

COURSE PROJECT OPTION PROBLEM STATEMENT

The purpose of this assignment is to help you select a problem that is manageable and well-defined, as well as relevant to you, so that it can lay the groundwork for the development of a thesis. The process of selecting a research problem generally begins when you identify a problem area. It continues with a refinement process that includes the review of relevant literature. It culminates with the selection of a specific problem.

The purpose of reviewing the literature is to determine what has already been done that relates to your problem, in order to obtain the knowledge and insight needed to develop a framework within which your problem fits, and to avoid duplication. It also provides a justification for your study. Once this specific problem is selected, a tentative hypothesis is formulated. The research you review should provide a rationale for your research hypothesis. In a further process of refinement, this tentative hypothesis then guides an in-depth review of the literature. This assignment represents Chapter 1 of your Thesis. The Review of the Literature would be the next semester project (Chapter 2), which would then be followed by a Thesis Proposal (Chapters 1, 2, and 3).

How to proceed:

1. List several educational problems for which you would be interested in conducting a research study.
2. Select one and identify 10 to 15 references which relate directly to the problem (primary references, preferably).
3. Read the abstracts.
4. Select 5 to 10 of the articles and review them.
5. Use the review of these articles to refine a research question and develop a testable hypothesis.

Basic components of the assignment:

- **Abstract** – 150 words
- **Introduction and Background** (2 pages): This is a description of the area which you are studying in your research. This section lays out the rationale for your research. Write a clear statement describing the context of the problem and the need to conduct the study. This may be based upon your personal experience. To establish the importance of the problem you've selected, you may want to use personal anecdotal information (about your class, your school, and your district). Quantitative observations strengthen your argument. Speculation is not acceptable unless it is supported with specific evidence or a published reference.

- **Summary Review of the Literature** (3 pages): This is a review of the most important literature that focuses on the need for the current study and where you build a theoretical framework to establish the rationale for the study. This is a brief review of the literature that explains how your study relates to the relevant literature. It situates your study within the field by describing the current research findings and how your study will contribute to the field. A brief introduction should preview the type of literature that will be reviewed. Primary research articles should be included as part of the review. In reviewing articles, address (1) the educational context of the study, (2) the research design, (3) major findings, (4) conclusion and limitations, (5) implications of this study to practice, research, policy and how it informs your research. The review should identify any weaknesses or gaps that can be addressed in the research you are proposing. A concluding paragraph should summarize the main findings and lead to the next section, which outlines your research question(s). You should be sure to:
 - Cite references relevant to the problem under investigation
 - Use mostly primary sources
 - Conclude with a brief summary of the literature and its implications for the problem
 - Explain how the implications of the reviewed literature form a theoretical or empirical rationale for the statement of the problem and hypothesis
- **Significance of the Study** (2 pages): This establishes what the study will contribute to educational research and/or practice. You should present the educational significance of the problem and how your study will contribute to educational research in the field and/or educational practice.
- **Limitations of the Study** (1 page): These define the scope and breadth of the problem that you will study. Define any limitations of the study and how you intend to address them
- **Statement of the Problem and Hypothesis** (4 pages): The problem should be a consequence of the needs identified in the literature. The importance of the problem needs to receive considerable attention. Clearly indicate why your problem is important. For example: Is the problem of current interest? Will more information about the problem have practical application? Will more information about the problem have theoretical importance? Would this study revise or extend existing knowledge? Would research findings lead to some useful change in practice? The problem statement should close with a question. The question typically contains two variables, a measurable relationship, and some indication of the population involved. The purpose of the literature search was to show that the literature cannot answer the question, and that research is needed to do so. Be sure to:
 - Situate the statement of the problem within existing research;
 - Establish a relationship between the research question and previous research;
 - Link the problem to related thinking in the field of educational research;
 - The problem should be able to be investigated through the collection and analysis of data;

- Present background information on the problem;
- Indicate the variables of interest and the specific relationship between those variables;
- Define terms used in the study;
- State the specific hypotheses to be tested; and
- State the expected relationship or difference for each hypothesis (note that each hypothesis should be testable).
- **References** - Be sure to use the proper formation to cite the literature in the body of the paper and in the reference list. Please refer to the *Publication Manual of the American Psychological Association* (latest edition).



Master of Arts in Teaching Science Science Education

Name _____

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COURSE PROJECT OPTION SCORING GUIDE

PROBLEM STATEMENT

Content (80%)	Points (80)	
Background	8	
Theoretical / Empirical Rationale	8	
Review of the Literature	8	
Primary Sources	8	
Statement of the Problem	8	
Statement of Problem Situated within Research	8	
Definition of Terms	8	
Hypotheses	8	
Educational Significance	8	
Limitations	8	
Presentation (20%)	Points (20)	
Logical and Coherent Organization	4	
Correspondence of Theory, Hypotheses / Questions	4	
Quality of References	4	
Grammar and Syntax	4	
Spelling	4	
Total	100	
Areas of Strengths		
Areas of Needed Improvement		