

GEORGE MASON UNIVERSITY
College of Education and Human Development

SYLLABUS

EDSE 842.001: Applications of Research Methodology in Special Education

Spring, 2010

Professor

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Office Hours

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

Time, Date & Room

Tuesdays, 7:20-10:00
Innovation 317

Purpose

The purpose of this seminar is for students to develop their understanding of research methodology, and its application in special education research. 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.

GSE Syllabus Statements of Expectations

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

Students are expected to exhibit professional behavior and dispositions. See <http://gse.gmu.edu> for a listing of these dispositions.

Students must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catalog/apolicies/#TOC_H12 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.

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)
- Participants
- Data sources
- Materials
- Procedures
- Data analysis
- Anticipated results

4. Midterm and final exams of methodological knowledge and skills.

Evaluation (see rubrics)

1. Attendance/participation:	10 points
2. Method sections:	40 points (4 @ 10 points each)
3. Midterm	20 points
4. Final	<u>30 points</u>
	100 points

Grading Scale:

A 94 – 100 points

A- 90 – 93 points

B+ 86 – 89 points

B 82 – 85 points

B- 79 – 81 points

C 78 points and below

Required Access to Course Blackboard Site

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://courses.gmu.edu> 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
Week 1, 1/19	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;
Week 2, 1/26	<i>Single-subject research</i> : Designs and methodological concerns. <u>Read by Tonight's class</u> : Horner et al. (2005); Hughes et al. (2002); Marckel, Neef, & Ferreri (2006).
Week 3, 2/2	<i>Single-subject research II</i> . Applications and issues; research synthesis. <u>Read by tonight's class</u> : Hine and Wolery (2006); Kourea, Cartledge, & Musti-Rao (2007); Scruggs & Mastropieri (2001).
Week 4, 2/9	<i>Single-subject research III</i> . Applications, randomization tests. <u>Read by tonight's class</u> : Regan, Mastropieri, & Scruggs (2006); Scruggs, Mastropieri, & Regan (2005).
Week 5, 2/16	<i>Qualitative research designs</i> . NVivo 8 demonstration . Internal and external validity. <u>Read by tonight's class</u> : Brantlinger, Jiminez, Klingner, Pugach, & Richardson (2005); Scruggs and Mastropieri (1995); Snell & Janney (2000). Method section I due.
Week 6, 2/23	<i>Qualitative research designs II</i> . Applications, data analysis follow up regarding NVivo. <u>Read by tonight's class</u> : Berry (2006) (particularly pp. 499-514); Seo, Brownell, Bishop, & Dingle (2008); Harry, Klingner, and Hart (2005).

Week 7, 3/2	<i>Qualitative research designs III.</i> Applications, synthesis. Guest Speaker: Tom Scruggs. SPSS introduction. <u>Read by tonight's class:</u> Buckley (2005) (particularly pp. 7-36); Scruggs, Mastropieri, & McDuffie (2007). Midterm exam.
SPRING BREAK	
Week 8, 3/16	<i>Survey research. Methods.</i> <u>Read by tonight's class:</u> Cutler and Graham (2008); Repie (2005); Guest speaker: Dr. Mike Repie. Method section II due.
Week 9, 3/23	<i>Survey research II.</i> Applications, synthesis; <u>Read by tonight's class:</u> Praisner (2003).; Scruggs & Mastropieri (1996).
Week 10, 3/30 <i>Note:</i> Dr. Regan out of town.	<i>Group-experimental research.</i> Assumptions of ANOVA; threats to validity; random assignment. <u>Read by tonight's class:</u> Gersten et al. (2005); Sullivan, Mastropieri, & Scruggs (1994). Guest Speaker: Tom Scruggs
Week 11, 4/6	<i>Group-experimental research II.</i> Experimental and quasi-experimental designs. <u>Read by tonight's class:</u> Gersten, Baker, Smith-Johnson, Dimino, & Peterson (2006); Glago, Mastropieri, & Scruggs (2009); Nougaret, Scruggs, & Mastropieri (2005). Method section III due. Guest speaker: Dr. Karen Glago.
Week 12, 4/13	<i>Group-experimental research III.</i> Quasi-experimental designs: comparative designs for pre-existing groups. <u>Read by tonight's class:</u> Cullinan, Osborne, & Epstein (2004); Neal, McCray, Webb-Johnson, & Bridgest (2003).
Week 13, 4/20	CEC convention
Week 14, 4/27	<i>Group-experimental research IV.</i> Ceiling and floor effects; one within/one-between designs; multiple statistical tests; crossover designs. <u>Read by tonight's class:</u> Mastropieri, Scruggs, Spencer, & Fontana (2003); Simpkins, Scruggs, & Mastropieri (2009). Guest presenter: Dr. Pam Simpkins.
Week 15, 5/4 (make up for 4/20)	<i>Group-experimental research V.</i> Unit of analysis; factorial designs; crossover designs. <u>Read by tonight's class:</u> Mastropieri et al. (2006); Sáenz, Fuchs, & Fuchs (2005).
<i>Finals Week 5/12</i>	Method section IV due. Final exam due.

Required Readings*

Berry, R. A. W. (2006). Inclusion, power, and community: Teachers and students interpret the language of community in an inclusion classroom. *American Educational Research Journal*, 43, 489-529.

Brantlinger, E., Jiminez, R., Klingner, J., Pugach, M., & Richardson, V. (2005). Qualitative studies in special education. *Exceptional Children*, 71, 195-207.

- 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.
- Calhoon, M. B., & Fuchs, L. S. (2003). The effects of peer-assisted learning strategies and curriculum-based measurement on the mathematics performance of secondary students with disabilities. *Remedial and Special Education, 24*, 235-245.
- Cullinan, D., Osborne, S., & Epstein, M. H. (2004). Characteristics of emotional disturbance among female students. *Remedial and Special Education, 25*, 276-290.
- Cutler, L., & Graham, S. (2008). Primary grade writing instruction: A national survey. *Journal of Educational Psychology, 100*, 907-919.
- 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.
- 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.
- Glago, K., Mastropieri, M. A., & Scruggs, T. E. (2009). Improving problem solving of elementary students with mild disabilities. *Remedial and Special Education, 30*, 372 – 380.
- Harry, B., Klingner, J. K., & Hart, J. (2005). African American families under fire: Ethnographic views of family strengths. *Remedial and Special Education, 26*, 101-112.
- 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.
- 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.
- Hughes, C. A., Ruhl, K. L., Schumaker, J. B., & Deshler, D. D. (2002). Effects of instruction in an assignment completion strategy on the homework performance of students with learning disabilities in general education classes. *Learning Disabilities Research and Practice, 17*, 1-18.

- Kourea, L., Cartledge, G., & Musti-Rao, S. (2007). Improving the reading skills of urban elementary students through total class peer tutoring. *Remedial and Special Education, 28*, 95-107.
- Marckel, J. M., Neef, N. A., & Ferreri, S. J. (2006). A preliminary analysis of teaching improvisation with the picture exchange communication system to children with autism. *Journal of Applied Behavior Analysis, 39*, 109-115.
- Mastropieri, M. A., Scruggs, T. E., Norland, J., Berkeley, S., McDuffie, K., Tornquist, E. H., & Conners, N. (2006). Differentiated curriculum enhancement in inclusive middle school science: Effects on classroom and high-stakes tests. *Journal of Special Education, 40*, 130-137.
- Mastropieri, M. A., Scruggs, T. E., Spencer, V., & Fontana, J. (2003). Promoting success in high school world history: Peer tutoring versus guided notes. *Learning Disabilities Research & Practice, 18*, 52-65.
- Neal, L. I., McCray, A. D., Webb-Johnson, G., & Bridgest, S. T. (2003). The effects of African American movement styles on teachers' perceptions and reactions. *Journal of Special Education, 37*, 49-57.
- Nougaret, A., Scruggs, T. E., & Mastropieri, M. A. (2005). The impact of licensure status on the pedagogical competence of first year special education teachers. *Exceptional Children, 71*, 217-229.
- Praisner, C. L. (2003). Attitudes of elementary principals toward the inclusion of students with disabilities. *Exceptional Children, 69*, 135-145.
- 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.
- Sáenz, L. M., Fuchs, L. S., & Fuchs, D. (2005). Peer-assisted learning strategies for English language learners with learning disabilities. *Exceptional Children, 71*, 231-247.
- Scruggs, T. E., & Mastropieri, M. A. (1995). Science and mental retardation: An analysis of curriculum features and learner characteristics. *Science Education, 79*, 251-271.
- Scruggs, T. E., & Mastropieri, M. A. (1996). Teacher perceptions of mainstreaming/inclusion, 1958-1995: A research synthesis. *Exceptional Children, 63*, 59-74.
- Scruggs, T. E., & Mastropieri, M. A. (2001). How to summarize single-participant research: Ideas and applications. *Exceptionality, 9*, 227-245.
- 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.

- 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.
- 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.
- Skinner, D., Bailey, D. B., Jr., Correa, V., & Rodriguez, P. (1999). Narrating self and disability: Latino mothers' construction of identities vis-a-vis their child with special needs. *Exceptional Children*, 65, 481-495.
- Snell, M. E., & Janney, R. E. (2000). Teachers' problem-solving about children with moderate and severe disabilities in elementary classrooms. *Exceptional Children*, 66, 472-490.
- Repie, M. S. (2005). A school mental health issues survey from the perspectives of general and special education teachers, school counselors, and school psychologists. *Education & Treatment of Children*, 28, 279-298.
- Sullivan, G. S., Mastropieri, M. A., & Scruggs, T. E. (1995). Reasoning and remembering: Coaching thinking with students with learning disabilities. *Journal of Special Education*, 29, 310-322.

*Most articles are available on-line and/or via Blackboard. 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 (10 items) AND FINAL (15 items) EXAMINATIONS
(50) points total)**

For each 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 (see sample paper on pp. 40 – 59 of the APA manual) 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.

RUBRIC FOR PARTICIPATION AND ATTENDANCE (10 points)

Exemplary (10 points): The student attends all classes, is on time, is prepared and actively participates and supports the members of the learning group and the members of the class. The student asks thoughtful, good questions and speaks up when concepts are not clearly understood.

Adequate (9-8): The student attends all classes, is on time, is prepared and follows outlined procedures in case of unavoidable absence; the student makes contributions to the learning group and class when prompted. May be occasionally unprepared and/or displays limited participation.

Marginal (7 points): The student is absent from class and/or frequently late to class, often not prepared, does not contribute actively to class discussions, demonstrates a disinterest in the material/discussions

Inadequate (6 or fewer points): The student is often late or absent for class. The student is not prepared for class and does not actively participate in discussions. May fail to exhibit professional behavior and dispositions.