

**EFFECTIVENESS OF PROBLEM-SOLVING METHOD IN TEACHING
MATHEMATICS AT LOWER SECONDARY LEVEL**

**A
THESIS
BY
PAWAN DHAKAL**

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

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LETTER OF APPROVAL

**A
Thesis**

**By
Pawan Dhakal**

Entitled

**Effectiveness Of Problem-Solving Method In Teaching Mathematics At
Lower Secondary Level** has been approved in partial fulfillments 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 Upadhaya
(External)

.....

Mr. Abtar Subedi
(Internal)

.....

Date: 2072-06-19 .

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Pawan Dhakal

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TRIBHUVAN UNIVERSITY
DEPARTMENT OF MATHEMATICS EDUCATION
KIRTIPUR KATHMANDU, NEPAL

CERTIFICATE

This is to certify that **Mr Pawan Dhakal** is a student of academic year 2067/068 with campus Roll no....., Thesis no.1027 exam Roll no.2282671 and T.U. Registration no.9-2-243-67-2004 has completed this thesis under my supervision for the period prescribed by the rules and regulation of Tribhuvan University Nepal. The thesis entitled "**Effectiveness of problem solving method in teaching mathematic**" embodies the results of his investigation in the Department of Mathematics Education, Central Department of Education University Campus Kirtipur Kathmandu. I recommend and forward that his thesis be submitted for the evaluation as the partial requirements to award the degree of Master of Education.

.....

(Mr. Abatar Subedi)

Supervisor

.....

(Asso. Pro. Laxmi Narayan Yadav)

Head

ABSTRACT

This is an experimental research related to the mathematics achievement of grade VIII students. The study was done in Makawanpur district to compare the mathematics achievement between genders and to explore the effectiveness of problem solving method in teaching mathematics at lower secondary level. Two government schools were selected by using convenience sampling and pre-test, post-test non-equivalent control group design was used to conduct this study. There were 42 students in Siddhartha Higher Secondary School and 40 students in Bhutan Devi Higher Secondary School. On the basis of pre-achievement test score two groups were made homogeneous as nearly as possible. 26 students (14 boys and 12 girls) of Siddhartha Higher Secondary Schools were selected as experimental group and 24 students of Bhutan Devi Higher Secondary School were selected as control group on the fair coin toss. Two groups were taught same topics percentage, unitary method, simple interest and profit and loss but experimental group was taught by using problem-solving method and control group was taught using traditional method of teaching and 14 lesson plans were developed during the experiment. After completing the experiment both groups were administered a mathematics achievement test.

Achievement tests and observational notes were the main tools of study. For analysis of data collected from achievement test mean, standard deviation, variance and t-test (at 0.05 level of significant) were used. A descriptive analysis was presented for the changes in non cognitive skills. It was concluded that there was no significant mathematics learning and achievement difference in terms of gender. And problem-solving method of teaching gives better result than the traditional method of teaching. Non-cognitive skills of the students also be developed by the problem solving method teaching.

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