

**George Mason University
Graduate School of Education
Program: Special Education
Summer 2010**

EDSE 590: Research Methods in Special Education

Instructor: Dr. Carolyn Iguchi

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Location: Kellar Annex, 3807 University Drive, Fairfax, VA 22030

Class Time: June 7 to July 28; Mondays and Wednesdays, 4:30pm to 7:10pm

Office Hours: By appointment

Course Description

The purpose of this course is to describe fundamental concepts and practices in educational research in special education. Specific applications of educational research methods to problems in special education will be covered. Emphasis is on reviewing and critiquing special education research, and applied classroom research for teachers.

Student Outcomes

Upon completion of this course, students will be able to:

- Identify and understand different models of educational research suitable for different research purposes in special education
- Describe and discuss basic theories and methods of quantitative experimental and quasi-experimental research in special education
- Describe and discuss basic theories and methods of survey research in special education
- Describe and discuss basic theories and methods of single-subject research in special education
- Describe and discuss basic theories and methods of qualitative research in special education
- Describe and implement teacher applications of classroom research to address specific classroom problems.

Relationship of Courses to Program Goals and Professional Organizations

EDSE 590 is part of the George Mason University, Graduate School of Education, and Special Education Masters Degree Program. The program aligns with the standards for teacher licensure established by the Council for Exceptional Children, the major special education professional organization in the United States. As such the curriculum for the course includes competencies for teaching students with disabilities from preschool through grade 12. The CEC Standards are listed on the following web site:
http://www.cec.sped.org/ps/perf_based_stds/common_core_4-21-01.html

Required Texts and Other Readings

McMillan, J.H. (2008). *Educational research: Fundamentals for the consumer* (5th ed.). Reading, MA: Addison-Wesley Longman.

American Psychological Association (2010). *Publication manual* (6th ed.). Washington, DC: Author.

Other readings relevant to special education applications assigned by instructor.

NOTE:

This syllabus and course schedule may change according to class needs.

If you need course adaptations or accommodations because of a disability or if you have emergency medical information to share with instructor or need special arrangements, **please call and/or make an appointment with instructor as soon as possible.**

Evaluation

1. Article Analysis Papers (30%, 10% each)
2. Class Attendance and Participation (10%)
3. Reading Quizzes (15%)
4. Final research paper (40%)
5. Research presentation (5%)

It is recommended that students retain copies of all course products to document their progress through the GSE MR program. Products from this class can become part of your individual professional portfolio used in your portfolio classes that documents your satisfactory progress through the GSE program and the CEC performance based standards.

Grading criteria

92 – 100% = A
 90 – 92% = A-
 80 – 89% = B
 70 – 79% = C
 < 70% = F

Graduate School of Education Statements of Expectations

The Graduate School of Education (GSE) expects that all students abide by the following:

- Students are expected to demonstrate professional behavior and dispositions. See www.gse.gmu.edu for a listing of these professional dispositions.
- Students must follow the guidelines of the University Honor Code. See <http://academicintegrity.gmu.edu/honorcode> for the full honor code.
- Students must agree to abide by the university policy for Responsible Use of Computing. See <http://mail.gmu.edu> and click on *Responsible Use of Computing Policy* at the bottom of the screen.
- Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DRC) and inform the

instructor, in writing at the beginning of the semester. See www.gmu.edu/student/drc or call 703-993-2474 to access the DRC.

Other Course Expectations

1. Professional Behavior: For a satisfactory grade in this course, students are expected to attend all classes, arrive on time, be prepared for class, demonstrate professional behavior and complete all assignments with professional quality in a timely manner. To successfully complete this course, students need to adhere to the due dates for specific readings and assignments to be completed. If you feel you cannot adhere to the schedule noted in the syllabus, please contact the instructor immediately to discuss options for withdrawing and completing the course during another semester.

2. Promptness: All assignments must be submitted *on or before* the assigned due date. **In fairness to students who make the effort to submit work on time, 5% of the total assignment points will be deducted each day from your grade for late assignments. Assignments will not be accepted more than 3 days late.**

3. Written Products: All written assignments must be prepared in a professional manner following guidelines stated in the Publication Manual of the American Psychological Association (5th or 6th editions are acceptable). All final products must be typed. Products that, in the judgment of the instructor, are unreadable or unprofessionally prepared will be returned un-graded or assigned a lower evaluation. Plagiarism will not be tolerated.

4. Writing Support: All assignments should reflect graduate level spelling, syntax, and grammar. If you are deficient in any of these areas, you will need to document your work with the GMU Writing Center during this course to improve your skills (<http://writingcenter.gmu.edu>).

5. Signature Assignment: For student evaluation, program evaluation, and accreditation purposes, students will be required to submit a signature assignment from each of their Special Education courses to Taskstream, an electronic portfolio system. In addition, students completing Midpoint and Final Portfolio courses will use Taskstream to create a full portfolio of their work based on assignments completed throughout their program. For this reason, students will need to retain electronic copies of all course products to document their progress through the GSE Special Education program. In addition to the signature assignment, products from this class can become part of your individual program portfolio used in your portfolio classes that documents your satisfactory progress through the GSE program and the CEC performance based standards.

** Note: **Every** student registered for any EDSE course as of the Fall 2007 semester is **required** to submit signature assignments to TaskStream (regardless of whether a course is an elective, a “one time” course, or part of an undergraduate minor). TaskStream information is available at <http://gse.gmu.edu/programs/sped/>. Failure to submit the assignment to TaskStream will result in reporting the course grade as Incomplete (IN). **Unless this grade is changed, upon completion of the required submission, the IN**

will convert to an F nine weeks into the following semester. Please note: if you do not upload your paper PRIOR to the final exam, the instructor may not be able to change an assigned grade of IN until the next semester begins.**

ASSIGNMENTS

Reading Quizzes

Students will complete the chapter practice tests on the textbook website for the assigned reading and email the results of the quiz to the instructor *before the start of class*. Practice test results will not be accepted late.

Textbook website:

http://wps.ablongman.com/ab_mcmillan_edresearch_5/65/16694/4273674.cw/index.html

Article Analyses

Each student is required to submit three article analysis papers during the course of the semester representing three of the research methodologies we will be studying. The purpose of this assignment is for students to learn to assess the quality of published educational research and to distill from scholarly paper the most pertinent information.

Students will select a research article published in the last 5 years from a peer-reviewed academic journal. Students may use articles that will be included in the literature review for their final research proposal paper. The article summarized must use the appropriate type of research methodology (if in doubt, students are encouraged to email the instructor a copy of the research article before hand as article analysis papers based on the incorrect methodology will not be accepted for credit).

The paper will start with a brief summary of the research problem, study sample, experimental methodology, and key findings. This summary will be followed by an assessment/critique of the article. Students should refer to McMillan's questions for assessing published research on pages 362-367. The focus of the critique will depend on the specific article. For example, the critique may examine several of the following elements:

- (1) The fit between the research problem and the research methodology or design
- (2) Appropriate or inappropriate use of data collection instruments
- (3) The author's attention of data collection procedures and data analysis
- (4) Apparent flaws in execution of the research
- (5) Quality of sampling procedure, description of participants or inclusion criteria for participants

Papers will be evaluated on selection of an appropriate research article, clarity of written expression, demonstration of understanding of the research methodology and execution, through assessment of the strengths and weaknesses of the article, and correct usage of APA formatting.

Paper Format:

- APA formatted cover sheet
- Article assessment (3 pages)
- APA formatted reference page

Due Dates:

- True-Experimental Research: July 7
- Qualitative Research: July 14
- Quasi-Experimental Single-Subject Research: July 21

Final Research Paper*

For the final signature assignment, students will develop a research question relevant to the field of special education and write a research proposal paper that will describe how to carry out a study to answer their question. Actual data collection and analysis is not required for this assignment. The research proposal paper will reflect the appropriate experimental methodology for the research question. The paper will be in APA format and include the following sections: literature review, methods, and validity and limitations. Papers will be approximately 10 to 15 pages in length.

Literature Review

The purpose of the literature review is to introduce the reader to the research question, strategically explore previous research in this area, and argue for the rational of the present study. Students should cite at least ten articles published in peer reviewed journals in the literature review. The literature review should include the following components: a broad introduction to the research problem, a focused assessment and integration of previous research to provide justification for the present study, a statement of the research questions, and research hypotheses. Students will be evaluated on clarity of written expression, strong justification of the significance of the research problem, thorough assessment of published research with strong integration of the research to establish a foundation for the proposed study, and strength of research questions according to the criteria established by McMillan in chapter 2 of the text.

Methods

The methods sections will contain the following subsections: participants, measures, and procedure.

The participants section should include (a) a description of the population being examined, (b) a plan for selecting the sample from the population, (c) a rationale or justification of why the sampling method was selected, and (d) a hypothetical description of the participants selected.

The measures section will describe the key variables examined in your research and the materials or measures used to collect data on these variables. The description of the variables will contain both conceptual and operational definitions and specify both dependent and independent variables. In the description of the materials, APA formatted citation must be included for published measures.

The procedure section starts with a description of the specific type of research methodology and a justification for this research methodology based on your research question. The procedure section will thoroughly describe **each step** in the execution of the research. Summarize or paraphrase instructions (if applicable). The description of the procedure should be sufficient to allow for **exact replication** of the study. The procedure for conducting the study should follow the type of research methodology selected. Students will not be required to collect actual data, but a plan for conducting analysis of the data should be included. Students will be evaluated on the strength of the experimental design.

Validity, Limitations, and Anticipated Results

In this section, students must address potential threats to internal and external validity as described in McMillan. Students will describe how they will address these threats. The student must also address the limitations of the current study and recommendations for future research that would address these limitations. The paper will conclude with a statement of the predicted results.

Scoring Rubric

Exemplary paper (38-40 points): Meets all of the criteria above.

Adequate paper (36-37 points): Good overall paper, lacking in one or two of the criteria for an exemplary paper.

Marginal paper (32-35 points): Overall, acceptable but with one or more significant problems. Contains some useful information, but may have substantial problems with evaluation, writing style, or review of relevant literature.

Inadequate paper (1-31 points): Paper with substantial problems in important areas such as writing, description of research, overall thoughtfulness. Contains little or no information of value to special education practice.

Unacceptable/no paper (0 points): No paper turned in or paper was not approved for this assignment.

Research Presentations

Students will prepare a 10 minute PowerPoint presentation of their proposed research. Presentations should include a brief justification of the study based on the research included in the literature review, the research question(s), and an overview of each element of the method section.

*These assignments are probable entries for the student portfolio

Course Schedule

Course Schedule

- I. June 7: Introduction
 - a. Reading: N/A
 - b. Assignments due: N/A
- II. June 9: Research Problems, Variables, and Hypotheses

- a. Reading
 - i. McMillan Chapter 1
 - ii. McMillan Chapter 2
- b. Assignments due
 - i. Create two researchable questions as a potential basis for the research proposal project.
 - ii. Make sure GMU email account is active and checked regularly. The email ID and password are necessary for using library resources.
 - iii. Email instructor results from Chapter 1 and 2 Practice Tests
- III. June 14: The Literature Review
 - a. Reading
 - i. McMillan Chapter 3
 - ii. McMillan Chapter 4
 - b. Assignments due
 - i. Email instructor results from Chapter 3 and 4 Practice Tests
- IV. June 16: The Literature Review Continued
 - a. Reading
 - i. Read the tutorials on “Accessing Individual Research Reports” and “Integrating Multiple Studies On A Given Topic” (<http://www.gwu.edu/~litrev/index.html#search>)
 - b. Assignments due
 - i. Bring to class 10 scholarly journal articles relevant to your final paper topic.
- V. June 21: Participants, Subjects and Sampling
 - a. Reading
 - i. McMillan Chapter 5
 - b. Assignments due
 - i. Email instructor results from Chapter 5 Practice Test
- VI. June 23: Educational Measurement
 - a. Reading
 - i. McMillan Chapter 6
 - b. Assignments due
 - i. Write the participants section of your final paper. The participants section should include (a) a description of the population being examined, (b) a plan for selecting the sample from the population, (c) a rationale or justification of why the sampling method was selected, and (d) a hypothetical description of the participants selected. Consult table 5.2 (page 123) to determine the strongest method of sampling for your research question and methodology. **Bring two hard copies to class.**
 - ii. Email instructor results from Chapter 6 Practice Test
- VII. June 28: Educational Measures
 - a. Reading
 - i. McMillan Chapter 7
 - b. Assignments due

- i. Email instructor results from Chapter 7 Practice Test
- VIII. June 30: Nonexperimental Quantitative Research Designs
 - a. Reading
 - i. McMillan Chapter 8
 - b. Assignments due
 - i. Email instructor results from Chapter 8 Practice Test
- IX. July 5: Experimental Research Designs
 - a. Reading
 - i. McMillan Chapter 9
 - b. Assignments due
 - i. Email instructor results from Chapter 9 Practice Test
- X. July 7: Statistical Inference
 - a. Reading
 - i. McMillan Chapter 10
 - b. Assignments due
 - i. Experimental Research Article Analysis Paper
 - ii. Email instructor results from Chapter 10 Practice Test
- XI. July 12: Qualitative Research Designs
 - a. Reading
 - i. McMillan Chapter 11
 - b. Assignments due
 - i. Email instructor results from Chapter 11 Practice Test
- XII. July 14: Mixed Method and Action Research
 - a. Reading
 - i. McMillan Chapter 12
 - b. Assignments due
 - i. Qualitative Research Article Analysis Paper
 - ii. Email instructor results from Chapter 12 Practice Test
- XIII. July 19: Single-Subject Quasi-Experimental Research
 - a. Reading
 - i. McMillan Chapter 13
 - b. Assignments due
 - i. Bring 3 copies of your final paper literature review for peer review
 - ii. Email instructor results from Chapter 13 Practice Test
- XIV. July 21: Results and Conclusions
 - a. Reading: N/A
 - b. Assignments due
 - i. Single-Subject Article Analysis Paper
- XV. July 26: Group A Presentations and Peer Review
 - a. Reading: N/A
 - b. Assignments due
 - i. Bring 3 copies of your final paper methodology for peer review
 - ii. Group A: Arrive prepared to present final project PowerPoint to the class
- XVI. July 28: Group B Presentations and Course Evaluations
 - a. Reading: N/A

- b. Assignments due
 - i. Final paper due
 - ii. Group B: Arrive prepared to present final project PowerPoint to the class