# SYLLABUS

## GEORGE MASON UNIVERSITY
## COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT
## SPECIAL EDUCATION

## EDSE 842-001
## Application of Research Methodology in Special Education

Spring Semester, 2012
Meeting Time/Days: Tuesday: 4:30 - 7:10 pm
Location: Finley 102H

**PROFESSOR:**
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**COURSE DESCRIPTION:**

A. **Prerequisites:** Admission to the Ph.D. program or permission of instructor.
B. **Course description from the university catalog:** 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.

**NATURE OF COURSE DELIVERY:**
This course consists of lectures, in class, whole group, small groups, and individual activities and assignments and use of relevant software including SPSS.

**LEARNER OUTCOMES:**
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.

**REQUIRED TEXTS:**

**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. doi: 10.3102/00028312043003489

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.

Carter, E.W., Moss, C.K., Hoffman, A., Chung, Y., & Sisco, L. (2011). Efficacy and social validity of peer support arrangements for adolescents with disabilities. *Exceptional Children, 78,* 107-125.

Cassella, M.D., & Sidener, T.M. (2011). Response interruption and redirection for vocal stereotypy in chidren with autism: A systematic replication. *Journal of Applied Behavior Analysis, 44,* 169-173. doi: 10.1901/jaba.2011.44-169

Cullinan, D., Osborne, S., & Epstein, M.H. (2004). Characteristics of emotional disturbance among female students. *Remedial and Special Education, 25*, 276-290. doi: 10.1177/07419325040250050201

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. doi: 10.1177/0741932508324394

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. doi: 10.1111/1540-5826.00028

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. doi: 10.1177/07419325070280020801

Litvak, M.S., Ritchie, K.C., & Shore, B. (2011). High- and average-achieving students' perceptions of disabilities and of students with disabilities in inclusive classrooms. *Exceptional Children, 77,* 474-487.

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. doi: 10.1901/jaba.2006.131-04

Marshak, L., Mastropieri, M.A., & Scruggs, T.E. (2011). Curriculum enhancements for inclusive secondary social studies classes. *Exceptionality, 19,* 61-74. doi: 10.1080/09362835.2011.562092

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. doi: 10.1177/00224669060400030101

McDuffie, K.A., Mastropieri, M.A., & Scruggs, T.E. (2009). Differential effects of co-teaching and peer-mediated instruction: Results for content learning and student-teacher interactions. *Exceptional Children, 75,* 493-510.

Moyson, T., & Roeyers, H. (2011). The quality of life of siblings of children with autism

spectrum disorder. *Exceptional Children, 78,* 41-55.

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. doi: 10.1177/00224669030370010501

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.

Rafdal, B.H., McMaster, K.L., McConnell, S.R., Fuchs, D., & Fuchs, L.S. (2011). The effectiveness of kindergarten peer-assisted learning strategies for students with disabilities. *Exceptional Children, 77,* 299-316.

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. (1996). Teacher perceptions of mainstreaming/ inclusion, 1958-1995: A research synthesis. *Exceptional Children, 63,* 59-74.

Scruggs, T.E., & Mastropieri, M.A. (in press). PND at 25: Past, present and future trends in summarizing single subject research. *Remedial and Special Education.*

Scruggs, T.E., Mastropieri, Berkeley, S., & Graetz, J. (2010). Do special education interventions improve learning of secondary content? A meta analysis. *Remedial and Special Education, 36,* 437-449. doi: 10.1177/0741932508327465

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.

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., Scruggs, T.E, & Mastropieri, M.A. (2009). Differentiated curriculum enhancements in inclusive 5th grade science classes. *Remedial and Special Education, 30,* 300-308. doi: 10.1177/0741932508321011

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. doi: 10.1177/002246699502900304

Wanzek, J., Vaughn, S., Roberts, G., & Fletcher, J.M. (2011). Efficacy of a reading intervention for middle school students with learning disabilities. *Exceptional Children, 78,* 73-87.

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*Articles are available on-line, through ejournals. 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**?
- 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 to discuss 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 (2001). *Publication manual* (5th ed). Washington, DC: Author.

Bickel, R. (2007). *Multilevel analysis for applied research.* New York: Guilford.

Creswell, J.W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3nd ed.). 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. (2002). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: Sage.

**COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT**

***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/].
- For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website [See http://gse.gmu.edu/].

**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. Five-page maximum for each proposal (not including title page, abstract, and references), APA (5th ed.) format (see sample manuscript). 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)**

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

Grading: 100-95: A; 94-90:A- ; 89-86: B+; 85-80: B; 79-70: C

**Course Schedule**

| Week | Topic |
|---|---|
| Week 1, 1/24 | Introduction/Organization: Pretest; "How do you know?"; research traditions; common methodological concerns; nomothetic vs ideographic methods; causation; internal and external validity; dependent and independent variables; the problem of induction; number systems. |
| Week 2, 1/31 | *Single-subject research*: Designs and methodological concerns. Read Horner et al. (2005); Cassella and Sidener (2011), Marckel, Neef, and Ferreri (2006). |
| Week 3, 2/7 | *Single-subject research II.* Applications and issues;. Read Carter et al. (2011); Hine and Wolery (2006); Kourea, Cartledge, and Musti-Rao (2007). |
| Week 4, 2/14 | *Single-subject research III.* Applications, randomization tests, research synthesis. Read Hughes et al. (2002); Regan, Mastropieri, and Scruggs (2006); Scruggs and Mastropieri (in press). |
| Week 5, 2/21 | *Qualitative research designs*. Internal and external validity. Read Brantlinger, Jiminez, Klingner, Pugach, and Richardson (2005); Berry (2006) (esp. pp. 499-520); Snell and Janney (2000). **Method section I due.** |
| Week 6, 2/28 | *Qualitative research designs II.* Applications, data analysis with *NVivo*. Read Moyson and Roeyers (2011); Seo, Brownell, Bishop, and Dingle (2008); Harry, Klingner, and Hart (2005). |
| Week 7, 3/6 | *Qualitative research designs III.* Applications, research synthesis. Read Buckley (2005) (particularly pp. 7-36); Scruggs, Mastropieri, and McDuffie (2007). **Midterm exam.** |
| Week 8, 3/13 | Spring break; no class ☺ |
| Week 9, 3/20 | *Survey research*. Methods. Read Repie (2005); Litvak, Ritchie, & Shore (2011); **Method section II due.** |
| Week 10, 3/27 | *Survey research II.* Applications, research synthesis. Read Praisner (2003); Scruggs and Mastropieri (1996). |
| Week 11, 4/3 | *Group-experimental research.* Assumptions of ANOVA; threats to validity; random assignment. Read -Gersten et al. (2005); -Sullivan, Mastropieri, and Scruggs (1994). |
| Week 12, 4/10 | *Group-experimental research II.* Experimental and quasi-experimental designs. Read Rafdal, McMaster, McConnell, Fuchs, and Fuchs (2011); Glago, Mastropieri, and Scruggs (2009); Nougaret, Scruggs, and Mastropieri (2005). **Method section III due.** |
| Week 13, 4/17 | *Group-experimental research III.* Quasi-experimental designs: comparative designs for pre-existing groups. Read Cullinan, Osborne, and Epstein (2004); Neal, McCray, Webb-Johnson, and Bridgest (2003). |
| Week 14, 4/24 | *Group-experimental research IV.* Ceiling and floor effects; one |

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|---|---|
| | within/one-between designs; multiple statistical tests; crossover designs. Read Simpkins, Scruggs, and Mastropieri (2009); McDuffie, Mastropieri, and Scruggs (2009). |
| Week 15, 5/1<br>(make up for 1/20) | *Group-experimental research V.* Unit of analysis; factorial designs; meta-analysis. Read -Mastropieri et al. (2006); Wanzek, Vaughn, Roberts, and Fletcher (2011).; Scruggs, Mastropieri, Berkeley, and Graetz (2010). |
| *Finals Week* 5/10 | **Method section IV due. Final exam due.** |

**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, 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)**

This course requires students to write a four research method sections employing single subject, qualitative, survey, and group-experimental/quasi-experimental research methodology (5 pages maximum, not including title page, abstract, and references). It should employ APA format (see sample paper on pp 306-320 of the APA manual) and contain sections similar to the following:

Introduction, brief literature review (1 page)
- Purpose
- Research questions

Method (4 pages)
- Participants and setting
- Research design
- Data sources; dependent variables
- Materials

Procedures (proposed methods for data collection)
Data analysis
Anticipated results (where relevant)

**RUBRIC FOR METHOD SECTION ASSIGNMENTS**

**Exemplary paper (10 points):** Appropriate topic, clearly and directly written, thorough description of participants, data sources, and procedures. 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 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 evaluation, writing style or 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 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. Asks good questions; 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 or nonparticipatory.

**Marginal (7 points):** The student is absent from class, often not prepared, does not contribute actively to class discussion.

**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.