivation towards learning mathematics because the concerned bodies like their school, parents, teachers have given less concern for developing student friendly teaching and learning environment. According to Gardner, there are 8 types of students on the basis of their learning style and ability. So, teacher has responsibility to recognize the student's ability to learn and treat them as their learning style.

Finally, there are various factors responsible for low achievement of students in mathematics learning like as students' personal factors; anxiety and fear, spend less time than other subject, family level factors; proper time to practice, busy in family chores and institutional (school level) factors; lack of competent and trained teacher, lack innovative teaching strategies and materials, cooperative learning. In order to improve student achievement in mathematics teachers, parents and even students should proper motivation and concentration on teaching learning mathematics. Teacher need to focus on motivating students for learning mathematics using different innovative and interactive teaching learning tools and techniques, emphasize on child-friendly cooperative learning and try to interlink mathematical contents with student's real-life experiences. Similarly, parents should be responsible for the management of students learning like as financial management, home environment management.

Implications of the Study

The study titled "Causes of low achievement in mathematics" has implications across various sectors, as is the case with all research. The primary objective of this study was to identify the factors responsible for poor performance in mathematics. As a result, the findings of this study have significant implications for various sectors.

Reworded: Hence, the primary implications of this study can be summarized as:

The study has multiple benefits, including improving student engagement and participation in mathematics classes, promoting the use of cooperative and student-centered learning methods in schools, increasing student interest in learning mathematics, and it helps mathematics teachers, students, researchers, curriculum planners, textbook writers, and educationists. Additionally, the study can guide

textbook authors in selecting appropriate mathematical problems to include in their materials.

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Appendices

Appendix-I

Interview format for respondent students

Name:

Date:

Class:

Gender:

Address:

Age:

Name of school:

The interview with the respondent students was taken in the following guidelines.

-) Pre knowledge of learner.
-) Respondents Introduction.
-) Family background (parent's education, occupation, member, economic status, etc.)
-) Student's interest in learning mathematics.
-) Time spends in learning and practice.
-) Learning environment at home and school.

-) Teacher's behavior toward students.
-) Opinion a teacher's teaching technique, method and material.
-) Parents support for learning.
-) Causes of difficulties in learning mathematics.
-) Participation in Class work and extra curriculum activities.
-) Expectation from parents, teacher, and school.
-) Relation between teacher-student.

Appendix-II

Interview format for subject Teacher

Name of teacher:

Date:

Qualification:

Experience:

Address:

Gender:

Name of school:

The interview with the mathematics teacher was taken in the following guidelines.

-) Effective teaching learning method and material.
-) Use of ICT technology in mathematics classroom.
-) Relation between student-teacher in the classroom
-) Difficulties in learning mathematics
-) Classroom management and learning environment
-) Homework and classwork
-) Student participation in learning mathematics
-) Student pre knowledge
-) Student learning habit and interest

Appendix-III

Interview format for Head Teacher

Name of teacher:

Date:

Qualification:

Experience:

Address:

Gender:

Name of school:

The interview with the Head teacher was taken in the following guidelines.

-) View of school physical facilities
-) Evaluation system
-) Relation between guardian and school
-) Views on student's mathematics achievement
-) Instructional material, ICT, and library.
-) Relation between teacher-student
-) Learning environment
-) Causes of low achievement of mathematics in learning.
-) Policy for improve low achiever student
-) Way to improve student achievement

Appendix-IV

Interview Format for Parents

Name:

Date:

Gender:

Age:

Relation with student:

The interview with the student parents was taken in the following guidelines.

-) Parents occupation and education
-) Economic condition
-) Home environment of student in learning
-) Providing Physical facility
-) Child's interest

Appendix-V

Classroom Observation Format

Name of school:

Students' participation:

Date of observation:

Topic:

The classroom observation was taken the following heading points.

Teacher Activities

-) Collaboration, discussion and encouragement in learning
-) Teaching instructional material, method and style.
-) Classroom management
-) Classwork and homework
-) Interaction with student in classroom work.
-) Evaluation and suggestion
-) Lesson plan.
-) Feedback and reward

Students Activities

-) Students' interest in subject matter.
-) Practice and participation in classroom activities.
-) Curiosity for learning
-) Relation between to each other student.
-) Ask question

Appendix- VI

Question set

The interview with student was conducted on the basic of following structure and semi structure question format.

1. What is your prior knowledge of mathematics and how is it affecting your current learning?
.....
2. How to improve the interest of student in learning mathematics?
.....
3. How to affect at home environment in your learning mathematics?
.....
4. How much time you spend in daily practice for mathematics?
.....
5. Why do you feel mathematics as difficult subject rather than another subject?
.....
6. How does parents' education affect in your mathematics learning?
.....
7. Can teacher use ICT in your mathematics classroom?
.....
8. what is the financial status of your family?
.....
9. How does parental education affect student learning?
.....
10. Which method Teacher apply?
.....
11. Does the teacher use educational materials Daily?
.....
12. Which method do you find suitable for mathematics learning?
.....