

A STUDY OF THE IMPACT OF LABORATORY APPROACH
ON ACHIEVEMENT AND PROCESS SKILLS IN SCIENCE
AMONG IX STANDARD STUDENTS

विद्यया ऽ मृतमश्नुते



एन सी ई आर टी
NCERT

A DISSERTATION

Submitted in Partial Fulfilment of the requirement
for the degree

of

MASTER OF EDUCATION (R.E.E.)

TO

BARKATULLAH VISHWAVIDYALAY, BHOPAL

2008-2009

Supervisor

Dr. B. Ramesh Babu

Reader in Education

Research scholar

Anupama Yadav

REGIONAL INSTITUTE OF EDUCATION

(National Council of Educational Research & Training)

Bhopal (M.P.)

2
0
0
8
:
2
0
0
9

**A STUDY OF THE IMPACT OF LABORATORY APPROACH
ON ACHIEVEMENT AND PROCESS SKILLS IN SCIENCE
AMONG IX STANDARD STUDENTS**

विद्यया ऽ मृतमश्नुते



एन सी ई आर टी
NCERT

D-274

A DISSERTATION

Submitted in Partial Fulfillment of the requirement

for the degree

of

MASTER OF EDUCATION (R.I.E.)

TO

BARKATULLAH VISHWAVIDYALAY, BHOPAL

2008- 2009

Supervisor

Dr. B. Ramesh Babu

Reader in Education

Research scholar

Anupama Yadav

REGIONAL INSTITUTE OF EDUCATION

(National Council of Educational Research & Training)

Bhopal (M.P.)

CERTIFICATE

This is to certify that Anupama Yadav, a student of M.Ed. Course, of regional Institute of education, Bhopal in the year 2008-09 has worked under my guidance. Her dissertation "*A study of the impact of laboratory approach on achievement and process skills in science among ix standard students*" is original and worthy of presentation in partial fulfillment of degree of master of education of Barkatullah Vishwavidyalay, Bhopal (M.P.) The present study is a outcome of her sincere efforts.

Place: Bhopal

Date: 27.04.2009


Dr. B. Ramesh Babu

Reader in Education

Regional Institute of Education,
Bhopal

ACKNOWLEDGEMENT

I take this opportunity to express my gratitude to my guide **Dr. B. Ramesh Babu** . Who helped in execution of this study. I thank him for his valuable advice, continuous help, inspiring guidance and encouragement in the completion of the study. I owe gratitude and regards for his generosity.

I am indebted to **Prof. Anand Bihari Saxena** Principal, **Prof. V.K. Sunwani** Dean of instruction, **Prof. S.K. Goel** Head of the education department RIE Bhopal for their inspiring Co-operation and for providing enough learning facilities, and educational environment in a campus.

I extend my gratitude to **Dr. K. K. Khare**, Incharge of M.Ed RIE Bhopal for inspiring guidance in research work and never ending blessings which equaled me to successfully complete this study.

I equally thank all the faculty members of the department of education R.I.E. Bhopal for their affectionate care in completion of this study, my sincere thanks to all of them.

I am grateful to **Mr. P.K. Tripathi** librarian R.I.E. Bhopal and all other library staff members for extending library facilities and helping in locating the required reference materials for this dissertation.

I am also thankful to the head, teacher and students of the institute who were kind enough to offer me full co-operation in collection of an adequate and precise data.

I also thank all my class mates who remained as a source of inspiration to me at all time without whom I could not get accelerated time to time for completion of this work.

Above all I owe my sincere gratitude to my beloved parents for being a perennial source of inspiration to me.

Place: Bhopal

Date: 27-04-09

Anupama Yadav
Anupama Yadav
M.Ed.
R.I.E. (Bhopal)

CONTENTS

CHAPTER- I

INTRODUCTION

1.1 INTRODUCTION	1-19
● Background of the problem	2
● Nature of school science	3
● Aims of science of teaching in school	4
● Importance of Biology laboratory	6
● The Science Process skills.	8
● Brief description of the science process skills	9
● Learning of science process skill at school.	12
● Assessment of science process skill.	13
1.2 NEED AND IMPORTANCE OF THE STUDY	14
1.3 STATEMENT OF THE PROBLEM	15
1.4 OPERATIONAL DEFINATION OF THE TERMS	15
1.5 OBJECTIVES OF THE STUDY	17
1.6 HYPOTHESIS OF THE STUDY	17
1.7 DELIMITATIONS OF THE STUDY	18
1.8 STRUCTURE OF THE STUDY	18

CHAPTER- II

REVIEW OF RELATED LITERATURE

2.1	INTRODUCTION	20-33
2.2	REVIEW OF RELATED RESEARCH LITERATURE	21-32
2.3	REVIEW SUMMARY	33

CHAPTER- III

3.1	INTRODUCTION	34-40
3.2	RESEARCH DESIGN	34
3.3	SAMPLE	36
3.4	VARIABLES	37
3.5	DATA GATHERING PROCEDURE	38
3.6	ADMINISTRATION OF DATA GATHERING DEVICE	39
3.7	TABULATION OF DATA	40
3.8	STATISTICS USED	40

CHAPTER- IV

ANALYSIS AND INTERPRETATION

4.0	INTRODUCTION	41
4.2	ANALYSIS OF THE HYPOTHESIS	42

CHAPTER- V

SUMMARY AND MAJOR FINDING

5.1	INTRODUCTION	51-56
5.2	OBJECTIVES OF THE STUDY	51
5.3	HYPOTHESIS OF THE STUDY	52
5.4	VARIABLES OF THE STUDY	52
5.5	TOOLS USED WERE	53
5.6	MAJOR FINDING OF THE STUDY	53
5.7	CONCLUSION	54
5.8	EDUCATIONAL IMPLICATIONS	54
5.9	SUGGESTION FOR FURTHER RESEARCH	55

BIBLIOGRAPHY

APPENDICES

APPEND ICE 1: ACHIEVEMENT TEST PAPER

APPEND ICE 2: PRACTICAL TEST PAPER

APPEND ICE 3: PROCESS SKILL ASSESSMENT

SCHEDULE

LIST OF TABLES

S.N.	NAME OF THE TABLE	PAGE NO.
1.	Characteristic of research design	36
2.	Details of Sample	37
3.	Showing the significant mean difference in achievement test between experimental and control group	44
4.	Showing the significant mean difference in practical test b/w control and experimental group	46
5.	Frequency table of observed process skills for experimental group.	47
6.	Frequency table of observed process skills for control group	48
7.	Showing the significant mean difference in observed process skills between control and experimental group	49

LIST OF GRAPHS

S.N.	NAME OF THE GRAPH	PAGE NO.
1.	Graphical representation of achievement test mean value of experimental and control group	44
2.	Graphical representation of practical test mean value of experimental and control group.	46
3.	Graphical representation of observed process skills mean value of experimental and control group.	50