UNIVERSITY OF MINNESOTA - DULUTH
Department of Health, Physical Education & Recreation
ESAT 4700 - Statistics and Research Methods in Exercise Science

Instructions to Write the Research Proposal

The research proposal topic should include all of the elements listed below. In addition, you need to be able to implement the research on campus! This means that all equipment and related apparatus should be readily available in the various exercise science labs or easily accessible through another department on campus. For instance, any experiment to be performed in a microgravity environment will not be accepted, unless UMD recently acquired a space shuttle that would be readily available for our use!

Title page
Introduction
• Provide background to problem area
• Review important literature
• Hypotheses (research hypotheses or research questions)
• Possible limitations, delimitations and assumptions
• Rationale: Significance of the study

Methods
• Subjects
• Instruments/apparatus
• Procedures
• Pilot studies
• Experimental design (how are you going to structure your groups)
• Data analysis (statistical procedure planned for analysis)

References (minimum 15 references)

Appendices
• Informed consent
• Other if necessary

References and appendices should begin on a new page
Include only the references cited in the proposal

1. All proposals must be typed double-spaced with a 1.5-inch margin on the left and a 1-inch margin on the right, top and bottom margins.
2. You will be assessed on spelling, grammar, and style.
3. Plagiarism is a severe academic offense. It will be rewarded with an automatic F grade, plus disciplinary action according to university regulations.
4. The final draft of the proposal is due on Friday, 7 November, 2005.
Each student will be expected to give an 8-minute presentation of his/her proposal. The order of presentation will be determined by random assignment. Following the presentation, there will be a 4-minute period assigned for questions by the audience. Audience participation will be expected!

Follow these instructions for this assignment:

1. Prior to the oral presentation, each class member should receive a one-page double-spaced typed abstract of your research proposal. The abstract should include:
   a. Statement of the problem
   b. Justification of the research (significance of the study)
   c. Research hypotheses
   d. Subjects
   e. Experimental design
   f. Statistical treatment
2. The oral presentation should cover the following topics
   a. introduction to the problem area
   b. statement of the problem
   c. research hypotheses
   d. subjects
   e. procedures (instrument/apparatus)
   f. experimental design
   g. statistical analysis
3. Your grade will be based on the following criteria:
   a. Content (did you cover the area listed in (2.) above?)
   b. Timing (8-minute time limit met?)
   c. Clarity (Could you convey the ideas in a clear manner? Use of visual aids if necessary? Pace of presentation?)
ESAT 4700 - Statistics and Research Methods in Exercise Science

Oral Presentation of Research Proposal

EVALUATION

Name: ___________________________ Date: __________

Grade: _______/40

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>EVALUATION</th>
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<td>I. CONTENT</td>
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<td>b. Title</td>
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<td>c. Introduction to problem area</td>
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<td>d. Statement of the problem</td>
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<td>e. Research hypotheses/questions</td>
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<td>g. Description of subjects</td>
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<td>h. Instruments/apparatus/procedures</td>
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<td>i. Experimental design</td>
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| II. TIMING                 |            |
| a. within 8-minute limit   | 5 4 3 2 1   |
| b. Pacing (not too fast)   | 5 4 3 2 1   |

Note: One point will be deducted per 15-second increment when over the 8-minute period!!!

| III. CLARITY               |            |
| a. Spoke clearly           | 2 1 0      |
| b. Did not read proposal   | 2 1 0      |
| c. Used visual aids when necessary | 2 1 0 |
| d. Appeared to understand material | 2 1 0 |