

#### **Math Education Program**

Signature Assignment for EDME 502 Research Proposal

### **Student Learning Outcome(s) Assessed:**

SLO 6: Design research in their own teaching settings relating to mathematics education.

#### **Description of the Signature Assignment**

Candidates develop a research proposal in their own teaching settings relating to mathematics education. The purpose of this research proposal is to apply knowledge and skills of research to design a research plan directly relating to mathematics teaching or learning.

#### **Directions for Students**

Develop a research proposal that is related to your math teaching or student learning, including: 1) The statement of the problem and its significance, 2) Review of related literature, and 3) Methods. This will be the first three chapters of your action research project. The purpose of this research proposal is to apply knowledge and skills of research to design a research plan directly relating to mathematics teaching or learning.

- 1. The statement of the problem and its significance
  - a. Background
  - b. Problem Statement
  - c. Purpose of the Study
  - d. Research Questions
  - e. Operational Definitions
  - f. Assumptions
  - g. Delimitations and Limitations of the Study
  - h. Significance of the Study
  - i. Conclusion
- 2. Review of related literature
  - a. Introduction.
  - b. Synthesize and critically analyze the literature.
  - c. Conclusion

## 3. Methods

- a. Site
- b. Subjects
- c. Procedures/Intervention
- d. Data Collection
- e. Instruments
- f. Data Analysis

# **Scoring Rubric:**

| Criteria                                  | 4 = Exceeds<br>expectations  | 3 = Meets<br>expectations  | 2 = Meets some<br>expectations   | 1 = Does not<br>meet<br>expectations   | 0 = Unable to<br>score; incomplete<br>or missing work          |  |
|---|--|--|--|--|--|--|
| Purpose<br>and                            | Purpose is clear;<br>research questions<br>are appropriate,  | Purpose is clear;<br>research questions<br>are clear and   | Purpose is vague;<br>research questions<br>are vague, but  | Purpose and research questions are not   | Purpose and research are incomplete /                          |  |
| Research clear, and measurable measurable |  | measurable   | clear and not measurable   | missing  |  |  |
| Literature<br>Review                      | Thoroughly synthesizes and analyzes more than eight research studies, and topics closely related to research questions | Adequately synthesizes and analyzes more than eight research studies, and topics related to research questions | Analyzes less than eight research studies, not be able to synthesize, or some topics not related to research questions | Insufficiently analyzes less than eight research studies, and topics not related to research questions | Literature Review<br>are incomplete /<br>missing               |  |
| Research<br>Design                        | Research design is appropriate and clear   | Research design is clearly stated  | Research design is not clearly stated  | Research design is not appropriate   | Research design is incomplete / missing                        |  |
| Subjects                                  | Clearly describes subjects with detailed demographic information   | Describes subjects<br>and includes some<br>demographic<br>information  | Describes subjects<br>and includes<br>minimal<br>demographic<br>information  | Does not clearly describe subjects and does not include demographic information                        | Subjects and demographic information are incomplete / missing  |  |
| Procedure                                 | Thoroughly describes procedures or intervention strategies   | Adequately describes procedures or intervention strategies   | Describes some procedures or intervention strategies   | Describes minimal procedures or intervention strategies  | Procedures or intervention strategies are incomplete / missing |  |
| Data<br>Collection                        | Clearly describes appropriate data collection methods  | Describes data collection methods  | Describes minimal data collection methods  | Describes inappropriate data collection methods  | Data collection<br>methods are<br>incomplete /<br>missing      |  |
| Instrument                                | Identifies or develops appropriate instrument and clearly describes it   | Identifies or<br>develops<br>instrument but does<br>not clearly describe<br>it                                 | Identifies or<br>develops<br>inappropriate<br>instrument but<br>clearly describes it                                   | Identifies or develops inappropriate instrument and does not clearly describe it                       | Instrument is incomplete / missing                             |  |
| Data<br>Analysis                          | Appropriate data analysis method is clearly described and justified  | Data analysis<br>method is<br>described, but not<br>justified  | Data analysis<br>method is<br>described and<br>justified minimally   | Inappropriate data analysis method is described and justified  | Data analysis<br>method is<br>incomplete /<br>missing          |  |
| Writing                                   | Writing is organized,<br>clear and error free,<br>and follows APA<br>format  | Writing is clear, but inconsistent, follows APA format   | Writing is not<br>clear, or not follow<br>APA format   | Writing is unclear<br>and unorganized<br>with errors in<br>grammar and APA<br>format                   | Some parts of writing is incomplete / missing                  |  |
| Total                                     |  |  |  |  |  |  |

# **Evaluation of EDME 504 Signature Assignment**

Candidate Name\_\_\_\_\_

| Criteria             | Score |   |   |   |   |  |
|----------------------|-------|---|---|---|---|--|
| Purpose and Research | 0     | 1 | 2 | 3 | 4 |  |
| Literature Review    | 0     | 1 | 2 | 3 | 4 |  |
| Research Design      | 0     | 1 | 2 | 3 | 4 |  |
| Subjects             | 0     | 1 | 2 | 3 | 4 |  |
| Procedure            | 0     | 1 | 2 | 3 | 4 |  |
| Data Collection      | 0     | 1 | 2 | 3 | 4 |  |
| Instrument           | 0     | 1 | 2 | 3 | 4 |  |
| Data Analysis        | 0     | 1 | 2 | 3 | 4 |  |
| Writing              | 0     | 1 | 2 | 3 | 4 |  |

# Legend

| Total Points | College of Education Assessment Scale Equivalent |
|--------------|--|
| 31-36        | 4 (Exceeds Expectations)                         |
| 24-30        | 3 (Meets Expectations)                           |
| 17-23        | 2 (Meets Some Expectations)                      |
| 10-16        | 1 (Does Not Meet Expectations)                   |
| 0-9          | 0 (Can't Score)                                  |