### A COMPARATIVE STUDY OF MATHEMATICS ACHIEVEMENT AT SECONDARY LEVEL IN BAGLUNG AND KASKI DISTRICTS

A THESIS SUBMITTED BY KHIM NATH SUBEDI ROLL NO: 8/061 T.U.REGD. NO 9-2-48-2361-2000

### IN THE PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE MASTER'S DEGREE IN EDUCATION

TO THE DEPARTMENT OF MATHEMATICS TRIBHUVAN UNIVERSITY PRITHIVI NARAYAN CAMPUS POKHARA, NEPAL July, 2009

## THE DEPARTMENT OF MATHEMATICS TRIBHUVAN UNIVERSITY PRITHIVI NARAYAN CAMPUS POKHARA, NEPAL

#### CERTIFICATE

This is to certify that Mr. Khim Nath Subedi, a student of the academic session 2061/064 with campus roll no. 8/061. Exam roll no. 480077 and T.U. registration No. 9-2-48-2361-2000 has completed his thesis under my supervision during the period prescribed by Department of Mathematics, P.N. Campus, Pokhara. This thesis entitled "A Comparative Study of Mathematics Achievement at Secondary Level in Baglung and Kaski Districts" has been prepared on the basis of the result of his investigation conducted during the period 2009 under the Department of Mathematics, Prithvi Narayan Campus, Pokhara. I recommend his thesis to submit for the evaluation as the partial requirement to award the Degree of Master in Education.

(Loknath Adhikari) Department Head of Mathematics Tribhuvan University Prithvi Narayan Campus, Pokhara (Maheshwor Pokhrel) Supervisor Department of Mathematics Tribhuvan University Prithvi Narayan Campus, Pokhara

## THE DEPARTMENT OF MATHEMATICS TRIBHUVAN UNIVERSITY PRITHIVI NARAYAN CAMPUS POKHARA, NEPAL

# Thesis Submitted By KHIM NATH SUBEDI Entitled

## A COMPARATIVE STUDY OF MATHEMATICS ACHIEVEMENT AT SECONDARY LEVEL IN BAGLUNG AND KASKI DISTRICTS

has been approved in partial fulfillment of the requirements for the degree of Master in Education.

	Committee for the Viva-voce	Signature
1.	Reader Mr. Loknath Adhikari (Department Head of Mathematics)	
2.	Mr.Maheshwor Pokhrel (Supervisor)	
3.	Prof. Dr. K.K. Shrestha (External Supervisor)	

Date: 14<sup>th</sup> August, 2009

#### ACKNOWLEDGEMENT

First of all, I'd like to extend my sincere gratitude to my thesis supervisor Mr. Maheshwor Pokherl, Lecturer in Mathematics, Prithivi Narayan Campus, Pokhara for his continuous encouragement, guidance and invaluable suggestions to complete my thesis work. I would also like to express my sincere thanks to Mr Loknath Adhikari the head of mathematics department, P.N. Campus for his inspiration and essential guidelines. I am greatly obliged to Mr.Bibhab Neupane Lecturer of mathematics for his help and guidence. Likewise, I am thankful to all respected teachers of the department of mathematics, Prithivi Narayan Campus for their continuous guidance and valuable suggestion.

I am very much grateful to the headmasters and teachers of mathematics who helped me to prepare this thesis. It is beyond my words to express my gratitude to my family members who encouraged to precede my work forward.

At last but not last I want to thank to Quick Computer Service, Bagar, Pokhara for the expert work in bringing this paper in to print.

> Khim Nath Subedi July, 2009

#### ABSTRACT

This study attempts to find out the mathematics achievement of secondary level students of Baglung and Kaski districts. This study was conducted on the basis of following objectives:

- i. To compare the mathematics achievements of the secondary level students of Baglung and Kaski districts.
- ii. To compare the mathematics achievement of the secondary level male students of Baglung and Kaski districts.
- iii. To compare the mathematics achievement of the secondary level female students of Baglung and Kaski districts.
- iv. To compare the mathematics achievement of the secondary level rural students of Baglung and Kaski districts.
- v. To compare the mathematics achievement of the secondary level urban students of Baglung and Kaski districts.

The above stated objectives of the study were the survey type in order to collect the data; an achievement test paper was the main instrument for the study. The investigator developed the test consisting of 50 multiple choice items on the basis of the prescribed curriculum in mathematics of grade IX. Reliability of the instrument was ensured through piloting .The researcher administered the achievement test paper with 20 students of Shree Mahendra Secondary School, Sukhaura, Baglung for the purpose of pilot study of the test. All the questions items were of objective types i.e. multiple choice items taking in to account of the obtained p-value and D-value of the items. Out of 50 items 9 items were rejected and remaining 41 were accepted for the final test.

Students studying at grade 10 were considered as sample population of this research. The equal number of students of secondary level was selected randomly from each school for sample of the study. The sample of the study included 160 students (80 Baglung and 80 Kaski) from two districts.

The study consists of five chapters. First chapter presents the introduction, statement of the problem, significance of the study, objectives, hypothesis and limitations. The second chapter introduces review of literature. Third chapter deals with the methodology applied to carry out the research work. Fourth chapter presents the analysis and interpretation of the data and last fifth chapter includes the findings, conclusion, and recommendations.

Datas are collected from 8 public schools of Baglung district and 8 public schools of Kaski district. Time was given only 45 minutes. One mark was given for one right answer. The statistical techniques used in this study were mean scores, standard deviation and two-tailed t-test at 0.05 level of significance. Based on the interpretation and analysis of the data, the following results were found:

- i. There was a significant difference in mathematics achievement of the students of Baglung and Kaski districts.
- ii. There was a significant difference in mathematics achievement of the male students of Baglung and Kaski districts.
- iii. There was no significant difference in mathematics achievement of the female students of Baglung and Kaski districts.
- iv. There was no significant difference in mathematics achievement of the rural students of Baglung and Kaski districts.
- v. There was a significant difference in mathematics achievement of the urban students of Baglung and Kaski districts.

After the statistical analysis and interpretation of the collected data it was concluded that the achievement in mathematics was affected by the location of school, infrastructure of school and climate.

### **TABLE OF CONTENTS**

Page 1	No
--------	----

Ackı	nowledgement	Ι
Abst	ract	II
Tabl	e of Contents	IV
List	of tables	VI
List	of Chart	VI
СНА	<b>APTER-I: INTRODUCTION</b>	1-11
1.1.	Background of the study	1
1.2	Statements of the problems	7
1.3	Significance of the study	8
1.4	Objectives of the study	9
1.5	Statements of hypothesis	9
	1.5.1 Research hypothesis	9
	1.5.2 Statistical hypothesis	10
1.6	Limitations of the study	11
1.7	Definition of the terms	11
CHA	<b>APTER -II : REVIEW OF RELATED LITERATURE</b>	12-18
CHA	<b>APTER -III: RESEARCH METHODOLOGY</b>	19-26
3.1	Sampling procedure	19
	3.1.1 Population	19
	3.1.2 Sample selection	19
3.2	Instrument /Tools	21
	3.2.1 Construction of test	21
	3.2.2 Item analysis	22

3.3	Data collection procedure	26
3.4	Data analysis procedure	26
СНА	PTER -IV: ANALYSIS AND INTERPRETATION OF DATA	27-31
4.1	Comparison of mathematics achievement of the	
	students of Baglung and Kaski districts	27
4.2	Comparison of mathematics achievement of the	
	male students of Baglung and Kaski districts	28
4.3	Comparison of mathematics achievement of the	
	female students of Baglung and Kaski districts	29
4.4.	Comparison of mathematics achievement of the	
	rural students Baglung and Kaski districts	30
4.5	Comparison of mathematics achievement of the	
	urban students Baglung and Kaski districts	31
CHA	<b>PTER-V: SUMMARY, FINDINGS, CONCLUSION</b>	
	AND RECOMMENDATIONS	33-36
5.1	Summary	33
5.2	Finding of the study	33
5.3	Conclusion	35
5.4	Recommendations	36

## BIBLIOGRAPHY

Appendix A– H

## List of Tables

Tabl	e No. Titles	Page
1.	Item distribution	22
2.	Item analysis	24
3.	Comparison of mathematics achievement of the	
	sudents of Baglung and Kaski districts	28
4.	Comparison of mathematics achievement of the	
	male students of Baglung and Kaski districts.	29
5.	Comparison of mathematics achievement of the	
	female students of Baglung and Kaski districts.	30
6.	Comparison of mathematics achievement of the	
	rural students of Baglung and Kaski districts.	31
7.	Comparison of mathematics achievement of the	
	urban students of Baglung and Kaski districts.	32

### List of Chart

1.	Distribution of sample students	20
----	---------------------------------	----