EFFECTIVENESS OF CONSTRUCTIVISM IN MATHEMATICS LEARNING

A

THESIS

BY

ARJUN GURUNG

IN THE PARTIAL FULFILMENT OF THE REQUIRMENTS FOR THE

DEGREE OF MATHEMATICS EDUCATION

SUBMITTED

TO

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RECOMMENDATION FOR ACCEPTANCE

This is to certify **Mr. Arjun Gurung** has completed his M. Ed. thesis entitled **"Effectiveness of constructivism in Mathematics Learning"** under my supervision during the period prescribed by the rules and regulations of Tribhuvan University, Kirtipur, Kathmandu, Nepal. I recommended and forward his thesis to the Department of Mathematics Education to organize final viva-voce.

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Mr. Krishna Prasad Adhikari

(Supervisor)

Date:

LETTER OF APPROVAL

This thesis entitled **"Effectiveness of constructivism in Mathematics Learning"** submitted by **Mr. Arjun Gurung** in partial fulfillment of the requirements for the Master's Degree in Education has been approved.

Committee for the Viva-voce	**Signature**
Associate Prof. Laxmi Narayan Yadav (Chairman)	……...…….
Prof. U.N. Pandey (External)	……...…….
Mr. Krishna Prasad Adhikari (Supervisor)	……...…….

Date:

DEDICATION

Dedicated

To

My Late Father

Mr. Bhim Bahadur Gurung

DECLARATION

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

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ArjunGurung

LETTER OF CERTIFICATE

This is to certify that the Mr. Arjun Gurung student of academic year 2066/67 with Campus Roll. No. 2008, Thesis No. 942, Exam Roll No.281175 and T.U. registration No. 6-1-240-43-2001 has completed this thesis under the supervision and guidance of Lecturer Mr. Krishna Prasad Adhikari during the period prescribed by the rules and regulation of Tribhuvan University Nepal. This thesis entitled **"Effectiveness of Constructivismin Mathematics Learning"** has been prepared based on the result of his investigation conducted during the prescribed period under the Department of Mathematics Education, Central Department of Education, University campus, Kirtipur, Tribhuvan University, Nepal. I recommended and forward that his thesis be submitted for the evaluation as the partial requirements to award the degree of Master of Education.

…….

Associate Prof. Laxmi Narayan Yadav

(Head)

Date:

Defense Date:

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ArjunGurung

ABSTRACT

This study entitled **"Effectiveness of Constructivism in Mathematics Learning"** was based on quasi- experimental research design on the theoretical basis of Vygotsky's social constructivism. The main objective of this study was to analyze the effects of constructivism on mathematics achievement of students and analyze the reflection of students towards constructivist approach in teaching mathematics of grade V.

One of the private schools of Lalitpur district (D.A.V. Sushil Kedia Vishwa Bharati Higher Secondary School, Jawalakhel) was selected for the study by purposive sampling method. Twenty eight students of section-A and twenty eight students of section-E were selected as experimental and control group respectively. The mean value of experimental group was 16.42 and control group was 15.75, then there was no significance difference between experimental and control group on pre-test. Both groups were taught same topic. The students of experimental group were taught by constructivist method whereas that of control group by traditional teaching method. The data were collected through mathematics achievement test and interview schedule. Only five students were selected from experimental group for interview. Pre-test and post-test were based on same questions. The total duration of experiment was 30 days. The reliability of test was established by pilot test. Twenty eight students of Creative Academy were participated in pilot test. The coefficient of reliability was 0.95.

The data were analyzed in MS Excel 2013 by descriptive and inferential statistical techniques. The students of experimental group performed (Mean-21.42) better than that of the control group (16.42) on post-test. Students view towards the constructivist method is positive in terms of the class work and class interaction. Therefore, constructivist method is found to be very effective on students' in learning mathematics.

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