APPENDIX A
Sample Title Page (Master’s)

POWER EFFICIENCY AND CARDIOPULMONARY RESPONSES
FOR VARIOUS WHEELCHAIR DESIGNS AND
PROPULSION METHODS

A thesis submitted in partial fulfillment of the
requirements for the degree of
Master of Science

By

ROY EUGENE YOUNG
B.S., Bluffton College, 1966

1975
Wright State University
APPENDIX B
Sample Approval Sheet (Master’s)

WRIGHT STATE UNIVERSITY
GRADUATE SCHOOL

June 6, 1975

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER
MY SUPERVISION BY Roy Eugene Young, ENTITLED Efficiency
and Cardiopulmonary Responses for Various Wheelchair Designs and
Propulsion Methods (NOTE: SAME TITLE AS IT APPEARS ON TITLE
PAGE) BE ACCEPTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF Master of Science (NOTE:
COMPLETE DEGREE AS IT APPEARS ON TITLE PAGE).

Anne Jones, Ph.D.
Thesis Director

Charles Smith, Ph.D.
Chair, Department of Biological
Sciences

Committee on
Final Examination

Anne Jones, Ph.D.

William Green, Ph.D.

Jeanne Hall, Ph.D.

Edward Page, Ph.D.

Barry Milligan, Ph.D.
Vice Provost for Academic Affairs
Dean of the Graduate School

counted as (ii), but never numbered

1” Margin
APPENDIX C
Sample Abstract

ABSTRACT


1The abstract "heading" (above) is to be single-spaced and it must include: the candidate's name as it appears on the title page (but with last name first); the abbreviation of the graduate degree being awarded; the name of the candidate's department or graduate program, or both; the institution (Wright State University); the year the degree is to be awarded; and the title of the thesis as it appears on the title page. The abstract "narrative" begins three spaces below the heading and it must be double-spaced.

(Note: Visible page numbering begins here)
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. INTRODUCTION AND PURPOSE</td>
<td>1</td>
</tr>
<tr>
<td>Cardiopulmonary Stresses for Wheelchair Activity</td>
<td>1</td>
</tr>
<tr>
<td>Power Efficiency for Wheelchair Activity</td>
<td>3</td>
</tr>
<tr>
<td>Purpose</td>
<td>4</td>
</tr>
<tr>
<td>Rationale</td>
<td>5</td>
</tr>
<tr>
<td>II. METHODS</td>
<td>6</td>
</tr>
<tr>
<td>Subjects</td>
<td>6</td>
</tr>
<tr>
<td>Decreasing Stresses Elicited by Wheelchair Operation</td>
<td>6</td>
</tr>
<tr>
<td>Methods of wheelchair operation</td>
<td>6</td>
</tr>
<tr>
<td>Alterations in wheelchair design</td>
<td>7</td>
</tr>
<tr>
<td>Wheelchair Ergometer</td>
<td>8</td>
</tr>
<tr>
<td>Calibration of ergometer</td>
<td>8</td>
</tr>
<tr>
<td>Calculation of power output for wheelchairergometry</td>
<td>15</td>
</tr>
<tr>
<td>Simulation of Small and Large Handrims</td>
<td>17</td>
</tr>
<tr>
<td>Exercise test procedure</td>
<td>18</td>
</tr>
<tr>
<td>Sequence of test</td>
<td>21</td>
</tr>
<tr>
<td>Physiological variables</td>
<td>22</td>
</tr>
<tr>
<td>Methods of data collection</td>
<td>22</td>
</tr>
<tr>
<td>Heart rate</td>
<td>23</td>
</tr>
<tr>
<td>Energy cost of exercise and power efficiency</td>
<td>23</td>
</tr>
<tr>
<td>III. RESULTS</td>
<td>29</td>
</tr>
</tbody>
</table>
TABLE OF CONTENTS (Continued)

BIBLIOGRAPHY ........................................... .81
VITA ......................................................... .84
**APPENDIX E**  
Sample List of Figures

**LIST OF FIGURES**

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physical parameters of zigzag cells</td>
<td>4</td>
</tr>
<tr>
<td>2. k-diagram for a periodic show-wave structure</td>
<td>6</td>
</tr>
<tr>
<td>3. Uniform zigzag model</td>
<td>8</td>
</tr>
<tr>
<td>4. Uniform helical zigzag model</td>
<td>8</td>
</tr>
<tr>
<td>5. Azimuthal radiation patterns of UZZ-1</td>
<td>9</td>
</tr>
<tr>
<td>6. Azimuthal radiation patterns of UHZZ-1</td>
<td>10</td>
</tr>
<tr>
<td>7. Azimuthal radiation patterns of UHZZ-2</td>
<td>11</td>
</tr>
<tr>
<td>8. k-diagram of the zigzag structures</td>
<td>12</td>
</tr>
<tr>
<td>9. Impedance locus of UZZ-1</td>
<td>14</td>
</tr>
<tr>
<td>10. Impedance locus of UHZZ-1</td>
<td>15</td>
</tr>
<tr>
<td>11. Parameters of a log-periodic helical zigzag</td>
<td>18</td>
</tr>
<tr>
<td>12. A photograph of a log-periodic zigzag antenna over the ground plane</td>
<td>19</td>
</tr>
<tr>
<td>13. H-plane radiation patterns of LPHZZ-1</td>
<td>21</td>
</tr>
<tr>
<td>14. H-plane radiation patterns of LPHZZ-2</td>
<td>22</td>
</tr>
<tr>
<td>15. H-plane radiation patterns of LPHZZ-3</td>
<td>23</td>
</tr>
<tr>
<td>16. Input impedance referred to 50 ohms of LPHZZ-1</td>
<td>24</td>
</tr>
<tr>
<td>17. Input impedance referred to 50 ohms of LPHZZ-2</td>
<td>25</td>
</tr>
<tr>
<td>18. Far-field radiation patterns of LPHZZ-3A</td>
<td>28</td>
</tr>
<tr>
<td>19. Far-field radiation patterns of LPHZZ-3B</td>
<td>29</td>
</tr>
<tr>
<td>20. Far-field radiation patterns of LPHZZ-3C</td>
<td>30</td>
</tr>
<tr>
<td>21. Far-field radiation patterns of LPHZZ-3D</td>
<td>31</td>
</tr>
</tbody>
</table>
APPENDIX F
Sample List of Tables

LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Analysis of Variance of Frequency of Pango Responses on the Training Task (Exp. Grp. 1)</td>
<td>18</td>
</tr>
<tr>
<td>2. Analysis of Variance of Frequency of Pango Responses on the Training Task (Exp. Grp. 2)</td>
<td>39</td>
</tr>
<tr>
<td>3. Analysis of Variance of Frequency of Pango Responses on the Training Task (Exp. Grp. 3)</td>
<td>40</td>
</tr>
<tr>
<td>4. Analysis of Variance of Frequency of Pango Responses on the Training Task (Grade 1)</td>
<td>44</td>
</tr>
<tr>
<td>5. Analysis of Variance of Frequency of Pango Responses on the Training Task (Grade 5)</td>
<td>45</td>
</tr>
<tr>
<td>6. Analysis of Variance of Frequency of Pango Responses on the Training Task (Grade 8)</td>
<td>46</td>
</tr>
<tr>
<td>7. Analysis of Variance of Frequency of Pango Responses on Compounding Tasks (Exp. Grp. 1)</td>
<td>56</td>
</tr>
<tr>
<td>Appendix Table A1. Instructions Used in Administering the Test Anxiety Scale for Children</td>
<td>113</td>
</tr>
<tr>
<td>A2. Means and Standard Deviations Associated with Ages TASC and IQ Scores</td>
<td>115</td>
</tr>
</tbody>
</table>
I. INTRODUCTION

The main objective of this project is to provide computer-aided instruction service in the elementary statistics laboratory. The aim is to increase the students' knowledge of statistics and statistical techniques, and to help them gain confidence in their knowledge by solving and analyzing statistical problems via interactive dialogue with the computer. Since this computer-aided instruction is designed to be used by nontechnical personnel, i.e., students in elementary statistics courses, it is written in lay terminology.

The basic elements of a topic with illustrative examples will still be presented in lectures, assigned readings and exercises, and progress-accessing examinations. The laboratory which accompanies the course is the only part to be computerized. At the present, this laboratory consists of solving and analyzing additional exercises similar to those presented in class with emphasis on topics which are not covered well in the text.

The approach in the laboratory is tutorial with few lectures presented. In spite of this array of help, some students still lack confidence in solving and analyzing problems. It is hoped that Computer-Aided Instruction (CAI) will aid in alleviating some of the problems, since CAI is more personalized and interactive, and more demanding of the student in that full attention is required. Also, CAI material might have some acceptable educational flair strong enough to attract and hold the students' interest rather than just repeat classroom work or be perceived as a dreary process of drill and practice.
II. BACKGROUND

WHAT IS COMPUTER-AIDED INSTRUCTION?

Computer-aided instruction is defined in this project to mean the use of computers to aid teachers and students in the educational process. It utilizes such functions as presenting problems, guiding a student's thinking by asking questions, and evaluating performance. It may be thought of as a form of human-machine interaction whose goal is the efficient learning of a desired curriculum (9). In this project, the curriculum is elementary statistics. The CAI designer or instructional programmer will find that there are several decisions which must be made when preparing course material for the computer. These include:

1. Selection of the appropriate media device for the presentation of the curriculum
2. Control of the sequence of elements within the curriculum
3. Control of the rate of the presentation
4. Concurrent recording of the learning behaviors
5. Inclusion of decision mechanisms that determine the rate and sequence by which curriculum elements are presented to each student (10).

There are two general approaches the instructional programmer may take in CAI. The first is the machine-directed approach in which the various alternatives and paths through an instructional area are programmed into the machine. In this approach, there must be a predetermined model of the needs of the student and existing methods by which the computer can evaluate the student's current state of knowledge. In addition, the machine
The second general approach is the student-directed approach in which the sequence of materials presented is altered only at the request of the student. Included in this approach are such things as information retrieval and library functions, learning by discovery and experimentation, simulation and gaming, data reduction and conversational computing. The machine-directed approach has received more research attention and actual utilization than the student-directed approach. Machine-directed CAI will be used in this project.

THE POTENTIAL OF COMPUTER-AIDED INSTRUCTION

Computer-aided instruction is becoming increasingly viewed as a valuable asset in the educational arena. One of the first educators to recognize the potential of CAI was Stol- urow, who in 1969 saw it as possessing the capability to: (1) individualize instruction, (2) conduct educational research under controlled conditions and at the same time collect detailed records on student performance, and (3) assist educators in the development of instructional materials.
Gravity exploration is based on Newton's law expressing the force of attraction between two particles in terms of their masses and separation (Dobrin, 1976). This law of gravitation which defines this attraction is stated as:

\[ F = \frac{G m_1 m_2}{r^2} \]

where
- \( F \) = force of attraction between m1 and m2 due to gravity
- \( G \) = universal gravity constant
- \( m_1 \) = mass of the earth (considered concentrated at its center)
- \( m_2 \) = mass of particle on earth's surface
- \( r \) = radius of the earth

(Nettleton, 1976)

The force \( F \) which represents the force of gravity is not the measurement that is used in exploration. In exploration, the acceleration of a body resulting from that force is the conventional quantity used to measure the gravitational field acting at any given location (Dobrin, 1976). This acceleration can be derived from Newton's Second Law of Motion:

\[ F = m_2 a \]

where \( a \) = acceleration of the body due to gravity
The acceleration is then: \[ a = \frac{F}{m_2} = \frac{Gm_1}{r^2} \] 
(Nettleton, 1976)

Gravity meters are designed to measure variations in the weight or force of gravitational attraction on a constant mass caused by changes in the gravitational field. These changes in the gravitational field can be attributed to variations in density of the subsurface materials. It is lateral variation in this gravitational attraction that will indicate the presence of anomalous high or low density mass distributions. Materials that are more dense cause a stronger gravitational pull than those that are less dense. The unit of measurement for the acceleration of gravity is called the gal and is equal to 1 cm/sec. The normal gravitational acceleration on the surface of the earth is approximately 980 gals. Since we are measuring only small differences in gravitational acceleration of the earth's field in exploration, the milligal, which is equal to 1/1000 of a gal is used.
APPENDIX I
Sample Bibliography

BIBLIOGRAPHY


REFERENCES


APPENDIX K
Sample Title Page (Doctoral)

HUMAN OPERATOR PERFORMANCE IN A
REGULATORY TRACKING TASK WITH AN
ACTIVE VERSUS A PASSIVE CONTROL STICK

A dissertation submitted in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

By

AUGUSTUS MORRIS, JR.
B.S., Wright State University, 1981

1988
Wright State University
APPENDIX M
Sample Approval Sheet (Doctoral)

WRIGHT STATE UNIVERSITY
GRADUATE SCHOOL

June 6, 1988

James Smith, Ph.D.
Dissertation Director

Larry Arlian, Ph.D.
Director, Biomedical Sciences
Ph.D. Program

Barry Milligan, Ph.D.
Vice Provost for Academic Affairs
Dean of the Graduate School

Committee on Final Examination

James Smith, Ph.D.

Carol Green, Ph.D.

Y. S. Kim, Ph.D.

Sandra Jones, Ph.D.

Juan Rivera, Ph.D.

David Page, Ph.D.