

GEORGE MASON UNIVERSITY
College of Education and Human Development

SYLLABUS

EDSE 842 (.001/.657): Applications of Research Methodology in Special Education

Spring, 2011

Professor

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Office Hours

Krug Hall, Rm. 110E
Tuesdays, 4:00 – 6:00
Thursdays, 3:00 - 4:15
or by appointment

Time, Date & Room

Tuesdays, 7:20 pm - 10:00 pm
Innovation 129

Course Description

Provides knowledge and skills in the application of research methodology in special education. Topics include methods for conducting survey research, experimental and quasi-experimental research, research involving correlation and regression, and qualitative research. Emphasizes application to specific issues in special education research.

Student Outcomes:

Upon completion of the course, students should be able to:

- 1 Describe the strengths and limitations of single subject research designs in special education research.
2. Describe basic procedures involving single subject research designs.
3. Evaluate previous research that has employed single subject research methodology.
4. Design future special education research using single subject methodology.
5. Describe the strengths and limitations of qualitative research designs in special education research.
6. Evaluate previous research that has employed qualitative research methodology.
7. Design future special education research using qualitative methodology.
8. Describe the strengths and limitations of survey research designs in special education research.
9. Evaluate previous research that has employed survey research methodology.
10. Design future special education research using survey methodology.
11. Describe the strengths and limitations of group-experimental research designs in special education research.
12. Describe basic procedures involving group-experimental research designs.

13. Evaluate previous special education research that has employed group-experimental research methodology.

14. Design future special education research using group-experimental methodology.

Graduate School of Education Statements of Expectations

Student Expectations

- Students must adhere to the guidelines of the George Mason University Honor Code [See <http://academicintegrity.gmu.edu/honorcode/>].
- Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].
- Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/1301gen.html>].
- Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.
- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- Students are expected to exhibit professional behaviors and dispositions at all times.

Campus Resources

- The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].
- The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].

Course Materials:

There is not a selected text required for this course. Recommended texts for reference are suggested in the syllabus. Required reading materials include identified research articles to be obtained via the George Mason database and/or Blackboard postings.

Nature of Course Delivery:

1. Class lecture, discussion, and participation.
2. Media and relevant multimedia presentations.
3. Study and independent library research.
5. Group presentations of current literature of special education research
7. On-line; e.g., Discussion Board, Blackboard, readings

Evaluation:

1. Class attendance and participation in discussion and group activities
2. Written method sections
3. Group presentation
4. Mid-term and Final exam

Late Assignment Policy: 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.**

Task Stream and Signature Assignment(s):

There are no signature assignments for this course or any necessary submissions to *Taskstream*.

Requirements

1. Class attendance and participation in discussion and group activities.
2. Four written method sections, using *single-subject*, *qualitative*, *survey*, and *group-experimental* or *quasi-experimental* methodology. 5-7 page max., double –spaced, for each proposal (NOT including title page, abstract, and references), APA (6th ed.) format. Subheadings should ordinarily include the following:

- Background literature (brief)
- Purpose statement
- Research Questions
- Method
 - Participants
 - Setting
 - Materials/Instrument

- Procedures
 - Data Sources
- Data analysis
- Anticipated results/Discussion
- References

Evaluation (see rubrics)

1. Attendance/participation: 15 points
2. Method sections: 40 points (4 @ 10 points each)
3. Midterm & Final 30 points (15 points each)
4. Presentation 15 points
100 points

Grading Scale:

A+ 97 – 100 points

A 93 – 96 points

A-90-92 points

B+ 87 – 89 points

B 83 – 86 points

B- 80 – 82 points

C 79 points and below

Required Access to Course Blackboard Site (9.1)

Blackboard will be used to post important information for this course. Plan to access the Bb site several times per week; announcements and resources are posted on the Bb site in between class sessions. You are responsible for accessing the materials – for printed copies, etc. prior to class. <http://mymason.gmu.edu>. Your user ID and password will remain the same. Click the Login tab. Your Login and password is the same as your George Mason e-mail login. Once you enter, select EDSE 842 course.

Course Schedule

Week	Topic	Readings Due For This Class
Week 1, 1/25	Introduction/Organization: Pretest; research traditions; common methodological concerns; nomothetic vs ideographic methods; causation; internal and external validity; dependent and independent variables; the problem of induction;	Odom, Brantlinger, Gersten, Horner, Thompson, & Harris (2005) Cook, Tankersley, & Landrum (2009)
Week 2, 2/01	<i>Single-subject research</i> : Designs and methodological concerns.	Tankersley, Harjusola-Webb, & Landrum, (2008) Regan, Mastroperi, & Scruggs (2005)
Week 3, 2/8	<i>Single-subject research II</i> . Applications and issues; research synthesis.	Horner, Carr, Halle, McGee, Odom, & Wolery (2005) Lane, Kalberg, & Shepcaro (2009)
Week 4, 2/15	<i>Single-subject research III</i> . Applications, randomization tests. Guest presenter: Dr. Anna Evmenova	Hine & Wolery (2006) Evmenova, Graff, Kinas Jerome, Behrmann (2010) Scruggs, Mastropieri, & Regan (2005)
Week 5, 2/22	<i>Qualitative research designs</i> . Internal and external validity. Method section I due.	Seo, Brownell, Bishop, & Dingle (2008) Buckley (2005) chapter (pp.7-36) Scruggs, Mastropieri, & McDuffie (2007)
Week 6, 3/01	<i>Qualitative research designs II</i> . Applications, data analysis	McDuffie & Scruggs (2008) Braintlinger, Jiminez, Klinger, Pugach & Richardson (2005)
Week 7, 3/08	NVIVO 8 demonstration <i>Qualitative research designs III</i> . Midterm exam.	Prepare for Mid-Term
SPRING BREAK		
Week 8, 3/22	<i>Survey research</i> . Methods. Method section II due.	Cutler & Graham (2008)

Week 9, 4/05	<i>Survey research II.</i> Applications, synthesis;	Praisner (2003)
Week 10, 4/12?? <i>Note:</i> Dr. Regan out of town.	<i>Group-experimental research.</i> Assumptions of ANOVA; threats to validity; random assignment.	Cook, Cook, Landrum, Tankersley (2008) Gersten, Baker, Smith-Johnson, Dimino, & Peterson (2006)
Week 11, 4/19	<i>Group-experimental research II.</i> Experimental and quasi-experimental designs. Method section III due.	Gersten, Fuchs, Compton, Coyne, Greenwood, & Innocenti (2005) Montague & Dietz (2009) (extra – Chard, Ketterlin-Geller, Baker, Doabler (2009)
Week 12, 4/26	NO CLASS Council for Exceptional Children (CEC) Conference	
Week 13, 5/3	<i>Group-experimental research III.</i> Quasi-experimental designs: comparative designs for pre-existing groups.	Mastropieri & Scruggs (2009) Simpkins, Scruggs, & Mastropieri (2009)
Week 14, 5/10	<i>Group-experimental research IV.</i> Ceiling and floor effects; one within/one-between designs; multiple statistical tests; crossover designs. Guest presenter: Dr. Sheri Berkeley	Berkeley (TBD)
<i>Finals Week</i> 5/17	Method section IV due. Final exam due.	

Required Readings*

- Baker, S. K., Chard, D. J., Ketterlin-Geller, L. R., Apichatabutra, C., & Doabler, C. (2009). Teaching writing to at-risk students: The quality of evidence for self-regulated strategy development. *Exceptional Children*, 75, 303 – 319.
<http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>
- Brantlinger, E., Jiminez, R., Klingner, J., Pugach, M., & Richardson, V. (2005). Qualitative studies in special education. *Exceptional Children*, 71, 195-207.
<http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>

- Buckley, C. Y. (2005). Establishing and maintaining collaborative relationships between regular and special education teachers in middle school social studies inclusive classrooms. In T. E. Scruggs & M.A. Mastropieri (Eds.), *Advances in learning and behavioral disabilities: Vol. 18. Cognition and learning in diverse settings* (pp. 161-208). Oxford, UK: Elsevier.
- Chard, D. J., Ketterlin-Geller, L. R., Baker, S. K., Doabler, C., & Apichatabutra, C. (2009). Repeated reading interventions for students with learning disabilities: Status of the evidence. *Exceptional Children, 75*, 263 – 282.
<http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>
- Cook, L., Cook, B. G., Landrum, T. J., & Tankersley, M. (2008). Examining the role of group experimental research in establishing evidence-based practices. *Intervention in School and Clinic, 44*, 76 – 82. doi: 10.1177/1053451208324504
- Cook, B. G., Tankersley, M., & Landrum, T. J. (2009). Determining evidence-based practices in special education. *Exceptional Children, 75*, 365 – 384.
<http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>
- Cutler, L., & Graham, S. (2008). Primary grade writing instruction: A national survey. *Journal of Educational Psychology, 100*, 907-919. doi:10.1037/a0012656
- Evmenova, A. S., Graff, H. J. , Kinas Jerome, M., & Behrmann, M. (2010). Word prediction programs with phonetic spelling support: Performance comparisons and impact on journal writing for students with writing difficulties. *Learning Disabilities Research & Practice, 25*, 170 – 182.
doi: 10.1111/j.1540-5826.2010.00315.x
- Gersten, R., Baker, S. K., Smith-Johnson, J., Dimino, J., & Peterson, A. (2006). Eyes on the prize: Teaching complex historical content to middle school students with learning disabilities. *Exceptional Children, 72*, 264-280.
<http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>
- Gersten, R., Fuchs, L. S., Compton, D., Coyne, M., Greenwood, C., & Innocenti, M. S. (2005). Quality indicators for group experimental and quasi-experimental research in special education. *Exceptional Children, 71*, 149-164.
<http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>
- Hine, J. F., & Wolery, M. (2006). Using point-of-view video modeling to teach play to preschoolers with autism. *Topics in Early Childhood Special Education, 26*, 83-93. doi:10.1177/02711214060260020301
- Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children, 71*, 165-179.
<http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>

- Lane, K. L., Kalberg, J. R., & Shepcaro, J. C. (2009). An examination of the evidence base for function-based interventions for students with emotional and/or behavioral disorders attending middle and high schools. *Exceptional Children*, 75(3), 321-341. <http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>
- McDuffie, K. A., & Scruggs, T. E. (2008). The contributions of qualitative research to discussions of evidence-based practice in special education. *Intervention in School and Clinic*, 44, 91 – 97. doi:10.1177/1053451208321564
- Montague, M., & Dietz, S. (2009). Evaluating the evidence-base for cognitive strategy instruction and mathematical problem solving. *Exceptional Children*, 75, 285 – 303. <http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>
- Odom, S. L., Brantlinger, E., Gersten, R., Horner, R. H., Thompson, B., & Harris, K R. (2005). Research in special education: Scientific methods and evidence-based practices. *Exceptional Children*, 71, 137 – 148. <http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>
- Praisner, C. L. (2003). Attitudes of elementary principals toward the inclusion of students with disabilities. *Exceptional Children*, 69, 135-145. <http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>
- Regan, K. S., Mastropieri, M. A., & Scruggs, T. E. (2005). Promoting expressive writing among students with emotional and behavioral disturbance via dialogue journals. *Behavioral Disorders*, 31, 33-50.
- Scruggs, T. E., Mastropieri, M. A., & McDuffie, K. A. (2007). Co-teaching in inclusive classrooms: A meta-synthesis of qualitative research. *Exceptional Children*, 73, 392-416. doi:10.1016/S0735-004X(07)20013-8
- Scruggs, T. E., Mastropieri, M. A., & Regan, K. (2006). Statistical analysis for single subject research designs. In T.E. Scruggs & M.A. Mastropieri (Eds.), *Advances in learning and behavioral disabilities: Vol. 19. Applications of research methodology* (pp. 33-54). Oxford, UK: Elsevier.
- Seo, S., Brownell, M. T., Bishop, A. G., & Dingle, M. (2008). An examination of beginning special education teachers' classroom practices that engage elementary students with learning disabilities in reading instruction. *Exceptional Children*, 75, 97-122. <http://www.cec.sped.org/content/NavigationMenu/Publications2/exceptionalchildren/>
- Simpkins, P. M., Mastropieri, M. A., & Scruggs, T. E. (2009). Differentiated curriculum enhancements in inclusive fifth-grade science classes. *Remedial and Special Education*, 30, 300-309. doi:10.1177/0741932508321011

Tankersley, M., Harjusola-Webb, S., & Landrum, T. J. (2008). Using single-subject research to establish the evidence base of special education. *Intervention in School and Clinic, 44*, 83 – 90. doi:10.1177/1053451208321600

*Most articles are available on-line and/or via Blackboard courses 9.1. Read PDF versions whenever possible. For each research article, be prepared in class to discuss each of the following:

- What was the **purpose** of the investigation?
- What were the **research questions**?
- What, if applicable, the **dependent variable(s)** and **independent variable(s)**?
- Who were the **participants**?
- What were the **data sources**?
- What **materials** were employed?
- What were the **research procedures**?
- What were **data analysis** procedures?
- What **conclusions** were drawn?
- What were the **limitations** of the investigation?
- How could you **replicate and extend** this study (e.g., for your dissertation)?

For non-research, methodological papers, be prepared in class for each of the following:

- What is the **purpose** of the article?
- What are the **major points** under each subheading?
- How can the article be **summarized**?
- How is this article **useful** in planning/designing research?

Recommended Resources

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

Creswell, J. W. (2008). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage.

Fowler, F. J. (2008). *Survey research methods* (4th ed.). Thousand Oaks, CA: Sage.

Gravetter, F. J., & Wallnau, L. B. (2008). *Statistics for the behavioral sciences*. Florence, KY: Cengage/Wadsworth.

Green, S. B., & Salkind, N. J. (2007). *Using SPSS for Windows and Macintosh: Analyzing and understanding data* (5th Ed.) Upper Saddle River, NJ: Prentice Hall.

- Kennedy, C. H. (2005). *Single-case designs for educational research*. Boston: Allyn & Bacon.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Quasi-experimentation: Design and analysis issues for field settings*. Boston: Houghton Mifflin.
- Siegel, S., & Castellan, N. J. (1988). *Nonparametric statistics for the behavioral sciences* (2nd ed.). New York: McGraw-Hill.
- Todman, J. B., & Dugard, P. (2000). *Single-case and small-n experimental designs: A practical guide to randomization tests*. Mahwah, NJ: Erlbaum.
- Yin, R. K. (1993). *Case study research: Design and methods* (4th ed.). Thousand Oaks, CA: Sage.

RUBRIC FOR MID-TERM AND FINAL EXAMINATIONS (30 points total)

For each open-ended test item:

Exemplary response (2 points): Provides direct and thorough response to question, defines relevant terms, and provides specific examples or instances of the concepts being discussed. Answer is directly reflective of lecture, readings, activities, or assignments, or other material of direct relevance to class.

Adequate response (1.5 point): Provides direct and relevant response to question, provides accurate information directly relevant to class readings, notes, or activities. May provide less information, less elaboration, or a less thoughtful overall response than an exemplary response.

Marginal response (1 point): Provides some relevant information, but does not demonstrate overall a clear or complete understanding of the relevant concepts.

Inadequate response (.5 - 0 points): Weak response that does not appear to reflect course content or activities. May include inaccurate information.

METHOD SECTION ASSIGNMENT (4 @ 10 points each)

This course requires students to write four research method sections employing single subject, qualitative, survey, and group-experimental/quasi-experimental research methodology (5 – 7 page maximum, double-spaced, NOT including title page, abstract, and references). Each paper should employ APA format and contain sections similar to the following:

Introduction, brief literature review (1-2 page)

Purpose

Research questions

Method (3-4 pages)

Research design

Participants and setting

Materials

Data sources; dependent variables

Procedures (proposed methods for data collection)

Data analysis

(*Anticipated*) Results (where relevant) (1 page)

Discussion

RUBRIC FOR METHOD SECTION ASSIGNMENTS

Exemplary paper (10 points): Appropriate topic, clearly and directly written, thorough description of participants, data sources, and procedures. Adequate design, analysis, and general understanding/interpretation of the relevant methodology; good writing style, free of mechanical or stylistic errors, appropriate and correct use of APA format.

Adequate paper (9-8 points): Good overall paper, lacking in one or two of the criteria for an exemplary paper. Not entirely clear and thorough, and/or may have neglected specific components relevant to the relevant methodology; minor writing style or APA format errors may be present.

Marginal paper (7 points): Overall, acceptable but with one or more significant problems. Contains some useful information, but may have substantial problems with the evaluation, writing style/APA format, or unclear or inappropriate description of methodology.

Inadequate paper (1-6 points): Paper with substantial problems in important areas such as writing, description of participants, data sources, procedures, data analysis, or overall thoughtfulness. Contains little or no information of value to the field of education.

Unacceptable/no paper (0 points): Paper with no value whatsoever relative to the assignment, or no paper turned in at all.