2018

- SUMIT KARNA

1322

ACHIEVEMENT IN MATHEMATICS AND ITS CAUSES

A THESIS BY SUMIT KARNA

IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION

SUBMITTED TO DEPARTMENT OF MATHEMATICS EDUCATION CENTRAL DEPARTMENT OF EDUCATION UNIVERSITY CAMPUS TRIBHUVAN UNIVERSITY KIRTIPUR, KATHMANDU 2018

LETTER OF CERTIFICATE

This is to certify that **Mr. Sumit Karna**, a student of academic year of 2071/2072 with thesis no. 1322, exam Roll No. 280538, Campus Roll No. 52 and T.U. Regd. No 9-2-57-1035-2008 has completed his thesis under the supervision of Assoc. Prof. Dr. Bed Raj Acharya. The thesis entitled **''Achievement in Mathematics and Its Causes''** has been prepared based on the result of his investigation. I hereby, recommend and forward his thesis for the evaluation in partial fulfillment for requirements to award for the Degree of Master in Mathematics Education.

(Assoc. Prof. Laxmi Narayan Yadav)

Head

Date:

LETTER OF APPROVAL

A

Thesis

By

SUMIT KARNA

Entitled

"Achievement in Mathematics and Its Causes" has been approved in partial fulfillment of the requirements for the Degree of Master in Mathematics Education.

	Committee of the Viva-Voce	Signature
1.	Assoc. Prof. Laxmi Narayan Yadav	
	(Chairman)	
2.	Prof. Dr. Hari Prasad Upadhyay	
	(External)	
3.	Assoc. Prof. Dr. Bed Raj Acharya	
	(Member)	

RECOMMENDATION FOR ACCEPTANCE

This is to certify that Mr. Sumit Karna has completed his M.Ed. thesis entitled "Achievement in Mathematics and Its Causes" under my supervision during the period prescribed by the rules and regulation of Tribhuvan University, Kirtipur, Kathmandu, Nepal. I recommend and forward his thesis to the Department of Mathematics Education to evaluate in final viva-voce.

.....

(Assoc. Prof. Dr. Bed Raj Acharya)

(Supervisor)

Date:

Sumit Karna

This document is copyright material. Under low, no parts of this document may be reproduced without the expressed permission of the researcher.

Defense date: May 24, 2018

All Right Reserved

DEDICATION

This work is dedicated to my parents who taught and inspired me to walk on the part of educational journey. Likewise, I would like to dedicate to my wife Sweta Karna who supported me in every step of my life.

DECLARATION

I hereby declare this work is my own work and has not been submitted for any other degree in any university.

Sumit Karna

(Degree Candidate)

ACKNOWLEDGEMENT

First, I would like to express my heartfelt gratitude to my research supervisor, Assoc. Prof. Dr. Bed Raj Acharya, Department of Mathematics Education, Tribhuvan University, Kritipur, Kathmandu. His invaluable and constructive suggestions have become the greatest valuable property of this thesis. Without his guidance, this thesis would never have been appeared in this form.

I would like to express my sincere gratefulness to Assoc. Prof. Laxmi Narayan Yadav, Head of Department of Mathematics Education, University Campus, Kritipur, Kathmandu, for his invaluable co-operation, constructive suggestion and inspiration while accomplishing this research work.

I would like to extend my gratitude to my respected teachers Prof. Dr. Hari Prasad Upadhayay, Prof. Dr. Min Bahadur Serestha, Prof. Dr. Binod Dhakal, Mr. Abatar Subedi, Mr. Bed Prasad Dhakal and all the teachers and staff of the Department of Mathematics Education for their kind support, suggestion and intellectual support for this research work.

I am very grateful to my father, Ram Sevak Lal Karna and mother, Sudama Devi Karna for providing me opportunity to undertake my study. I also extend thanks to my relatives for their co-operation during the period of data collection.

I wish to express hearty thanks to mathematics teacher, students, civil servants and Badi parents who help me during data collection in sampled schools and District Education Office, Surkhet who provided invaluable data for my research work.

ABSTRACT

This study focuses on the Achievement in mathematics and its cause. The main objectives of this study were to compare the achievement level of Badi and non-Badi students in mathematics and to explore the causes that affect achievements in mathematics of Badi students. Main hypothesis was that there is no significant difference between mean achievement of Badi and Non Badi students.

This study was a mixed research design approach conducted at Shree Sharda Secondary School, Shree Pravat Secondary School, Shree Chhinchu English Medium School and Deuti Vidya Mandir Sadan, Bheriganga municipality, Surkhet. I selected hundred students from four schools of both Badi and non-Badi caste for achievement test. I took interview four Badi students, two Badi parents, four mathematics teachers and four head teachers. I conducted observation of five mathematics classes. I analyzed and interpreted the data with the help of z-test, theories and some related literatures.

From the study, it was found that there was significant difference between mean achievement of Badi and Non-Badi students. So, achievement in mathematics of Badi students were lower than non Badi students. It was found that the interests of learners, pre knowledge and teaching learning activities, motivation, physical facilities, school environment, home environment, parents education and culture and society were main causes of low achievements in mathematics.

LIST OF FIGURE

Figure: 1.1 Conceptual Framework1	16	5
-----------------------------------	----	---

Table of Contents

Lette	er of Certificate	i
Lette	er of Approval	ii
Reco	ommendation for Acceptance	iii
Copy	yright	iv
Dedi	ication	V
Decl	laration	vi
Ackn	nowledgement	vii
Abst	ract	viii
List	of Figure	ix
Tabl	e of Contents	x
Cha	pters	
I.	INTRODUCTION	1-5
	Background of the Study	1
	Statement of the Problems	2
	Objectives of the Study	3
	Hypothesis	3
	Significance of the Study	3
	Delimitation of the Study	4
	Operational Definition of Terms	4
II.	REVIEW OF RELATED LITERATURE	6-19
	Empirical Review	6
	Theoretical Review	12
	Conceptual Framework	17

III.	METHODS AND PROCEDURES	20-25
	Research Design	20
	Population of the Study	20
	Sample of the Study	21
	Tools for Research	21
	Reliability and Validity of Tool	22
	Data Collection Procedures	24
	Data Analysis and Interpretation Procedures	25
IV.	ANALYSIS AND INTERPRETATION OF DATA	26-47
	Mathematics Achievement Test	27
	Interview	29
	Classroom Observation	31
	Interest of Learner	34
	Teaching Learning Activities	35
	Pre knowledge	37
	Motivation	38
	Physical Facilities	39
	School Environment	41
	Home Environment	42
	Parents Occupation	44
	Culture and Society	45
V.	FINDINGS, CONCLUSIONS AND IMPLICATIONS	48-46
	Findings	48
	Conclusions	49
	Implications	50

REFERENCES	52-55
APPENDIX-A: Mathematics Achievement Test	56
APPENDIX-B: Items Analysis Table	61
APPENDIX-C: Split Half reliability of Achievement Test	63
APPENDIX-D: Achievement Score of non Badi Students	65
APPENDIX-E: Achievement Score of Badi Students	67
APPENDIX-F: Interview Guidelines for Students	69
APPENDIX-G: Interview Guidelines for Teachers	70
APPENDIX-H: Interview Guideline for Parents	71
APPENDIX-I: Interview Guideline for Head Teacher	72
APPENDIX-J: Classroom Observation Guidelines	73
APPENDIX-K: Figures	75