

**UNFOLDING THE REALITY OF LOW ACHIEVEMENT IN  
MATHEMATICS**

**UNFOLDING THE REALITY OF LOW ACHIEVEMENT IN MATHEMATICS – ANJILA ADHIKARI – 2015**

**A  
THESIS  
BY  
ANJILA ADHIKARI**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE  
OF MASTERS OF EDUCATION**

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

**2015**

**LETTER OF APPROVAL**

A  
Thesis  
By

Anjila Adhikari

Entitled

**Unfolding the Reality of Low Achievement in Mathematics** has been approved in partial fulfillment of the requirements for the Degree of Master of Mathematics Education.

**Committee for the Viva-Voce**

**Signature**

Asso. Prof. Laxmi Narayan Yadav

.....

(Chairman)

Prof. Dr. Hari Prasad Upadhyay

.....

(Member)

Mr. Abatar Subedi

.....

(Member)

## LETTER OF CERTIFICATE

This is to certify that Mrs. Anjila Adhikari a student of academic year 065/066 with Campus Roll No. 177/065, Thesis No. 995, Exam Roll No. 281048 (2066), T.U. Regd. No. 9-2-239-51-2003 has completed her thesis under my supervision during the period prescribed by the rules and regulations of Tribhuvan University, Nepal. The thesis entitled, **Unfolding the Reality of Low Achievement in Mathematics** embodies the results of her investigation conducted during the period of 2015 under the Department of Mathematics Education, Central Department of Education, University Campus, Kirtipur, Kathmandu. I recommend and forward that her thesis be submitted for the evaluation for awarding the Degree of Master of Mathematics Education.

.....

(Mr. Abatar Subedi)  
Supervisor

.....

(Asso. Prof. Laxmi Narayan Yadav)  
Head

## ACKNOWLEDGEMENTS

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

I am highly indebted to Mr. Abatar Subedi, who is the Lecturer of our department as well as thesis guide equipped me with all sort of basic concepts and techniques essential to carry out this study. I want to extend my sincere gratitude for his patience, kindness, proper guidance, supervision and invaluable suggestions that gave me a kind of inspiration to accomplish my thesis with confidence in all stages of the study.

My sincere gratitude goes to Asso. Prof. Laxmi Narayan Yadav, Head, Department of Mathematics Education, Prof. Dr. Hari Prasad Upadhyay, Chairman, Subject Committee, Mathematics and Computer Science Education, Prof. Dr. Min Bahadur Shrestha, Prof. Dr. Lekh Nath Sharma and other respected teachers for their invaluable comments and suggestions that led me to accomplish this thesis.

I wish to acknowledge and express my profound gratitude to the Head teacher and Mathematics teacher of selected schools for their valuable suggestions, facilitating reference materials, advices and encouragement during my research work.

At last, I offer thanks to G Computer Center, Kiritpur, Kathmandu who helps me typing and printing out this paper and I cannot stay without giving special thanks to my family for providing me economic support as well as invaluable support.

.....  
Anjila Adhikari

## **ABSTRACT**

The topic of the study is "Unfolding the reality of low achievement in mathematics". This study focuses on the causes of low achievement in mathematics. The main objective of this study was to explore and focus the factors that bring low achievement in mathematics.

To fulfill the intended objectives of the study, the researcher had developed the conceptual understanding of the study which was the theoretical framework for this study. The theoretical framework of the study covered home related factors, student related factors and school related factors, having three sub factors of each those factors. Data analysis and interpretation was done on the basis of theoretical frame work developed by the researcher in literature review altogether.

This was case study research having qualitative and descriptive nature. Among all schools from Kathmandu district, only one school was chosen purposively. Finally, from total students of Grade VII four students (1 boy and 3 girls) were selected for the case study on the basis of mathematics score obtained by the students in the test taken by the school. Tools for the data collection were interview schedules, observation form and written documents. Face to face interview was carried out with students, parents, mathematics teacher & head teacher and classroom observation was done. The collected information was analyzed descriptively according to the constructivism theory.

This study showed different causes of low achievement in mathematics. They were less participatory classes, poor teacher-student relationship, improper feedback system, poor financial condition of the parents, occupational factor and parent's low education level.

## TABLE OF CONTENT

<b>Chapters</b>	<b>Page No.</b>
<i>Letter of Approval</i>	<i>i</i>
<i>Letter of Certificate</i>	<i>ii</i>
<i>Acknowledgements</i>	<i>iii</i>
<i>Abstract</i>	<i>iv</i>
<i>Contents</i>	<i>v</i>
<b>I. INTRODUCTION</b>	<b>1-10</b>
Background of the Study	1
Statement of Problem	4
Objective of the Study	6
Significance of the Study	6
Delimitation of the study	7
Operational Definition of Related Terms	8
<b>II. REVIEW OF RELATED LITERATURE_S</b>	<b>11-21</b>
Empirical Literature	11
Theoretical Literature	18
Conceptual Understanding of the Study	19
<b>III. METHODS AND PROCEDURES</b>	<b>22-25</b>
Design of the Study	22
Case of the Study	22
Selection of Study Area	23
Selection of Case Respondent	23
Tools for Data Collection	24

In Depth Interview	24
Observation	24
School Document	24
Data Collection Procedure	25
Data Analysis and Interpretation	25

#### **IV. ANALYSIS OF DATA AND INTREPRETATION OF THE RESULT**

**26-42**

Relations of Different Environmental Factors in Achievement	26
Student Related Factors	27
School Related Factors	33
Teaching Style	33
Teacher and Student Relationship	35
Supervision	37
Home Related Factors	37
Parent Occupation	38
Parent's Income	40
Parent's Education	41

#### **V. SUMMARY, FINDINGS, CONCLUSION AND RECOMMENDATIONS**

**43-46**

Summary	43
Findings	44
Conclusion	45
Recommendations	45

#### **REFERENCES**