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INDIVIDUALISED INSTRUCTION,  
ATTITUDE AND ACHIEVEMENT  
IN  
MATHEMATICS LEARNING

A thesis presented in partial  
fulfilment of the requirements  
for the degree of  
Master of Arts in Education  
Massey University

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1974

## ABSTRACT

This investigation reports a quasi experimental study of an individualised approach to mathematics learning which was operated in a New Zealand Primary School at the Standard Three level. The emphasis in the study was on student attitude towards mathematics and achievement in mathematics.

The research was based on the following questions:-

1. Does student involvement in an individualised programme in mathematics result in a significant change in their attitude towards mathematics?
2. Does student involvement in an individualised programme in mathematics result in a significant change in their mathematics achievement?
3. What relationship, if any, is shown between student attitudes towards mathematics and student achievement in mathematics?

The research design was a 'Non-Equivalent Control Group Design' in which two experimental and two control classes were used. No significant differences were shown between the experimental and control groups on four separate factors and thus they were considered as equivalent matched groups. Teachers were matched on the basis of length of teaching service.

To measure student attitude towards mathematics a Likert type scale suitable for the Standard Three level was developed, entitled 'My Feelings About Maths'. Achievement was assessed by a standardised test.

Pre treatment tests of attitude and achievement were administered to all subjects. The experimental classes then undertook the individualised programme for a fourteen week period whilst the control classes followed a textbook based programme.

At the end of the experimental period, post treatment tests of attitude and achievement were administered to all subjects. The experimental subjects completed a questionnaire to indicate their attitude towards the individualised programme as also did the experimental teachers. Both questionnaires were specially constructed for the study.

Analysis of data showed a significant positive change in attitude in the experimental group. There was no significant change in

attitude in the control group. Both groups showed a significant gain in achievement. Attitude towards mathematics and achievement in mathematics was found to be correlated positively, at a low level, for both groups at the pre treatment stage. However, at the post treatment stage the correlation was non significant for the experimental group.

Some evidence was obtained of the differential effects of the individualised programme on children at different ability levels. There was also evidence of a sex difference interaction.

A large majority of the students in the experimental group indicated very positive attitudes towards the individualised programme. Teacher attitude was also positive.

14

ACKNOWLEDGEMENT

I should like to acknowledge with gratitude the assistance given me by many people during the course of this study. In particular I would like to thank the following:

The Principals, staff and children of the schools who cooperated in this study

Professor C.G.N. Hill, my Supervisor, and members of the Education Department of Massey University who helped in structuring the study and bringing it to its final form.

My wife and family for their encouragement and assistance in many different ways

Mrs. L. Hughes who undertook the typing of this thesis

A.E. Naftel

Ashhurst  
August, 1974

TABLE OF CONTENTS

Abstract		ii
Acknowledgements		iv
Table of Contents		v
List of Tables		vii
List of Figures		viii
Chapter 1	THE RESEARCH ISSUE	1
	The Background and Significance of the Research	2
	Summary	8
Chapter 2	REVIEW OF LITERATURE	10
	Introduction	10
	Individualising Instruction	10
	Approaches to Individualising Instruction	11
	Attitude Towards Mathematics	13
	The Relationship of Attitude and Achievement in Mathematics Learning	14
	Summary	15
Chapter 3	DEFINITIONS OF TERMS AND FORMULATION OF HYPOTHESES	17
	Definitions	17
	Statement of Hypotheses	20
Chapter 4	RESEARCH DESIGN AND PROCEDURES	22
	Research Design	22
	Comments on Research Design	23
	The Instruments Used	25
	Procedures	31
	Statistical Analysis	34
	Statistical Methods Used	37
Chapter 5	RESULTS AND FINDINGS OF THE STUDY	40
	Results	40
	A Pre Treatment Analysis	40
	B1 Post Treatment Analysis	41
	2 Intercorrelations	42
	3 Attitude Change and Achievement Change	44
	4 Boy/Girl Differences	49
	5 Student Reaction to Individualised Programme	60

TABLE OF CONTENTS-continued

	6 Responses to Teacher Questionnaire	61
	Findings of the Study	65
Chapter 6	SUMMARY, DISCUSSION AND GENERAL CONCLUSIONS	70
APPENDIX A	Attitude Scale-'My Feelings About Maths'	
APPENDIX B	Attitude Scale-'My Feelings About I.M.P.'	
APPENDIX C	Teacher Questionnaire	
APPENDIX D	Achievement Test	

BIBLIOGRAPHY

LIST OF TABLES

<u>TABLE</u>		
4.1	Details of Sample	31
5.1	Values of Mann Whitney 'U'	40
5.2	Results of Sign Test-Attitude Scores	41
5.3	Results of Sign Test-Achievement Scores	41
5.4	Results of Willcoxon Test-Attitude Scores	42
5.5	Results of Willcoxon Test-Achievement Scores	42
5.6	Intercorrelations for Experimental and Control Groups	43
5.7	Partial Correlations	43
<u>ATTITUDE AND ACHIEVEMENT GAINS</u>		
5.8	A Based on Attitude	47
5.9	B Based on Achievement	47
5.10	C Based on General Ability	48
5.11	D Based on Reading Comprehension	48
<u>ATTITUDE AND ACHIEVEMENT GAINS-Boy/Girl Differences</u>		
5.12	A Based on Attitude	52
5.13	B Based on Achievement	53
5.14	C Based on General Ability	54
5.15	D Based on Reading Comprehension	55
<u>ATTITUDE AND ACHIEVEMENT GAINS-Boy/ Boy/ Girl/Girl Differences</u>		
5.16	A Based on Attitude	56
5.17	B Based on Achievement	57
5.18	C Based on General Ability	58
5.19	D Based on Reading Comprehension	59
5.20	Responses to Attitude Scale "MY FEELINGS ABOUT I.M.P."-Question 1	63
5.21	Responses to Attitude Scale "MY FEELINGS ABOUT I.M.P."-Questions 2 and 3	64



LIST OF FIGURES

FIGURE

4.1	Model of Research Design	22
<u>ATTITUDE AND ACHIEVEMENT GAINS</u>		
5.8	A Based on Attitude	47
5.9	B Based on Achievement	47
5.10	C Based on General Ability	48
5.11	D Based on Reading Comprehension	48
<u>ATTITUDE AND ACHIEVEMENT GAINS-<del>Boy</del>/Girl</u>		
<u>Differences</u>		
5.12	A Based on Attitude	52
5.13	B Based on Achievement	53
5.14	C Based on General Ability	54
5.15	D Based on Reading Comprehension	55
<u>ATTITUDE AND ACHIEVEMENT GAINS-<del>Boy/Boy</del> and</u>		
<u>Girl/Girl Differences</u>		
5.16	A Based on Attitude	56
5.17	B Based on Achievement	57
5.18	C Based on General Ability	58
5.19	D Based on Reading Comprehension	59