



A study of time and motion differentials in a generalized assignment in a home economics clothing laboratory class  
by Alma Helene Lewis

A THESIS Submitted to the Graduate Committee In partial fulfillment of the requirements for the degree of Master of Science In Home Economics Education  
Montana State University  
© Copyright by Alma Helene Lewis (1948)

**Abstract:**

The purpose of this study was to determine the differences In the amount of time and motion used by students working In a sewing unit as contrasted to those out of the unit.

A unit arrangement of sewing and pressing equipment was organized In each of the two sewing laboratories at Montana State College. Two students from each class section were selected as controls working In the laboratory and were paired with two students assigned as the experimental group working In the unit. Records were kept by 44 different students from 11 sections for the three quarters—fall, winter, and spring—that this study was In progress.

Students were paired on the following basis: high school standing record obtained from the College Registrar's Office; home economics college prediction record obtained from the College Testing Bureau; and record of previous sewing Experience obtained from the College Instructors.

The time used In constructing a garment was recorded by the student. Distance traveled was measured by pedometers and these readings were recorded also.

The data secured showed that the experimental groups saved energy by traveling considerably less distance than the controls In the laboratory. The amount of time saved by working In the unit was negligible. All the students answering the questionnaire said they enjoyed working in the unit and would like to work in a laboratory arranged In this manner.

SOUTHWORTH CO.  
U.S.A.  
A STUDY OF TIME AND MOTION DIFFERENTIALS IN A GENERALIZED  
ASSIGNMENT IN A HOME ECONOMICS CLOTHING  
LABORATORY CLASS

by

Alma Helene Lewis

A THESIS

Submitted to the Graduate Committee

in

partial fulfillment of the requirements

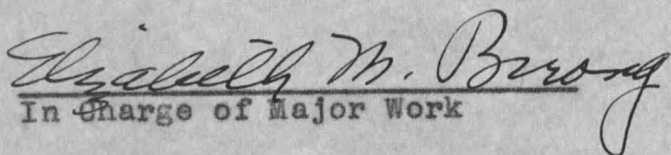
for the degree of

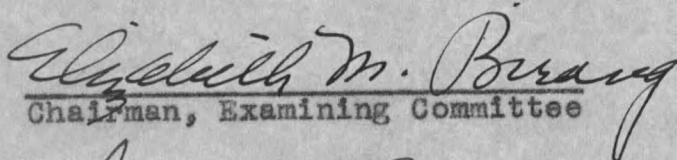
Master of Science in Home Economics Education

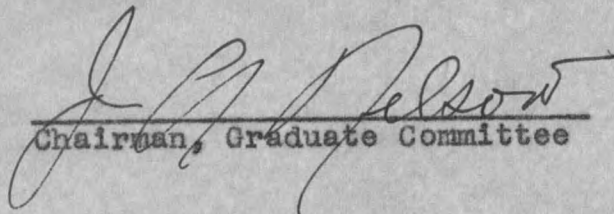
at

Montana State College

Approved:

  
Elizabeth M. Brang  
In Charge of Major Work

  
Elizabeth M. Brang  
Chairman, Examining Committee

  
J. A. Nelson  
Chairman, Graduate Committee

Bozeman, Montana  
August, 1948

N378

L585

cop 2

O.S.A.

TABLE OF CONTENTS

ii

	PAGE
LIST OF APPENDIXES . . . . .	iii
LIST OF TABLES . . . . .	iv
LIST OF ILLUSTRATIONS . . . . .	vi
ABSTRACT . . . . .	1
INTRODUCTION AND HISTORY . . . . .	2
PROCEDURE . . . . .	9
Background . . . . .	9
Methodology . . . . .	17
RESULTS . . . . .	37
Distance . . . . .	37
Time . . . . .	38
Grades . . . . .	39
Attitudes . . . . .	42
DISCUSSION . . . . .	43
Distance Traveled . . . . .	43
Time Used . . . . .	44
Grades Secured . . . . .	45
Attitudes . . . . .	48
SUMMARY . . . . .	50
CONCLUSIONS . . . . .	51
ACKNOWLEDGMENTS . . . . .	51
LITERATURE CITED AND CONSULTED . . . . .	52

J. Graduate Committee

01031

RACERASE BOND

LIST OF APPENDIXES

iii

PAGE

APPENDIX A.	Questionnaire on Sewing Conditions in Montana Homes . . . . .	54
APPENDIX B.	Questionnaire Regarding Sewing Laboratory Equipment Sent to 11 Colleges or Universities in Western Area . . . . .	57
APPENDIX C.	Time Sheet Used by Construction Class - Fall Quarter . . . . .	59
APPENDIX D.	Cards Used to Record Time, Winter Quarter . . . . .	62
APPENDIX E.	Cards Used to Record Time, Spring Quarter . . . . .	63
APPENDIX F.	Cards Used to Record Pedometer Readings .	64
APPENDIX G <sub>1</sub>	Chart of Distance Traveled by Student 8, Section II, in Unit, May 26, 1948 . . .	65
APPENDIX G <sub>2</sub>	Chart of Distance Traveled by Student 17, Section II, in Laboratory, May 26, 1948	66
APPENDIX G <sub>3</sub>	Arrangement of Equipment in One Clothing Laboratory with the Unit Installed . .	67
APPENDIX H.	Questionnaire Given to Students to Obtain Reaction to Unit . . . . .	68

LIST OF TABLES

TABLE	PAGE
I. Average Time Per Week Spent by Rural and Urban Homemakers in Various Activities (Bureau of Home Economics, U. S. Department of Agriculture) . . . . .	10
II. Record of Sewing Done in 165 Montana Homes . .	10
III. Number and Location of Sewing Equipment Used in 165 Montana Homes . . . . .	14
IV. Information Used in Pairing Students in One Section, Spring Quarter Class . . . . .	23
V. High School Standing, Home Economics Prediction, Time Spent, Distance Covered, and Grades Secured in Clothing Construction, Section I, Spring Quarter . . . . .	25
VI. High School Standing, Home Economics Prediction, Time Spent, Distance Covered, and Grades Secured in Clothing Construction, Section II, Spring Quarter . . . . .	26
VII. High School Standing, Home Economics Prediction, Time Spent, Distance Covered, and Grades Secured in Clothing Construction, Section III, Spring Quarter . . . . .	27
VIII. High School Standing, Home Economics Prediction, Time Spent, Distance Covered, and Grades Secured in Clothing Construction, Section IV, Spring Quarter . . . . .	28

































































































































































