EFFECTIVENESS OF ICT IN TEACHING GEOMETRY

A

THESIS

BY

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FOR THE PARTIAL FULFILLMENT OF THE REQUIREMENT
OF THE DEGREE OF MASTER OF EDUCATION

SUBMITTED

TO

DEPARTMENT OF MATHEMATICS EDUCATION

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LETTER OF CERTIFICATE

This is certify that Mr. Khirendra Raj Moktan a student of academic year 2068/69 with Campus Roll Number 365, Thesis Number 1174 Exam Roll Number 281644/069 and T.U. Registration Number 6-1-14-819-2004 has completed this thesis for the period prescribed by the rules and regulations of Tribhuvan University, Kirtipur, Kathmandu, Nepal. This thesis entitled "**Effectiveness of ICT in Teaching Geometry"** has been prepared based on the results of his investigation. I recommend and forward this thesis be submitted for the evaluation as the partial requirement to award the degree of Master Education.

…… ……

Mr. Dipak Mainali **Assoc. Prof.Laxmi Narayan Yadav**

Supervisor Head

Date:

LETTER OF APPROVAL

This thesis entitled "**Effectiveness of ICT in Teaching Geometry**" submitted by Mr. Khirendra Raj Moktan in partial fulfillment of the requirements for the Master's Degree in Mathematics Education has been approved.

Committee for Viva-Voce	**Signature**
1. Assoc. Prof. Laxmi Narayan Yadav (Chairman)	……..
2. Prof. U.N. Pandey (External)	……
3. Mr. Dipak Mainali (Supervisor)	……..

Date :

RECOMMENDATION FOR ACCEPTANCE

This is to certify that Mr. Khirendra Raj Moktan has completed his M.Ed. thesis entitled"**Effectiveness of ICT in Teaching Geometry"**under my supervision during the period prescribed by the rules and regulations of Tribhuvan University, Kirtipur, Kathmandu, Nepal. I recommend and forward his thesis to the Department of Mathematics Education for the final viva-voce.

……..

Mr. Dipak Mainali

(Supervisor)

Date:

DefenseDate:

DECLARATION

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

Date: …….

Khirendra Raj Moktan

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…….……

Mr.Khirendra Raj Moktan

ABSTRACT

This is the study entitled "**Effectiveness of ICT in Teaching Geometry"**has been carried out to find the effect of student'sperception about ICT. Researcher selected concessive sampling and selected two schools of Kathmandu district. This research has conducted by using quantitative method focused for experimental research design. The use of ICT in pedagogical process is growing liability of gadgets. As a result, educations see the urgent need for integrating technology in student's mathematical activities.

The sample of the study was 48, grade nine students (36 students in experimental and 12 students in control group) from two public secondary schools of Kathmandu district. After three weeks of regular experiment, researcher collected data from achievement test and a set of questionnaires based on five point Likert scale. For accomplishing this purpose pretest, posttest and non equivalent experimental method was used. The quantitative analysis was carried out by using independent samples t-test, the measure of effect Cohen’s d and the result was calculated by using IBM SPSS 21.0 version.

The results indicated that ICT based teaching hada significant effect on student’s achievement in geometry compare to traditional teaching method. Result of this research showed that the students in the experimental groups performed better when using ICT than the control group with traditional teaching method. Finding of this study showed a significant difference existed in the mean scores between these two groups. The result indicated that students in the experimental group out performed those in the control group. Furthermore, effective use of ICT makes basic concept easier, enjoyable and interesting. Result show student has positive attitude about ICT. Analysis of the questionnaire responses indicated positive overall perception about ICT in learning geometry. Finally it is concluded that ICT is the effective tool in teaching geometry in our context.

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ABBREVIATIONS

ICT	=	Information Communication Technology
CAS	=	Computer Algebra System
ANOVA	=	Analysis of Variance
OSS	=	Open Sources Software
NCTM	=	National Council of Teachers of Mathematics
DGS	=	Dynamic Geometry Software
CDC	=	Curriculum Development Centre
SPSS	=	Statistical Package for Social Science
DF	=	Degree of Freedom
SIG	=	Significance
SD	=	Standard Deviation
MAT	=	Mathematics Achievement Test