

**EFFECTIVENESS OF TEACHER TRAINING ON MATHEMATICS
ACHIEVEMENT AT SECONDARY LEVEL**

**A
THESIS**

**BY
TEJ BAHADUR ACHARYA**

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THE DEGREE OF MASTERS OF EDUCATION**

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CERTIFICATION

This is to certify that **Mr. Tej Bahadur Acharya**, a student of academic year 2068/69 with Campus Roll Number 187, Exam Roll Number 281882(2069), Thesis Number 1022, and T.U. Registration Number 9-3-28-74-2010 has completed his thesis under the rules and regulations of Tribhuvan University, Nepal. The thesis entitled "**Effectiveness of Teacher Training on Mathematics Achievement at Secondary Level**" embodies the result of his investigation conducted during the period 2015, in the Department of Mathematics and Computer Science Education, University Campus, Tribhuvan University, Kirtipur, Kathmandu. I hereby, recommend and forward that his thesis be submitted for the evaluation as the partial requirements to award the Degree of Master's in Education.

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Approval letter

A Thesis

Submitted

By

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Entitled:

"Effectiveness of Teacher Training on Mathematics Achievement at Secondary Level" has been approved in partial fulfilment of the requirements for the degree of Masters of Education.

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DEDICATION

Dedicated to

My parents

Arjun Guragai and Punya Maya Guragai who devoted a great

Span of their lives in making for me what I am now,

And

To the memory of my late grandfather

Mohan Prasad Guragain

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Tej Bahadur Acharya

ABSTRACT

The training is considered as one of the most crucial components in ensuring effective mathematics teaching in Nepal, but the impact of teacher training has not been found to be up to the desired level in teaching mathematics in our context. Many factors are said to be responsible for poor transfer of teacher training in the classroom delivery. With this premise in mind, this research was undertaken in order to find the effectiveness of training programme in teaching mathematics at secondary level and the current status of training transfer in the actual classrooms in the Government Schools of Morang District.

In order to fulfill the objectives of the study, the researcher selected 50 community schools of Morang District. Among those schools, the researcher purposively selected 25 schools having trained teachers and 25 schools having untrained. Therefore 25 trained mathematics teachers and 25 untrained mathematics teachers were selected as sample. Similarly, final exams' marks of 140 students in mathematics from grade IX were taken to analyze in which 70 students were taught by trained teachers and 70 were taught by untrained teachers on the basis of stratified sampling. The design of this research study was survey. Two important research instruments viz. check list/classroom observation form and questionnaire were used to collect the required data from the teachers and the Head teachers.

The mean, standard deviation, variance and two tailed Z-test were used to analyze the data collected through the final exam of the academic year 2070 and the data collected through the questionnaire and observation form were analyzed on percentage basis as well.

In comparison of students' achievements in mathematics, it was found that the mathematics achievement of students taught by trained teachers was more significant than the students taught by untrained teachers. Finally, the researcher found that the secondary level

mathematics teachers' classes are effective and generally transformed their training skills in their classroom teaching. Lack of interest to prepare lesson plan for mathematics teaching, use of properly teaching materials for lesson, continuous evaluation system was seen poor. Knowledge of related subject, presenting subject matter in classroom teaching and using language were satisfactory but they were undecided about child psychology. Therefore, the whole study made the researcher able to conclude that the transfer of teacher training in secondary level mathematics classrooms is not in the satisfactory level.

Finally, the researcher found that in Morang District, all the secondary level mathematics teachers' teaching learning activities were effective and generally transformed their training skills in their classroom teaching but the level of transformation was unsatisfactory. Lack of interest to prepare lesson plan for mathematics teaching, use of proper teaching materials for lesson, continuous evaluation system were seen poor. Knowledge of related subject, presenting subject matter in classroom teaching and using proper language were satisfactory but they were a bit confused about child psychology.

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LIST OF SYMBOLS

S	=	Variance of Sample Scores
N	=	No. of Students
\bar{X}	=	Mean of Scores
Σ	=	Summation
%	=	Percentage

LIST OF ABBREVIATIONS

CDC	:	Curriculum Development Centre
DEO	:	District Education Office
FOE	:	Faculty of Education
MOF	:	Ministry of Education
NCED	:	National Curriculum Development and Evaluation Council
NESP	:	National Education System Plan
SEDP	:	Science Education Development Project
SLC	:	School Leaving Certificate
TNA	:	Training Need Assessment
TPD	:	Teacher's Professional Development
TU	:	Tribhuvan University
UNDP	:	United Nations Development Plan
UNICEF	:	United Nations International Children Emergency Fund