

**EFFECT OF FORMATIVE EVALUATION ON MATHEMATICS
ACHIEVEMENT**

**A
THESIS**

**BY
KAPIL SHARMA**

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DEGREE OF MASTER'S DEGREE IN MATHEMATICS EDUCATION**

**SUBMITTED TO
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KATHMANDU, NEPAL**

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This is to certify that Mr. Kapil Sharma has completed his M.Ed. thesis entitled
“Effect of Formative Evaluation on Mathematics Achievement” under my
supervision during the period by rules and regulations of Tribhuvan University,
Kirtipur, Kathmandu, Nepal. I recommend and forward his thesis to the Department of
Mathematics Education to organize final viva-voce.

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(Mrs. Homkumari Adhikari)

Supervisor

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Letter of Approval

This thesis entitled “**Effect of Formative Evaluation on Mathematics Achievement**” submitted by Mr. Kapil Sharma in partial fulfillment of the requirements for the Master's Degree in Education has been approved.

Viva-Voce Committee

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Letter of Certificate

This is to certify that Mr. Kapil Sharma, a student of Academic Year 2070/71 with Campus Roll No: 524, Thesis No. 1313 , Exam Roll No: 280437 and T.U. Regd. No. 6-1-55-110-2005 has completed this thesis under the supervision and guidance of Mrs. Homkumari Adhikari during the period prescribed by the rules and regulations of Tribhuvan University, Kirtipur, Kathmandu, Nepal. This thesis entitled **“Effect of Formative Evaluation on Mathematics Achievement”** has been prepared based on the results of his investigation conducted during the prescribed period under the Department of Mathematics Education, Central Department of Education, University Campus, Nepal. I recommend and forward that his thesis be submitted for the evaluation and to award the degree of Master of Education.

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(Assoc. Prof. Laxmi Naryan Yadav)

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Dedication

This study is affectionately dedicated to my parents

Declaration

This thesis contains no material, which has been accepted for the award of other degree in any institution. To the best of my knowledge and belief, this thesis contains no material previously published by any author except due acknowledgement has been made.

.....

(Mr. Kapil Sharma)

Date:

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My first obligation is to the Department of Mathematics Education T.U., Kirtipur for providing me an opportunity to do a thesis on the topic of “Effect of Formative Evaluation on Mathematics Achievement”

I would like to express my sincere thanks, gratitude and gratefulness to my thesis supervisor Mrs. Homkumari Adhikari who provided me ideas, guidance, advice, mentoring, encouragement and feedback throughout my research study. Without her encouragement, advice, motivation, and support, this research study would not have been possible.

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.....

Kapil Sharma

Abstract

This study focused on Effect of Formative Evaluation on Mathematics Achievement of grade VIII students of Bardiya district. The objectives of this study were to compare the mathematics achievements of students with and without using formative evaluation, to analyze the improvement in non cognitive aspects (motivation, participation, regularity and attitudes) of students in mathematics teacher during experimental periods.

This study is based on mixed design i.e. quantitative and qualitative research. Researcher selected 2 community school from 10 community school by their same school economic condition, same students achievement through the convenience sampling method. Researcher selected 65 students from two community schools by convenience sampling method for this study. Also for non-cognitive aspects the researcher selected 10 students from both schools by random sampling method. The data was collected from achievement test, interview and class observation note of the schools. Mean, standard deviation and z-test were used for the analysis of quantitative data and the qualitative data were analyzed by triangulation.

The study found that there was significance difference between mathematics achievement of students taught by using formative evaluation and not using formative evaluation. Also the researcher found that in the experimental group the non-cognitive aspect was positive changed. They got better response towards mathematics but in the control group the researcher found that there was not so positive change.

Table of Contents

	Page No
<i>Letter of Certificate</i>	<i>i</i>
<i>Letter of Approval</i>	<i>ii</i>
<i>Recommendation for Acceptance</i>	<i>iii</i>
<i>Acknowledgement</i>	<i>iv</i>
<i>Copy Rights</i>	<i>v</i>
<i>Abstract</i>	<i>vi</i>
<i>Dedication</i>	<i>vii</i>
<i>Declaration</i>	<i>viii</i>
<i>Table of Contents</i>	<i>ix</i>
<i>List of Tables</i>	<i>xi</i>
<i>List of Figures</i>	<i>xi</i>
<i>Abbreviations</i>	<i>xii</i>
Chapters	
I: INTRODUCTION	1-8
Background of the Study	1
Statement of the Problem	4
Objectives of the Study	5
Significance of the Study	5
Hypothesis of the Study	6
Delimitation of the Study	7
Definition of Specific Terms	8
II: REVIEW OF RELATED LITERATURE	9-17
Empirical Literature	9

Theoretical Literature	14
Conceptual Framework	16
III: METHODS AND PROCEDURES	18-32
Design of the Study	18
Population and sample of the Study	20
Variables of the Study	21
Tools for Data Collection	23
Validity and Reliability of the Tools	25
Pilot test and item analysis	26
Experimental Validity Treats	27
Phases of Experimental	29
Source of Data	30
Data Collection Procedure	30
Data Analysis Procedure	31
Ethical Consideration	32
IV: ANALYSIS AND INTERPRETATION OF DATA	34-43
V: SUMMARY, FINDING, CONCLUSION AND RECOMMENDATIONS	44-46
Summary	44
Findings	44
Conclusion	45
Recommendations	46
Further Research Level	46
References	47-48
Appendices	49-66

List of Tables

Table 3.1: Design of the Study	19
Table No. 4.1: Result of pre-test	35
Table No.4.2: Result of post-test	36
Table No. 4.3: Scores in mathematics teaching obtained by control group	37
Table No. 4.4: Scores in mathematics teaching obtained by experimental group	38

List of Figures

Figure 2.1 Conceptual framework	16
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Abbreviations

CR	: Conditioned Response
CS	: Conditioned Stimulus
D.I.	: Discriminating Index
Ed.	: Edition
FOE	: Faculty of Education
MAT	: Mathematical Achievement Test
P	: Difficulty Level
SPSS	: Statistical Packages for Social Scientists
SLC	: School Leaving Certificate
S-R	: Stimulus Response
T. U.	: Tribhuvan University
UR	: Unconditional Response
US	: Unconditional Stimulus