

College of Education and Human Development Division of Special Education and disAbility Research

Spring 2014

EDSE 842 001: Application of Research Methodology in Special Education CRN: 10616, 3 - Credits

Instructor: Dr. Kelley Regan	Meeting Dates: 01/21/14 - 05/14/14
Phone: 703-993-9858	Meeting Day(s): Tuesday
E-Mail: kregan@gmu.edu	Meeting Time(s): 4:30 pm-7:10 pm
Office Hours: TBD	Meeting Location: KH 102

Note: This syllabus may change according to class needs. Students will be advised of any changes immediately through George Mason e-mail and/or through Blackboard.

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.

Prerequisite(s): Admission to PhD in education program, or permission of instructor

Co-requisites: None

Advising Contact Information

Please make sure that you are being advised on a regular basis as to your status and progress through your program. Mason M.Ed. and Certificate students should contact the Special Education Advising Office at (703) 993-3670 for assistance. All other students should refer to their faculty advisor.

Nature of Course Delivery

[Instructors, please revise in accordance with your specific course format]

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Learning activities include the following:

- 1. Class lecture and discussion
- 2. Application activities
- 3. Small group activities and assignments
- 4. Video and other media supports
- 5. Research and presentation activities
- 6. Electronic supplements and activities via Blackboard

Learner Outcomes

Upon completion of this course, students will have:

- Describe the strengths and limitations of single subject research designs in special education research.
- Describe basic procedures involving single subject research designs.
- Evaluate previous research that has employed single subject research methodology.
- Design future special education research using single subject methodology.
- Describe the strengths and limitations of qualitative research designs in special education research.
- Evaluate previous research that has employed qualitative research methodology.
- Design future special education research using qualitative methodology.
- Describe the strengths and limitations of survey research designs in special education research.
- Evaluate previous research that has employed survey research methodology.
- Design future special education research using survey methodology.
- Describe the strengths and limitations of group-experimental research designs in special education research.
- Describe basic procedures involving group-experimental research designs.
- Evaluate previous special education research that has employed group-experimental research methodology.
- Design future special education research using group-experimental methodology.

Required Textbooks

Type Here

Digital Library Option

The Pearson textbook(s) for this course <u>may be</u> available as part of the **George Mason University Division of Special Education and disAbility Research Digital Library**. Please note that not all textbooks are available through this option. Visit the links below before purchasing the digital library to ensure that your course(s) text(s) are available in this format.

The division and Pearson have partnered to bring you the Digital Library; a convenient, digital solution that can save you money on your course materials. The Digital Library offers you access to a complete digital library of <u>all Pearson textbooks</u> and MyEducationLabs used across the Division of Special Education and disAbility Research curriculum at a low 1-year or 3-year subscription price. Access codes are available in the school bookstore. Please visit http://gmu.bncollege.com and search the ISBN. To register your access code or purchase the Digital Library, visit:

http://www.pearsoncustom.com/va/gmu/digitallibrary/education/index.html

- 1 year subscription \$200 ISBN-13: 9781269541411
- 3 years subscription \$525 ISBN-13: 9781269541381
- Individual e-book(s) also available at the bookstore link above or at http://www.pearsoncustom.com/va/gmu/digitallibrary/education/index.html

Recommended Textbooks

APA Manual

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

Required Readings

- Berkeley, S., Mastropieri, M.A., & Scruggs, T.E. (2011). Reading comprehension strategy instruction and attribution retraining for secondary students with learning and other mild disabilities. *Journal of Learning Disabilities*, 44, 18-32.
- Bishop, A. G., Brownell, M. T., Klingner, J. K., Leko, M. M., & Galman, S. A. C. (2010). Differences in beginning special education teachers: The influence of personal attributes, preparation, and school environment on classroom reading practices. *Learning Disability Quarterly*, 33, 75-92.
- Burns, M. K., & Ysseldyke, J. E. (2009). Reported prevalence of evidence based instructional practices in special education. *The Journal of Special Education*, *43*(1), 3-11.
- 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/
- 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., 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/
- Klingner, J. K., & Boardman, A. G. (2011). Addressing the "Research Gap" in special education through mixed methods. *Learning Disability Quarterly*, *34*(3), 208-218.
- 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/
- Leko, M. M., & Brownell, M. T. (2011). Special education preservice teachers' appropriation of pedagogical tools for teaching reading. *Exceptional Children*, 77, 229-251.
- Marshak, L., Mastropieri, M. A., & Scruggs, T. E. (2011). Curriculum enhancements in inclusive secondary social studies classrooms. Exceptionality: A Special Education Journal, 19(2), 61-74. doi: 10.1080/09362835.2011.562092

- Mastropieri, M. A., Scruggs, T. E., Norland, J., Berkeley, S., McDuffie, K., Tornquist, E. H., & Connors, N. (2006). Differentiated curriculum enhancement in inclusive middle school science: Effects on classroom and high-stakes tests. Journal of Special Education, 40, 130-137.
- 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/
- 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
- 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
- Weston, J. R., Curran, C. M., Majsterek, D. J., & Prigge, D. J. (2010). An exploratory study in self-reported school-wide response to intervention reading practices. *Learning Disabilities: A Multi-Disciplinary Journal*, *16*(3), 125-132.

Additional (optional) Readings

- Cutler, L., & Graham, S. (2008). Primary grade writing instruction: A national survey. *Journal of Educational Psychology*, 100, 907-919. doi:10.1037/a0012656
- 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.

Course Relationships to Program Goals and Professional Organizations

This course is part of the George Mason University, Graduate School of Education (GSE), Special Education Program for teacher licensure in the Commonwealth of Virginia in the special education areas of Special Education: Students with Disabilities who Access the General Curriculum K-12. This program complies with the standards for teacher licensure established by the Council for Exceptional Children (CEC), the major special education professional organization.

GMU POLICIES AND RESOURES FOR STUDENTS:

- a. Students must adhere to the guidelines of the George Mason University Honor Code [See http://oai.gmu.edu/honor-code/].
- b. Students must follow the university policy for Responsible Use of Computing [See http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/].
- c. 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.
- d. 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/].
- e. 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/].
- f. Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- g. 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/].

PROFESSIONAL DISPOSITIONS

Students are expected to exhibit professional behaviors and dispositions at all times.

CORE VALUES COMMITMENT

The College of Education & Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles. [See http://cehd.gmu.edu/values/]

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

Course Policies & Expectations

Attendance.

Because of the importance of lecture and discussion to the total learning experience, students are encouraged to both attend and participate in class regularly. Attendance, punctuality, preparation, and active contribution to small and large group efforts are essential. These elements will reflect the professional attitude implied in the course goals and will account for 15% of the course grade. Students who must miss a class must notify the instructor (preferably in advance) and are responsible for completing all assignments and readings for the next class.

Late Work.

TaskStream Submission

Every student registered for any Special Education course with a required performance-based assessment is required to submit this assessment, (NO ASSESSMENT REQUIRED FOR THIS COURSE) (regardless of whether a course is an elective, a onetime course or part of an undergraduate minor). Evaluation of the performance-based assessment by the course instructor will also be completed in TaskStream. Failure to submit the assessment to TaskStream will result in the course instructor reporting the course grade as Incomplete(IN). Unless the IN grade is changed upon completion of the required TaskStream submission, the IN will convert to an F nine weeks into the following semester.

If you have never used TaskStream before, you MUST use the login and password information that has been created for you. This information is distributed to students through GMU email, so it is very important that you set up your GMU email. For more TaskStream information, go to http://cehd.gmu.edu/api/taskstream

Grading Scale

95-100% = A

90-94% = A-

87-89% = B+

83-86% = B

80-82% = B-

70-79% = C

< 70% = F

Assignments

Performance-based Assessment (TaskStream submission required).

N/A

Performance-based Common Assignments (No TaskStream submission required). $\ensuremath{\mathrm{N/A}}$

Other Assignments.

<u>Class Participation</u> (15 points – 13 points are earned face-to-face)

- 1. Professional Behavior: For a satisfactory grade in the course, students are expected to attend all classes, arrive on time, be prepared for class, demonstrate professional behavior (see Professional Disposition Criteria at http://www.gse.gmu.edu for a listing of these dispositions), 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. Laptops, cell phones, PDAs and all other electronic devices should be silenced during class time. If you choose to use your personal laptop for note taking, I ask that you utilize it for that purpose only (not for surfing the web, checking email, etc.).
- 3. 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.
- 4. Written Products: All written assignments must be prepared in a professional manner following guidelines stated in the Publication Manual of the American Psychological Association (6th edition). 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.

**PLEASE expect to verbally participate, effectively listen during every class session, and encourage discussion of your peers.

Three Methods Sections (Three at 10 points each)

Three written method sections, using *single-subject*, *qualitative*, and *group-experimental* or *quasi-experimental* methodology. 7-10 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 Ouestions
- Method

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- o Participants
- o Setting
- o Materials/Instrument
- Procedures
 - Data Sources
- Data analysis
- Anticipated results/Discussion
- References

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.

Midterm & Final (15 points each; 30 points total)

Both the midterm and the final exam will be take home assignments. Responses to open-ended prompts will be typed and provided to the instructor at a designated due date (see schedule). Responses on both exams should not be discussed among peers but course materials, resources, and readings may be used to support the responses.

RUBRIC FOR MID-TERM AND FINAL EXAMINATIONS

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.

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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.

Comparative Methodological Table (10 points)

This table should be a graphic organizer that depicts characteristics for each of the following research methodologies: qualitative, single-subject, and survey research.

The table should include the following headers for each research method (at least): *Purpose* (apart from other methods; why this methodology specifically over others?); *Data Sources* (identify the types of data sources typical of this methodology); *Strengthen Internal Validity* by... (How do you strengthen internal validity? Procedures? Steps?); *Strengthen External Validity* by...(How do you strengthen internal validity? Procedures? Steps?); Establish Reliability by...(How do you establish reliability?)

You can feel free to add additional headers/columns to the comparative methodological table. The ten points should include accuracy in those headers provided above. This table is to be completed independently but it is expected that individuals will use class materials, resources, lectures, discussions, to support completion of this assignment.

(See Appendix for an example of how this table would be presented).

Presentation (15 points)

Each student will be a member of a group that will present on an assigned methodology of special education research. The focus of the presentation will be to creatively and succinctly present the content from two core articles regarding quality indicators (QIs) and the application of QIs for reviewing particular research-based interventions. These articles will be provided in the assigned readings (schedule of this syllabus).

Groups: Qualitative Research, Single Subject Research, Group Experimental Research

Evaluation (see rubrics)

1. Attendance/participation: 15 points (13 face to face points earned)

2. Method sections:
3. Midterm & Final
30 points (3 @ 10 points each)
30 points (15 points each)

4. Comparative Methodological Table: 10 points4. Presentation 15 points

100 points

Schedule

Tentative Class Topics and Due Dates

(Subject to change for any unforeseen interruptions)

Week	Торіс	Readings due PRIOR to this class
Week 1 Jan. 21	 Introduction/Organization: Pretest; research traditions; common methodological concerns; nomothetic vs ideographic methods; causation; internal and external validity; dependent and independent variables; Evidence-Based Practices in Special Education 	 Odom, Brantlinger, Gersten, Horner, Thompson, & Harris (2005) Cook, Tankersley, & Landrum (2009)
Week 2	Qualitative research designs.	Buckley (2005) chapter (pp. 7-36)
Jan. 28	Internal and external validity.	Leko & Brownell (2011) Scruggs, Mastropieri, & McDuffie (2007) (meta-synthesis)

Week 3	Qualitative research designs II.	McDuffie & Scruggs (2008)		
Feb. 4th	Applications, data analysis *Group Presentation*	Braintlinger, Jiminez, Klinger, Pugach & Richardson (2005)		
Week 4	Survey Research.	Weston, Curran, Majsterek, & Prigge		
Feb. 11		(2010) Burns & Ysseldyke (2009)		
Week 5	Method section I (Qualitative) due.			
Feb. 18	NVivo Guest Presenter			
Week 6	Single-subject Research: Designs and	Tankersley, Harjusola-Webb, &		
Feb. 25	methodological concerns	Landrum (2008) Regan, Mastroperi, & Scruggs (2005)		
Week 7	Single-subject Research II.	Horner, Carr, Halle, McGee, Odom,		
March 4	Applications and issues; research synthesis	& Wolery (2005)		
	Group Presentation	Lane, Kalberg, & Shepcaro (2009)		
	Spring Break			
Week 8	Single-subject Research III.	Hine & Wolery (2006)		
March 18	Applications and issues; research synthesis	Evmenova, Graff, Kinas Jerome, Behrmann (2010)		
	Methods Section 2 (SSD) due			
		Randomization tests – extra reading:		
		Scruggs, Mastropieri, & Regan (2005)		
Week 9	Mixed Methods Research	Klingner & Boardman (2011)		
March 25		Bishop, Brownell, Klingner, Leko, & Galman (2010)		
Week 10	Group Experimental Research	Cook, Cook, Landrum, &		
April 1	Assumptions of ANOVA SPSS tutorials: Descriptive Percent, One-Way ANOVA, Paired <i>t</i> -tests, Paired samples <i>t</i> -test	Tankersley (2008)		

	AERA conference April 3-7	CEC conference April 9-12
Week 11 April 15	Group-experimental research II. Experimental and quasi-experimental designs. Threats to validity; random assignment *Group Presentation*	Gersten, Fuchs, Compton, Coyne, Greenwood, & Innocenti (2005) Montague & Dietz (2009) (extra – Chard, Ketterlin-Geller, Baker, Doabler (2009)
Week 12 April 22	Group-experimental research III. Designs for Pre-existing groups Methods Section 3 (Group experimental) due	Marshak, Mastropieri, & Scruggs (2011) Mastropieri, M. A., Scruggs, T. E., Norland, J., Berkeley, S., McDuffie, K., Tornquist, E. H., & Connors, N. (2006)
Week 13 April 29	Group-experimental research IV. Ceiling and floor effects; one within/one-between designs; multiple statistical tests; crossover designs. Guest presenter: Dr. Sheri Berkeley	Berkeley, Mastropieri, & Scruggs (2011)

^{*} Additional readings may be provided by the instructor for some Learning Modules.

Appendix A

Group Presentation Rubric				
Component	Points	Comments		
Description of Research Design of	/2			
Content of Quality Indicators (QIs) article Presentation includes a thorough description or listing of the quality indicators identified for the research methodology addressed within the reading The information presented is given practical relevance for special education research	/5			
 Content of article which applies QIs Present investigation sought to apply/test out the QIs and the purpose of the investigation Clearly present the IV/intervention Present the findings as they apply to the QIs Present any adjustments, if any, the authors made to the suggested QIs from 2005 Present conclusions from the application of the QIs to research – what did this provide the SPED community in quest of evidence? 	/5			
Presentation includes at least two provoking questions which engage the group either to stimulate conversations about the topic and/or to reinforce learning of the QIs, the methodology, or application of suggested QIs	/2			
 Presentation Presentation includes effective visual supports (PowerPoint, doc cam, etc.) and is no longer than 20 minutes (.5 points) Points are well communicated and facilitated learning of audience (.5 points) 	/1			
TOTAL	/15			

Appendix B (Sample of a Comparative Methodological Table)

Purpose	Data	Strengthen Internal	Strengthen	Establish
(apart from other	Sources	Validity by	External	Reliability
methods)			Validity by	
1.	1.	1.	1.	1.

Appendix C (Consider the following questions when completing the assigned readings).

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)?