GEORGE MASON UNIVERSITY
GRADUATE SCHOOL OF EDUCATION

EDCI 631: Research in Elementary Education (3 credits)
Tuesday 4:30-7:10
Robinson A250

Instructor: Dr. Sharon Castle
Office: Robinson A 317
Office Phone: 703-993-3824
Email: scastle@gmu.edu
Office Hours: Tuesday 3:00-4:30 or by appointment

Course Description

A. Prerequisites: Completion of licensure requirements in the Elementary Program.

B. This course is the first of five courses required to complete an M.Ed. after completion of licensure in the Elementary Program. It is designed to help beginning teachers understand various research paradigms for the purpose of using the research literature and systematic evidence to improve their practice. Emphasis will be placed on linking research and practice and making instructional decisions based on systematically collected data.

Nature of Course Delivery

This course includes multiple instructional strategies. Individual session formats will vary and may include lecture, small group/large group discussion, hands-on, interactive work, student presentations, and cooperative learning. Practical applications of theory will be explored via fieldwork in your classroom.

Standards

A. National Board of Professional Teaching Standards:

   Proposition 4: Teachers think systematically about their practice and learn from their experience.

B. National Technology Standards:

   Standard IV: Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies.
Standard V: Teachers use technology to enhance their productivity and professional practice.

Learning Outcomes

A. Students will be able to:
   1. Articulate the role of educational research and systematic evidence in the improvement of teaching.
   2. Use educational research literature as a basis for reflecting on and improving their teaching practice.
   3. Make explicit linkages between research and practice.
   4. Distinguish between the purposes and methods of theoretical, applied, and action research as well as quantitative and qualitative research.
   5. Explain the fundamentals of validity and reliability and articulate the potential threats to validity within various research paradigms.
   6. Critique the quality of research studies within various paradigms.
   7. Describe the purpose and cycle of action research.
   8. Write a review of literature.
   9. Use technology to assist in locating, using, and conducting research.

B. Outcomes and Standards

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>NBPTS Propositions</th>
<th>NET Standards</th>
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<tbody>
<tr>
<td>1</td>
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<td>IV</td>
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<td>7</td>
<td>4</td>
<td>IV and V</td>
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<td>8</td>
<td>4</td>
<td>IV and V</td>
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<td>9</td>
<td>4</td>
<td>IV and V</td>
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Required Texts


Selected Readings
Course Requirements

A. Assignments

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percent of Final Grade</th>
<th>Outcomes Addressed</th>
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<tbody>
<tr>
<td>Library Adventure</td>
<td>10%</td>
<td>2, 3, 4, 9</td>
</tr>
<tr>
<td>Article Search</td>
<td>10%</td>
<td>2, 3, 4, 9</td>
</tr>
<tr>
<td>Action Research Logs</td>
<td>10%</td>
<td>1, 2, 4, 5, 6, 8</td>
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<tr>
<td>Article Analysis 1 Poster &amp;</td>
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<tr>
<td>Presentation</td>
<td>10%</td>
<td>4, 5, 6, 9</td>
</tr>
<tr>
<td>Literature Review Focus</td>
<td>10%</td>
<td>1, 2, 4, 5, 6, 7, 8, 9</td>
</tr>
<tr>
<td>Final Literature Review Paper</td>
<td>20%</td>
<td>1, 2, 4, 5, 6, 7, 8, 9</td>
</tr>
<tr>
<td>In-Class Research Study Design 1</td>
<td>10%</td>
<td>1, 3, 4, 5, 6</td>
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<tr>
<td>In-Class Research Study Design 2</td>
<td>10%</td>
<td>1, 3, 4, 5, 6</td>
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<tr>
<td>Participation Points</td>
<td>10%</td>
<td>1, 2, 3, 4, 5, 6, 7, 8, 9</td>
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B. Assignment Descriptions

Library Adventure: Teams of students will locate 6 research journals and do a brief (1-2 page) annotated bibliography.

Article Search: Teams of students will locate and photocopy at least 8 articles on a topic of their choice. At least 6 of the articles must be research articles. The others may be reviews of research or practitioner pieces. Each team of students must turn in a bibliography in APA style that indicates what type of articles they have found. (1-2 pages).

Article Analysis Poster and Presentation: Teams of students will analyze a research article, represent their thinking on a poster, and present their poster to the class.

Action Research Log: Individual students will engage in a reflective analysis of their teaching practice that will lead to the identification of a topic on which to focus their literature review paper and potentially their action research project.

Literature Review Focus: Individual students will write an statement of focus that will establish the area of inquiry for their literature review paper. (2-3 pages)

Final Literature Review Paper: Individual students will analyze 8-10 research articles and will write their findings in a paper. (10-12 pages)

In-Class Research Study Design: Teams of students will design a quantitative and a qualitative study on the topic they have identified.

Participation Points: Individual contributions to classroom activities and discussions
C. Final Grading Scale

The final grading scale is:

94-100 = A  
90-93 = A-  
86-89 = B+  
80-85 = B  
70-79 = C  
Below 70 = F

University and Elementary Program Policies

Attendance. This is an advanced graduate level course, therefore the quality of your work, attendance, and informed participation are expected to be of the highest caliber. Unless it is an emergency situation, no absences are excused. Should you need to miss a class, it is your responsibility to inform the instructor ahead of time, turn in your assignments, collect any notes/assignments from a colleague, and do your utmost to remain current in the class. (See GMU Catalog, page 32.)

Late Assignments. Late assignments will not be accepted without the prior consent of the instructor.

Quality of Written Work. Written work should be word-processed in 12-point font. Legibility, organizational clarity, and standard English usage and mechanics are expected. Unacceptable work may be returned for editing prior to grading. Quotations, paraphrases, and references must appear in proper APA format. If you require special assistance, see the instructor.

Cell Phones. The university has a policy that requests students to turn off pagers and cell phones before class begins.

Honor Code. To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of George Mason University and with the desire for greater academic and personal achievement, George Mason University has set forth a code of honor that includes policies on cheating and attempted cheating, lack of participation in group work, plagiarism, lying and stealing. Detailed information on these policies is available in the GMU Student Handbook.

Individuals with Disabilities. The university is committed to complying with the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 by providing reasonable accommodations for applicants for admission, students, applicants for employment, employees, and visitors who are disabled. Students requiring specific accommodations for a disability should contact the Disability Resource Center at 993-2474, or the University Equity Office at 993-8730.
## Course Outline

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics and Activities</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>1/20</td>
<td>What is Research?</td>
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<td>Why is it important for teachers?</td>
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<td>Syllabus review</td>
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<td>AR Log Exercise</td>
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<tr>
<td>1/27</td>
<td>Research process</td>
<td>Read Charles, Chs. 1, 2</td>
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<td>Research Paradigms</td>
<td>Read Mills, Ch. 1</td>
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<td></td>
<td>AR Log Exercise</td>
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<tr>
<td>2/3</td>
<td>What is Reconnaisance?</td>
<td>Read Charles, Ch. 3</td>
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<td></td>
<td>What is a Literature Review?</td>
<td>Read Mills, Ch. 2</td>
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<td></td>
<td>AR Log Exercise</td>
<td>Read selected readings on Lit Review</td>
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<tr>
<td></td>
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<td>Due: First Action Research Log (2 entries)</td>
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<tr>
<td>2/10</td>
<td>Library Adventure</td>
<td>Read Charles, Chs. 4, 5</td>
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<tr>
<td>2/17</td>
<td>Planning and Designing Research</td>
<td>Read Charles, Ch. 6 + pp. 155-159</td>
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<td></td>
<td>Reliability, Validity, Generalizability</td>
<td>Read Mills, Ch. 3, 4</td>
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<td></td>
<td>AR Log Exercise</td>
<td>Due: Second Action Research Log (4 entries)</td>
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<tr>
<td>2/24</td>
<td>No formal class</td>
<td>XXX</td>
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<td></td>
<td>Work on article search</td>
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<tr>
<td>3/2</td>
<td>Qualitative Research</td>
<td>Read Charles, Chs. 10, 11</td>
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<td></td>
<td>Article Analysis</td>
<td>Mills, Appendix B</td>
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<td></td>
<td>AR Log Exercise</td>
<td>Due: Library Adventure</td>
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<tr>
<td>3/9</td>
<td>Spring Break</td>
<td>XXX</td>
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<tr>
<td>3/16</td>
<td>Group Work: Designing a Qualitative Study</td>
<td>Due: Article Search</td>
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<tr>
<td>Date</td>
<td>Activity</td>
<td>Due</td>
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<tr>
<td>3/23</td>
<td>Quantitative Research Article Analysis</td>
<td>Read Charles, Chs. 12, 14</td>
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</table>
| 4/6   | Group Work: Designing a Quantitative Study                               | Final Action Research Log (8 entries)
                                   | Literature Review Focus           |
| 4/13  | No formal class                                                          | XXX                                |
| 4/20  | Article Analysis Poster Presentations                                     | Poster Presentations                |
| 4/27  | Action Research Article Analysis                                         | Read Charles, Ch. 13
                                   | Read Mills, Chs. 5, 6, Appendix A |
| 5/4   | Designing Action Research Interpreting Conflicting Findings              | Read Mills, Chs. 7, 8              |
| 5/11  | Finals Week                                                              | Literature Review                  |
Detailed Assignment Descriptions

Library Adventure (10%)

Teams of students will develop an alphabetized annotated list of at least six research journals (not articles) that you feel will be useful to you as elementary school teacher/researchers. List the title of the journal and write two or three sentences that describe the journal. This description should include the types of research articles in the journal, the intended audience, the general focus of the journal, and the sponsoring professional organization if any.

Students will be assessed on:

- Their ability to discern research journals from other educational publications
- Their ability to describe concisely and accurately the journals they have selected
- The organization and clarity of their annotated list

Article Search (10%)

Teams of students will locate and photocopy at least 8 articles on a topic of their choice. At least 6 of the articles must be research articles. The others may be reviews of research or practitioner pieces. No more than 2 of the articles on your bibliography should be ERIC documents. Each team of students will turn in a bibliography in APA style with copies of the articles attached. Beside each article listed on your bibliography should be an indication of what kind of article it is. To do this, simply put in parentheses next to each article one of the following: (R) for research articles, (RR) for reviews of research, or (P) for practitioner pieces. For the research articles also identify if it is qualitative (QUAL) or quantitative (QUANT).

Students will be assessed on:

- Their ability to create a bibliography in APA style
- Their ability to identify what type of articles they have chosen
- Their ability to identify what type of research was conducted
- The variety of journals from which they have selected articles

Action Research Log (10%)

Individual students will engage weekly in a reflective analysis of their teaching practice that will lead to the identification of a topic on which to focus their literature review paper and potentially their action research project. Students will synthesize and extend in-class writing exercises that explore their beliefs about teaching and their teaching practice. Each entry should be approximately 2-4 pages. There should be 8 entries in total.
Students will be assessed on:

- Their ability to raise and explore issues pertaining to their beliefs about teaching and their teaching practice
- Their ability to analyze issues pertaining to their beliefs about teaching and apply it to their teaching practice
- The organization and coherence of their log entries.

**Article Analysis Poster and Presentation (10%)**

Teams of students will analyze a research article, represent their thinking on a poster, and present their poster to the class. The poster should clearly represent the following elements:

- The type of study that was conducted
- The general purpose of the study
- The specific question being investigated
- The method of sampling
- The size of the sample
- The data collection procedures
- The data analysis procedures
- The conclusions that were drawn
- The limitations to the study

Student teams will present their poster to the class and discuss the article in terms of the elements listed above. In their presentation, students should also address issues of reliability, validity, and generalizability.

Students will be assessed on:

- The visual clarity of the poster
- The conceptual clarity of the poster
- The thoroughness of the poster
- The organization of the presentation
- The ability to articulate the important features of the study during an oral presentation
- The ability to demonstrate an understanding of reliability, validity, and generalizability

**Literature Review Focus (10%)**

Individual students will write a statement of focus establishes the area of inquiry for their literature review paper. (2-3 pages)

Students will be assessed on the following:
• The ability to: 1) articulate an area of inquiry, 2) establish the importance of this area of inquiry based on available research, and 3) use research to define the terms needed to understand the area of inquiry
• The consistent use of APA format throughout the paper
• The inclusion of a bibliography in APA format
• The organization and clarity of the paper

**Literature Review Paper (20%)**

Individual students will analyze at least 8-10 research articles on a topic of their choosing and will write their findings in a short (10-12) page paper.

Students will do an analysis of 8 or more research articles about their interest area. In this paper articles should be synthesized, analyzed, and compared. Students should discuss both similarities and differences in the study designs and analytic procedures and how those affect the conclusions that are drawn.

Students will be assessed on the following:
• The ability to: 1) articulate an area of inquiry, 2) establish the importance of this area of inquiry based on available research, and 3) use research to define the terms needed to understand the area of inquiry
• The ability to articulate the important features of the studies
• The ability to synthesize, compare, and evaluate the studies in a coherent manner
• The ability to write a conclusion that summarizes research findings and outlines the implications for educational policy and practice
• The consistent use of APA format throughout the paper
• The inclusion of a bibliography in APA format
• The organization and clarity of the paper

**In-Class Collaborative Assessments (10% each)**

Teams of students will design a quantitative and a qualitative study on the topic they have identified.

For these two in-class assessments, students will work in teams to design a quantitative and a qualitative study on a topic they have identified. Students are free to consult with class texts, articles, and notes to work on these assessments. The following elements should be addressed:

- The type of study that is being conducted (i.e., qualitative, quantitative, descriptive, experimental, etc.)
- The general purpose of the study
- The specific question being investigated
- The method of sampling and the rationale for sampling in this manner
- The size of the samples and the reason for making this decision
- The data collection procedures and the rationale for collecting data in this way
- The reliability of the study design
- The validity of the study
- The generalizability of the study as it has been designed
- The limitations of the study design

Students will be assessed on:

- Their understanding of quantitative/qualitative studies
- Their ability to articulate an area of investigation
- Their ability to articulate a specific question for inquiry
- The coherence of the study design
- The ability to articulate their decision-making about sampling
- The ability to articulate their decision-making about data collection
- The ability to explain the reliability, validity, and generalizability of the study they have designed.
- The ability to articulate the limitations of the studies they design

**Participation Points (10%)**

Individual students are expected to contribute each week to classroom exercises and discussions. Each week that the student is present and makes meaningful contributions, they will receive a participation point.

Students will be assessed on:

- Their ability to integrate research concepts and educational experiences
- Their active and thoughtful contribution to exercises and discussions