 SPC ED 619 (3 credit hours)

The Application of Applied Behavior Analysis to

Academic Research in Special Education

# Fall 2014

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**Office Hours by appointment:** Tuesdays 2:30-3:30 & Fridays 3:00-5:00

**Class Meeting Tim**e & **Location**: Wednesday, 4:15 p.m. – 6:45 p.m. CTLB 230

**Class Webpage:** http://www.unm.edu/~susanrc/Site/SPCD\_619.html

## Course Description

The purpose of the course is to introduce graduate students to single-case research and its utility as a research methodology. Although use of single-case research in other disciplines will be considered, its application to educational research will be emphasized. This will include discussion of practitioner use of single-case methods to evaluate the efficacy of educational practices. Students in this course will:

* learn the logic behind and methodology of single case research.
* consider what designates an intervention or teaching strategy as ‘evidence-based’ when using single case research designs.
* Identify the main components of various single-case designs and their efficacy in addressing differing research questions; evaluate and compare strengths and weaknesses of each design type.
* use the most current criteria on quality indicators of single case research to critically analyze published single-case research studies.
* develop their skills in behavioral observation and data collection.
* design a single-case research study to examine a research question.
* consider and discuss ethical research practices with an emphasis on issues related to single-case research methods.

The format of the course will be a mixture of lecture, seminar discussions of readings and topics, and in-class activities.

## Course Objectives

Students in this course will

* Describe the logic on which single case research is based
* Describe the components, uses, advantages, and limitations of single case designs that examine the effects of an intervention on one or more target behaviors (e.g., withdrawal design, reversal design, multiple baseline designs, multiple probe design, changing criterion design) and those that compare the effectiveness of one or more interventions on a target behavior(s) (e.g., alternating treatments design, multielement designs, repeated acquisition designs).
* Describe ethical issues that must be considered when conducting research in educational settings, especially when conducting research with individuals with disabilities.
* Accurately operationally define social and academic behaviors and develop appropriate systems to measure these behaviors.
* Demonstrate the ability to display data graphically.
* Correctly define reliability, validity, and generalization in regards to single-case research design.
* Correctly define and demonstrate evaluation of interobserver agreement and procedural fidelity.
* Correctly define and describe possible assessment approaches to social validity.
* Correctly define and demonstrate appropriate analysis of single case data.
* Write a research proposal for a single case research study that includes formulation of a research question, review of relevant literature, detailed description of methods, and proposed analysis of data.

**Rationale**

The rationale for the Concentration in Intellectual Disability and Severe Disabilities is supported by a shift in the major paradigm in special education and bilingual special education from a solely trait-based conceptualization toward thinking about disabilities as an interaction between individuals with disabilities or those from cultural and linguistic diverse backgrounds, their environments, and needed supports. This new way of thinking forces reanalysis of structures designed to assist individuals in creating for themselves satisfying lives and challenges traditional notions of disabilities and handicaps. The vision of the Intellectual and Severe Disabilities Concentration is aligned with that of the vision and mission of the College of Education.

**The College of Education’s Mission Statement**

The **vision** of the College of Education:   
Excellence and diversity through people, ideas, and innovation.

Our **mission** is the study and practice of education through teaching, research, and service. We

* address critical education issues;
* test new ideas and approaches to teaching and learning;
* educate professionals who can facilitate human growth and development in schools, homes, communities, and workplaces, and
* prepare students for participation in a complex and challenging society.

In carrying out our mission **we value**

* excellence in all that we do;
* diversity of people and perspectives;
* relationships of service, accountability, collaboration, and advocacy;
* the discovery, discussion, and dissemination of ideas, and innovation in teaching, technology, and leadership

**College of Education's Conceptual Framework:**Professional Understandings, Practices, and Identities (UPI)

The College of Education at the University of New Mexico believes that professional education should seek to help individuals develop professional **understandings**, **practices**, and **identities**. These understandings, practices and identities frame the life-long learning of professional educators and reflect the values articulated in our Mission Statement and in state and national standards and competencies.

**UNDERSTANDINGS** frame the identity and practice of educational professional. We seek to help you better understand:

* *Human Growth and Development*

Patterns in how individuals develop physically, emotionally, and intellectually. How to provide conditions that promote the growth and learning of individuals from diverse cultural and linguistic backgrounds, including those with special learning needs.

* *Culture and Language*

The nature of home, school, community, workplace, state, national, and global contexts for learning. How social groups develop and function and the dynamics of power within and among them. How language and other forms of expression reflect cultural assumptions yet can be used to evoke social change. How one's own background and development shape understanding and interaction.

* *Content of the Disciplines*

The substance of the disciplines you teach -- the central organizing concepts and factual information -- and the ways in which new information is created, including the forms of creative investigation that characterize the work of scholars and artists.

* *Pedagogy*

Theory and research on effective educational practice. How to create contexts for learning in and across the disciplines. How to assess student learning and design, plan, and implement instruction to meet the needs of learners. How to evaluate educational practice.

* *Technology*

Effects of media and technology on knowledge, communication, and society. How to critically analyze and raise awareness of the impact of media and technology. How to use current technology.

* *Professional Issues*

The social and political influences on education, both historically and currently. Local, state, and national policies, including requirements and standards. How to critically analyze and participate in the formation of educational policy. Strategies for leadership, collaboration, and research.

* + *Nature of Knowledge*

How knowledge is constructed within social contexts, including the academic disciplines. The differences and connections among the knowledge constructed in different social contexts. How to conduct inquiry into the nature of knowledge within and across the disciplines.

These understandings enable you, as a professional, to value and engage in **PRACTICES** that embody the following qualities:

* *Learner-Centered*

Students' past experiences, cultural backgrounds, interests, capabilities, and understandings are accommodated in learning experiences. Routines promote learner risk-taking and allow learners to take increasing control of their own learning and functioning.

* *Contextual*

Experiences engage learners in ways of thinking, doing, talking, writing, reading, etc., that are indicative of the discipline(s) and/or authentic social contexts. Ideas and practices are presented with the richness of their contextual cues and information. Learners are provided with models and opportunities to reflect on their experiences and to relate their learning to other social contexts.

* *Coherent*

Learning experiences are organized around the development of concepts and strategies that learners need in order to participate in other similar situations. Learners are assessed on what they had the opportunity to learn.

* *Culturally Responsive*

Diversity is valued, and learners are helped to become aware of the impact of culture on how they and others perceive the world.

* *Technologically Current*

Available technology facilitates learning. Learners are helped to understand the effect of media on their perceptions and communication.

Developing a **PROFESSIONAL IDENTITY** is central to lifelong growth as a professional educator. The University of New Mexico College of Education will help you to develop the following attributes of a professional:

* *Caring*

Attentive to learners, willingness to listen and withhold judgment, and ability to empathize while maintaining high expectations for learner success.

* *Advocacy*

Committed to ensuring equitable treatment and nurturing environments for all learners.

* *Inquisitiveness*

Habitual inquiry into the many, ever-changing ways in which knowledge is constructed, how people learn, and how educators can support learning.

* *Reflection-in-Action*

Able to analyze, assess and revise practice in light of student learning, research and theory, and collegial feedback.

* *Communication*

Skilled in speaking, writing, and using other modes of expression.

* *Collaboration*

Able to work cooperatively with students, parents, community members, and colleagues.

* *Ethical Behavior*

Aware of and able to work within the ethical codes of the profession.

### CEC Preparation Standards

SPCD 619 includes content that addresses each of the following Council of Exceptional Children Initial or Advanced Preparation standards.

|  |
| --- |
| **Primarily Addressed**  ADVANCED 1.2 Special education specialists design and implement assessments to evaluate the effectiveness of practices and programs. (Learner & Learning, Assessment) |
| ADVANCED 4.1 Special education specialists evaluate research and inquiry to identify effective practices. (Instructional Pedagogy, Research and Inquiry) |
| ADVANCED 4.3 Special education specialists foster an environment that is supportive of continuous instructional improvement and engage in the design and implementation of research and inquiry. (Instructional Pedagogy, Research and Inquiry) |
| **Secondarily Addressed**  ADVANCED 6.3 Special education specialists model and promote respect for all individuals and facilitate ethical professional practice. (Professionalism & Collaboration, Leadership and Policy) |

**Specific Course Policies**

**Extra Credit**

Extra credit is not available for this course.

**Email Communications**

All students enrolled in the course must have an email address within the UNM system. This is the only email address that will be used in communicating about this course. Students are responsible for the information sent out via email to the email account they have listed in the UNM system, so it is important that students check the account they registered within the UNM system daily. If you do not typically use this account, please plan to check this account each day or forward it to the email account you typically use.

**Class Participation and Use of Technology in Class**

Active class participation is expected of all students. This involves

* arriving to class on time and well-prepared (i.e., having read all assigned readings),
* paying attention to professor and/or other students when they are speaking,
* use of appropriate and non-offensive language during class and in written class assignments,
* demonstrating cooperation with and respect for the professor and peers during class

discussions,

* actively participating, being on-topic, during small group activities, and
* showing consideration for other students' need for alternative teaching strategies.

Use of technology (i.e., cell phones, iPods or other MP3s, and/or laptops) not related to class activities can hamper the learning of other members of the class. Since this behavior interferes with the educational process of other students, it is considered disruptive behavior (see the UNM policy on disruptive behavior <http://www.unm.edu/~doso/ja_disruptivebehavior.html>).

To help create a positive classroom climate that facilitates the learning of everyone, remember to

* turn off the ringer of your cellular phone and not take calls within the classroom (Please step out in the hall to speak if you must answer an emergency call – you can let the professor know if you received an emergency call.);
* refrain from texting during class; this is disruptive to the learning process;
* not use laptops, iPads, iPad minis, or other electronic devices. If you need to use a laptop or other device for notetaking purposes, please check with the professor first.

**Formatting Guidelines for All Course Assignments**

NOTE: All written work in this course should be written in accordance with the guidelines of the American Psychological Association’s *APA Publication Manual* (6th ed.) (see Required Texts on page 11 of the syllabus). In particular, all assignments should be:

* Typed using 12-pt font, double-spaced, and have 1 inch margins on all sides.
* Include student’s name and name of assignment (e.g., Reflection Paper #1).
* Include running head in upper left-hand corner and page numbers in the upper right-hand corner.
* Use headings appropriately and correctly as indicated in the *APA Publication Manual.*
* Written in complete sentences using correct grammar.
* Include a separate reference page that includes all sources used in the paper, formatted according to the *APA Publication Manual.*
* *All works/sources used in the assignment must be appropriately attributed.*

**Course Evaluation and Assessment**

*Attendance*

Attendance and participation in class are mandatory. You are expected to have read the required readings ahead of time and come to class on-time and prepared to participate in class discussions and group activities.

Consistent with policy in the Concentration in Intellectual Disability and Severe Disabilities:

**Two** absences – 5 points (or half a letter grade) will be deducted from your final grade;

**Three** absences – 10 points (or a full letter grade) will be deducted from your final grade;

**Four** absences – You will be dropped from the course;

**Missing 50 or more min of a class session (coming late or leaving early)** = one absence.

***Late Assignments & Re-Writes of Assignments***

* *All assignments are due on the date indicated in the Class Schedule unless the professor amends the date.*
* *Assignments are to be turned in at the beginning of class (within the first 10 minutes).*
* *Assignments will not be accepted after the due date and will receive a score of “0” points.*
* *The final paper will not be accepted past the due date listed in the Class Schedule.*

To be fair to all students**, re-writes will not be allowed** except under extraordinary circumstances beyond the student’s control. In the rare case that a student is asked to re-do an assignment, such as in the case of inadequate citation or other extraordinary circumstance that leads to significant problems with the assignment, total points on the assignment may be reduced. In this instance, students will be required to meet with the professor and may also be required to utilize the services of the Graduate Resource Center.

Given this, students are ***strongly*** encouraged to meet with the professor prior to an assignment to insure that they understand the criteria for each assignment. This can take the form of bringing drafts of their work to drop-in office hours or scheduled appointments well before the assignment is due. The professor may also be able to respond to specific questions about portions of assignments sent via email, time permitting. However, due to time constraints, it is not possible to read complete assignments sent electronically or brought to office hours or provide detailed feedback on all aspects of the draft reviewed. Therefore, the professor cannot predict what grade a student will earn on a submitted assignment based on the review of her/his draft. To make each appointment or email exchange as beneficial as possible, please have specific questions ready to ask about assignments.

The following tables list the assignments required for this course, the number of possible points for each assignment, and the letter grade and point ranges used for determining final course grades. Note that final grades are based on percentage of points earned for the entire semester.

|  |  |
| --- | --- |
| **Assignments** | **Point Value** |
| Plagiarism Tutorial | 5 pts |
| Class Participation | 15 pts |
| Take Home Quizzes (2) | 20 pts (10 each) |
| Comp. Article Review | 15 pts |
| Presentation of a Research Article | 15 pts |
| Draft of Proposal & Meeting | 15 pts |
| Proposal Presentation | 15 pts |
| Research Proposal Paper | 45 pts |
| **Total:** | **145 pts** |

**DESCRIPTONS OF ASSIGNMENTS ARE LOCATED on p. 9-10 of the syllabus.**

|  |  |
| --- | --- |
| **Percentage of Total points earned** | **Grade** |
| 100 | A+ |
| 94-99 | A |
| 90-93 | A- |
| 88-89 | B+ |
| 84-87 | B |
| 80-83  78-79 | B-  C+ |
| 74-77 | C |
| <74 | F |

**NOTE**: UNM regulations specify that graduate students may not be assigned a grade of C-, D+, D, or D- (see p. 41 in the *UNM Catalog*). Therefore, graduate students who do not accumulate a minimum of 74% of the total points possible by the end of the semester will be assigned an F. In addition, incompletes and withdrawals at the end of the semester will be allowed only in accordance with UNM policies. Please see the UNM catalog for a description of these policies.

## *Accommodations*

Please see the professor as soon as possible if you need accommodations in the course due to a disability. Be sure you have registered with Accessibility Services (277-3506) in Mesa Vista Hall, Room 2021, to facilitate making accommodations available for you as quickly as possible.

## Policy on Academic Integrity

It is the responsibility of students and faculty to engage in “honest and responsible scholarship” (University of Illinois-UC Library, 2013) and to avoid practices that may be considered acts of academic dishonesty. UNM’s policy for students on academic dishonesty, as found in the *UNM Catalog*, p. 44, is as follows:

Any student who has been judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or the course.

Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others . . .

In this course we will use the definition of plagiarism adopted by Indiana University (2013):

Plagiarism is defined as presenting someone else's work, including the work of other students, as one's own. Any ideas or materials taken from another source for either written or oral use must be fully acknowledged, unless the information is common knowledge. What is considered "common knowledge" may differ from course to course.

a. A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment.

b. A student must give credit to the originality of others and acknowledge an indebtedness whenever:

1. Directly quoting another person's actual words, whether oral or written;

2. Using another person's ideas, opinions, or theories;

3. Paraphrasing the words, ideas, opinions, or theories of others, whether oral or written;

4. Borrowing facts, statistics, or illustrative material; or

5. Offering materials assembled or collected by others in the form of projects or collections without acknowledgment.

The following specifies how UNM’s policy on academic dishonesty is applied in this course:

* In terms of written work, you have the responsibility to explicitly specify what portion of that work reflects your own ideas/words, and what portion reflects the ideas/words of other people (e.g., authors of books or journal articles, websites, peers’ work). This includes
  + appropriately indicating direct quotes,
  + adequately paraphrasing others words and correctly attributing the source, and
  + explicitly stating what are primary and secondary sources
* Incorrect citations (e.g., inadequate paraphrasing, incorrectly indicating direct quotes) will result in the following:
  + The first time a problem is noted in an assignment, I will assume that it is unintentional and will ask that the assignment be re-written. Points may be deducted from the assignment at my discretion. In addition, you will be asked to meet with me to learn how to avoid the problem in future assignments.
  + The second time a problem is noted in an assignment, you will be assigned 0 points for that assignment.
  + The third time a problem is noted in an assignment, you will be assigned a failing grade in the course. Documentation of this will be sent to the Dean of Students.
* If at any time you submit an assignment that contains text or work taken from another source in whole or in part (e.g., a web site, an article, textbook) without any acknowledgment of the original source, you may receive a failing grade in the course. Documentation of this incident will be sent to the Dean of Students.

To assist you in understanding what plagiarism is and isn’t, you will be required to successfully complete an online tutorial and provide documentation of passing the tutorial’s online quiz. All written work in this course should be written in accordance with the guidelines of the American Psychological Association’s *APA Publication Manual* (6th ed.)(see list of Required Books on pp. 10-11 of the syllabus). This *Manual* specifies what plagiarism is and how to compose and format your work so that it is avoided.

Additionally, students in the class will be required to use Turnitin, a program that assists them in strengthening their writing by helping them locate places where they have not appropriately delineated direct quotes, used the structure or ideas of someone else without acknowledgement, or not paraphrased correctly. The professor will provide instructions in class on how to use the program. The TURNITIN Class ID numberis **6740892**; the class password is **SCD619**.

**Description of Course Assignments**

**Plagiarism Tutorial (5 pts)**

Go to the website below and complete the tutorial on plagiarism. It will provide information on what plagiarism is, examples of different types of plagiarism, practice problems, and a short quiz. Once you’ve worked through the material, take the quiz and print out the certificate indicating that you passed the quiz. Turn this in to the professor by 9/3 to receive points for this assignment. If you have done this for another class, provide a copy of the certificate to the professor by 9/3.

Website: https://www.indiana.edu/~istd/

**Class Participation (15 pts)**

This class is structured so that class discussions and activities are critical to student learning; most classes will be a blend of lecture, student presentations, and whole and small group discussions and activities. All students are expected to come to each class on time and fully prepared to participate dynamically in class activities. This includes asking pertinent questions, contributing relevant comments and examples, and for some classes, finding and bringing in relevant articles that form the basis of an activity or illustrate a topic that will be discussed. Be sure to read through the Weekly Readings & Tasks section carefully so that you are aware of what will be needed for each class session. (See Class Participation rubric for assessment criteria for this requirement.)

**Take-Home Quizzes** **(two, each 10 pts)**

These will cover key terminology and design elements for various single-case designs. They are given out one week before the due date and completed at home and turned in on the date listed in the class schedule.

**Comprehensive Review of a Published Single-Case Study (15 pts)**

The purpose of this assignment is for students to apply their developing knowledge of single-case research design (and research design in general) to critique a published study. Students will select a research study from a list provided by the professor and complete an in-depth critique following the format (template) provided in class.

**Presentation of a Research Article**   **(15 pts)**

Students will present a published study to the class that is an example of the research design for a particular class session and will lead a discussion of the study with the class. The discussion should help each class member understand the logic of the type of design used in the study, the research question and methods of the example study, the results and implications for practice and research. The student presenter will provide a one-page handout for each class member and the instructor that summarizes key information for the study. Students are **strongly encouraged to meet with the professor at least a week prior to their presentation** to overview what they will be teaching.

**Research Proposal (15 pts for draft; 15 pts for presentation; 45 pts for the final paper)**

The purposes of this assignment are for students to gain experience in (a) designing a study using single-case methods, (b) writing a formal research proposal, and (c) giving a professional presentation. The written proposal will have four sections: an Introduction, a Method section, a brief Discussion, and a graph depicting made-up data that illustrates the design. The proposal should demonstrate synthesis and evaluation of key course concepts related to single-case research design. (The final section of the course syllabus includes a detailed listing of evaluation criteria for each aspect of these assignments.) The overall assignment will consist of three parts:

1. Students will first complete a draft of the research proposal. They will be required to set an appointment time to meet with the professor to review the draft and clarify any concerns or questions (plan on about a 1 hour meeting). **Meeting times will be available the weeks of 10/13, 10/20, 10/27, and 11/3.** Students will earn 15 points by submitting a complete draft and meeting with the professor.
2. Students will prepare and present to the class a presentation based on their research proposal. Presentations will be **15-20 min in length** and will take place during one of the last two class periods of the semester.
3. Students will write the final research proposal paper using feedback from the meeting with the professor on the draft. The paper is due on the last scheduled class meeting.

**Required Texts (available in UNM Bookstore)**

American Psychological Association. (2009). *Publication manual of the American Psychological Association* (6th ed.) Washington, DC: Author.

Gast, D. L. (2010). *Single subject research methodology in behavioral sciences*. New York: Routledge.

Kratochwill, T. R., Hitchcock, J. Horner, R. H., Levin, J. R., Odom, S. L., Rindskopf, D. M., & Shadish, W. R. (2010) Single-case design technical documentation, Version 1.0 (Pilot). Retrieve this from What Works Clearinghouse website: http://ies.ed.gov/ncee/wwc/pdf/wwc\_scd.pdf

Packet of Readings. These can be purchased from the College of Education Publications Center in the TEC Building Room 126 (8:00am–12:00pm, 1:00pm-5:00pm  Monday–Friday).

# Weekly Schedule of Readings & Tasks

**Reading**s that are numbered (i.e., 1, 2, 3) are required and should be read before class. Readings marked with an asterisk\* will provide additional information on the topics discussed in class or mentioned in the text but are not required readings.

**Tasks** (marked with a diamond) are listed for each week. These involve some type of question for class discussion or materials for a class activity. Read these carefully and bring any needed materials to be ready to participate in class.

**NOTE**: Not all of the citations below are in correct APA style due to page constraints. So please do NOT use these as a model for how to correctly format references. Instead, use the *APA Manual of Style* (6th ed) for all papers.

**Week 1**

1. Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied

behavior analysis. *Journal of Applied Behavior Analysis, 1*, 91-97. (**We will discuss key ideas from this foundational article but you will not be expected to have read it before Class 1; be sure you have read it prior to Class 2.**)

* *What educational or clinical issues interest you: what are you curious about? What skills could your students/clients benefit from learning? Or what behaviors might they benefit from changing? What interventions have you thought you might like to try with your students or clients? Begin considering which of these might pose research questions that could be appropriately investigated using single case research methods.*

**Week 2**

1. Gast, D. L. (2010). Chapters 1 & 2. (pp. 1-31). *Single subject research methodology in behavioral sciences*. New York: Routledge.

2. Gast, D. L. (2010). Chapter 3 (pp. 32-56)

3. Hardicre, J. (2014). An overview of research ethics and learning from the past. *British Journal of Nursing, 23*(9), 483-486.

4. Kratochwill et al. (2010). Single-case design technical documentation. (pp. 1-4). Retrieved from the What Works Clearinghouse website: <http://ies.ed.gov/ncee/wwc/pdf/wwc_scd.pdf>

5. Hawken, L. (2011). Common steps and barriers you may have to deal with in conducting a research study (pp. 67-78). In R. O’Neill, J. McDonnell, F. Billingsley, & W. Jenson (Eds.) *Single case research designs in educational and community settings*. Boston: Pearson.

* *What do you see as the goal of research/scholarship? How is research different from practice? Where does single case research fit among the various research methodologies?*
* *What are the ethical principles that apply to research? Be ready to defend your opinions.*

**Week 3**

1. Fisher, M. H., Burke, M. M., & Griffin, M. M. (2013). Teaching young adults with disabilities to respond appropriately to lures from strangers. *Journal of Applied Behavior Analysis, 46*, 528-533.

2. Gast, D. L. (2010). Chapter 4 (pp. 67-81). *Single subject research methodology in behavioral sciences*. New York: Routledge.

3. 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. **(We will refer to this article throughout the semester. The quality indicators described in this article will serve as a framework for assessment of the quality of your research proposal.)**

\*McDonnell, J., & O’Neill, R. (2003). A perspective on single/within subject research methods and “scientifically based research”. *Research & Practice for Persons with Severe Disabilities, 28*, 138-142.

\*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.

* *What does “evidence-based” mean? Be able to describe a practice that your school/agency uses that your organizations considers “evidence-based”.*
* *Read the Fisher et al. (2013) article carefully, noting the various sections within the paper and paying special attention to the research question. we will use these in class*.

**Week** 4

1. Gast, D. L. (2010). Chapters 5 (pp. 91-109) & 6 (pp. 110-128). *Single subject research methodology in behavioral sciences*. New York: Routledge.

2. Kratochwill et al. (2010). Single-case design technical documentation. (pp.5-11). Retrieved from the What Works Clearinghouse website: <http://ies.ed.gov/ncee/wwc/pdf/wwc_scd.pdf>

* *Bring a draft research question to class – one based on an intervention you would like to examine using a single case research design. Incorporate the elements of developing a good research questions that we discussed/you read about last week. (You will turn these in.)*

**Week 5**

1. Gast, D. L. (2010). Chapter 7 (pp. 129-156). *Single subject research methodology in behavioral sciences*. New York: Routledge.

2. Kratochwill et al. (2010). Single-case design technical documentation. (pp. 12-17). Retrieved from the What Works Clearinghouse website: <http://ies.ed.gov/ncee/wwc/pdf/wwc_scd.pdf>

3. Kennedy, C. H. (2005). Social validity. *Single-case designs for educational*

*research* (pp. 218-233). Boston: Allyn and Bacon.

4. Strain, P. S., Barton, E. E., & Dunlap, G. (2012). Lesson learned about the utility of social validity. *Education and Treatment of Children, 25*(2), 183-200.

\*Wolf, M. M. (1978). Social validity: The case for subjective measurement or How applied

behavior analysis is finding its heart. *Journal of Applied Behavior Analysis, 11*, 203-214.

\*Thompson, T., Symons, F. J., & Felce, D. (2000). Principles of behavioral observation. In Thompson, T., Felce, D., & Symons, F. J. (Eds.). *Behavioral observation: Technology and applications in developmental disabilities*. (3-16). Baltimore, P. H. Brookes.

* *Be sure to look back over the Fisher et al. (2013) study we examined in Week 3 so you will be ready for Dr. Griffin’s discussion with the class.*
* *Think about the research proposal you will be developing: last week you worked on a research question. This week, consider what might be an appropriate dependent variable(s) (DV) for this proposed study.*
* *How will you measure the social validity of your study’s purpose, the intervention procedures, and its outcomes? Be ready to discuss some ideas for each area.*

**Week 6**

1. Gast, D. L. (2010). Chapter 7 (pp. 156-165). *Single subject research methodology in behavioral sciences*. New York: Routledge.

2. Gast, D. L. (2010). Chapter 8 (pp. 166-198). *Single subject research methodology in behavioral sciences*. New York: Routledge.

\*Kazdin, A. (2013). Graphic display of data for visual inspection. In *Single-case research designs* (pp. 322-351) (2nd ed.). New York: Oxford University Press.

\*Thompson, T., Symons, F. J., & Felce, D. (2000). Principles of behavioral observation. In Thompson, T., Felce, D., & Symons, F. J. (Eds.). *Behavioral observation: Technology and applications in developmental disabilities*. (3-16). Baltimore, P. H. Brookes.

* *Consider the dependent variable(s) (DV) you want to use in your proposed research study. Bring to class a draft of an operational definition for each DV you are considering. (You will turn these in.)*
* *Using these operational definitions, think about how you could reliably measure this behavior: What dimension will you measure? What data collection system might you use? How would you train observers? Conduct IOA? Be ready to discuss your thinking with the class.*

**Week 7**

1. Gast, D. L. (2010). Chapter 9 (pp. 199-233). *Single subject research methodology in behavioral sciences*. New York: Routledge.

2. Horner, R. H., Swaminathan, H., Sugai, G., & Smolkowski, K. (2012). Considerations for the systematic analysis and use of single-case research. *Education and Treatment of Children, 35*(2), pp. 269-290.

3. Kratochwill et al. (2010). Single-case design technical documentation. (pp. 17-21). Retrieved from the What Works Clearinghouse website: <http://ies.ed.gov/ncee/wwc/pdf/wwc_scd.pdf>

\* Kazdin, A. (2013). Graphic display of data for visual inspection. In *Single-case research designs* (pp. 322-351) (2nd ed.). New York: Oxford University Press.

* *This week we will practice visual data analysis in class. Be sure you are familiar with the key elements of visual analysis discussed in the Gast, Horner et al., and Kratochwill et al. chapters. Bring your laptop to class; if you don’t own one, please check with Susan.*

**Week 8**

1. Gast, D. L. (2010). Chapter 10 (pp. 234-275). *Single subject research methodology in behavioral sciences*. New York: Routledge.

2. Lane, K., Wolery, M., Reichow, B., & Rogers, L. (2007). Describing baseline conditions: Suggestions for study reports. *Journal of Behavioral Education, 16*, 224-234.

3. Gresham, F. M., Van, M. B., & Cook, C. R. (2006). Social skills training for teaching replacement behaviors: Remediating acquisition deficits in at-risk students. *Behavioral Disorders, 31*, 363-377.

* *We will discuss and examine withdrawal and reversal designs. What are the strengths and weaknesses of these designs? For what type of questions are they best used? Think about your research question: could it be investigated using this type of design?*

### Week 9

1. Gast, D. L. (2010). Chapter 11 (pp. 276-328). *Single subject research methodology in behavioral sciences*. New York: Routledge.

2. Ross, S. W., & Horner, R. H. (2009). Bully prevention in positive behavior support. *Journal of Applied Behavior Analysis, 42*, 747-759.

3. Ledford, J. R., Gast, D. L., Luscre, D., & Ayres, K. M. (2008). Observational and incidental learning by children with autism during small group instruction. *Journal of Autism and Developmental Disabilities, 38*, 86-103.

* *We will discuss and examine multiple baseline and multiple probe designs. Think about your research question: could it be investigated using one of these designs?*
* *Dr. Ann-Marie Orlando will be presenting and discussing some of her research tonight. What questions might you have for her related to selecting a design and implementing a study?*

**Week 10**

1. Gast, D. L. (2010). Chapter 12 (pp. 329-357. *Single subject research methodology in behavioral* *sciences*. New York: Routledge.

2. Freeman, K. A., & Dexter-Mazza, E. T. (2004). Using self-monitoring with an adolescent with disruptive classroom behavior. *Behavior Modification, 28*, 402-419.

3. Tincani, M. (2004). Comparing the picture exchange communication system and sign language training for children with autism. *Focus on Autism and Other Developmental Disabilities, 19*, 152-163.

* *We will discuss and examine multitreatment and alternating treatments designs that allow comparisons between interventions. Think about your research question: could it be investigated using one of these designs*?

**Week 11**

1. Gast, D. L. (2010). Chapter 12 (pp. 358-381. *Single subject research methodology in behavioral* *sciences*. New York: Routledge.

2. Polychronis, S. C., McDonnell, J., Johnson, J. W., Risen, T., & Jameson, M. (2004). A comparison of two trial distribution schedules in embedded instruction. *Focus on Autism and Other Developmental Disabilities, 19,* 140-151.

3. Jones, C. D., & Schwartz, I. S. (2004). Siblings, peers, and adults: Differential effects of

models for children with autism. *Topics in Early Childhood Special Education, 24*, 187-198.

* *We will discuss and examine adapted alternating treatments and parallel treatments designs that allow comparisons between interventions. Think about your research question: could it be investigated using one of these designs*?

**Week 12**

1. Gast, D. L. (2010). Chapter 13 (pp. 382-416). *Single subject research methodology in behavioral sciences*. New York: Routledge.

2. Koegel, R. L., Openden, D., & Koegel, L. K. (2004). A systematic desensitization paradigm to

treat hypersensitivity to auditory stimuli in children with autism in family contexts. *Research and Practice for Persons with Severe Disabilities, 29*, 122-134.

3. Collins, S., Higbee, T. S., & Salzberg, C. L. (2009). The effects of video modeling on staff

implementation of a problem-solving intervention with adults with developmental disabilities. *Journal of Applied Behavior Analysis, 42*, 849-854.

4. Schindler, H. R., & Horner, R. H. (2005). Generalized reduction of problem behavior of young children with autism: Building trans-situational interventions. *American Journal on Mental Retardation, 110*, 36-47.

* *We are discussing variations on multiple baseline designs and designs that incorporate more than one design element. Again, thinking of your research question, could it be best investigated using one of these designs?*

**Week 13**

1. Gast, D. L. (2010). Chapter 14 (pp. 417-453). *Single subject research methodology in behavioral sciences*. New York: Routledge.

2. Wolery, M. (2013). A commentary: Single-case design technical document of the What Works Clearinghouse. *Remedial and Special Education, 43*(1), 39-43.

3. Maggin, D. M., Briesch, A. M., & Chafouleas, S. M. (2013). An application of the What Works Clearinghouse Standards for evaluating single-subject research: Synthesis of the self-management literature base. *Remedial and Special Education, 43*(1), 44-58.

Kratochwill, T. R., & Levin, J. R. (2010). Enhancing the scientific credibility of single-case intervention research: Randomization to the rescue. *Psychological Methods, 15*, 124-144. DOI: 10.1037/a0017736

* *Why are researchers working to find appropriate and valid means of using statistical analysis for single case research data? What are some of the primary problems that have not yet been overcome? What the benefits and drawbacks of using statistical analysis for single case data?*

**Week 14**

No Readings.

**Additional Recommended Readings and Resources**

Bailey, J. S., & Burch, M. R. (2002). *Research methods in applied behavior analysis*. Thousand Oaks, CA: Sage Publications.

Franklin, R. D., Allison, D. B., & Gorman, B. S. (1997). *Design and analysis of single-case*

*research*. Mahwah, NJ: Lawrence Erlbaum.

Graham, S. (2005). Criteria for evidence-based practice in special education [Special Issue].

*Exceptional Children, 71*(3).

Hersen, M., & Barlow, D. H. (1976). *Single-case experimental designs: Strategies for studying*

*behavior*. New York: Pergamon Press.

Kazdin, A. E. (2013). *Single-case research designs.* New York: Oxford University Press.

Kennedy, C. H. (2005). *Single-case designs for educational research.* Allyn & Bacon: Boston: MA. [technical but full of excellent information]

Kratochwill, T. R., & Williams, B. L. (1988). Perspectives on pitfalls and hassles in single-

subject research. *Journal of the Association for Persons with Severe Handicaps, 13*, 147-154.

O’Neill, R. E., McDonnell, J. J., Billingsley, F. F., & Jenson, W. R. (2011). *Single case research designs in educational and community settings*. Upper Saddle River, NJ: Pearson Education, Inc.

*Remedial and Special Education Volume 34*, Number 1 (2013). A special issue devoted to recent advancements in the synthesis of single-case research.

Spooner, F., & Browder, D. M. (2003). Scientifically based research in education and students

with low incidence disabilities. *Research & Practice for Persons with Severe Disabilities, 28*, 117-125.

Tawney, J. W., & Gast, D. L. (1984). *Single subject research in special education*. New York:

Merrill.

Thompson, T., Felce, D., & Symons, F. J. (2000). *Behavioral observation: Technology and applications in developmental disabilities*. Baltimore, P. H. Brookes.

**Example Journals Publishing Single Case Studies**

|  |  |
| --- | --- |
| *American Journal On Intellectual and*  *Developmental Disabilities*  *Analysis of Verbal Behavior*  *Behavior Analyst*  *Behavior Change*  *Behavior Modification*  *Behavior Research and Therapy*  *Behavioral Disorders*  *Behavioral Interventions*  *Education and Treatment of Children*  *Education and Training in Developmental*  *Disabilities*  *Exceptional Children*  *Focus on Autism and Other Developmental*  *Disabilities* | *Journal of Applied Behavior Analysis*  *Journal of Autism and Developmental*  *Disorders*  *Journal of Behavior Therapy and Experimental*  *Psychology*  *Journal of Behavioral Education*  *Journal of Experimental Child Psychology*  *Journal of Positive Behavioral Interventions*  *Psychology in the Schools*  *Research and Practice for Persons with*  *Severe Disabilities*  *Research in Developmental Disabilities*  *School Psychology Quarterly*  *Topics in Early Childhood Special Education* |

**Checklists & Rubrics Used to Evaluate Selected Course Assignments**

*(Include a copy of the appropriate checklist when you turn in each assignment.*

*Copies of these are available on the course website.)*

**Class Participation Rubric**

|  | **3** | **2** | **1** |
| --- | --- | --- | --- |
| **Listening** | Actively and respectfully listens to peers and professor; allows everyone to contribute to discussion | Occasionally appears to be distracted or disinterested in peers/professor’s comments, or occasionally dominates discussion | Often seems to be distracted or engages in nonrelated activities when a peer or professor is speaking, or dominates discussion |
| **Preparation** | Consistently arrives on-time and fully prepared; comments/ questions indicate clearly that student has done readings and completed assigned tasks; appears ready and willing to engage in class discussions and activities | Occasionally arrives late and/or at times demonstrates through comments or lack of participation that readings were not done or only read superficially; occasionally does not have tasks completed; not always ready to engage in discussions/  activities | Frequently late to class and/or comments/lack of participation indicate that readings have not been done; tasks often not done or incomplete; little evidence of thoughtful consideration of key ideas in readings |
| **Quality of contributions** | Offers comments or asks questions that are relevant and reflect understanding of assigned text(s); responds to previous remarks of other students and attempts to engage them in further discussion; offers thoughtful insights about class topics or readings | Occasionally offers thoughtful comment about class topics or readings but does not make voluntary contributions consistently; comments/questions are not consistently relevant and/or demonstrate lack of preparation or attention to other students comments; | Rarely makes voluntary contributions; comments/participation display limited understanding of course readings or peers’ previous comments; comments are inaccurate, off topic, or consistently superficial |
| **Impact on class climate** | Participation and comments encourage peers and professor to engage in deeper discussion of key course ideas and constructs; contributes positively to everyone’s learning | Participation and comments are appropriate but don’t consistently encourage others to delve deeper into course concepts; comments are frequently superficial | Little or negative effect on others’ understanding or engagement with course concepts; sometimes treats peers disrespectfully |
| **Frequency of participation** | Consistent, active, and appropriate participation in class discussions and activities | Inconsistent participation in class activities and discussions; sometimes is an active participant and at other times is ‘tuned out’ or engaging in nonrelevant activities | Rarely participates in discussions or activities; often engages in activities during class that are not related to the class activities (e.g., texting, using the internet, reading unrelated materials) |
| **Total: /15** | | | |

**Comprehensive Research Article Critique** (Professor will provide this as a course handout and in electronic form.)

**Design/Research Article Presentation**

1. Information presented was accurate and complete: thoroughly addressed all critical components of the study, including its:

underlying logic

purpose

method

data analysis

outcomes \_\_\_\_(8)

2. Led a thoughtful and thorough discussion of the selected article as a vehicle for the discussion

of the design ­­\_\_\_\_(4)

3. Used professional presentation skills: was well-prepared, used Powerpoint or other media effectively, handout was relevant and organized, led effective discussion \_\_\_\_(3)

TOTAL: \_\_\_\_(15)

**Research Proposal Presentation**

|  |  |
| --- | --- |
| **Appearance** | **Score** |
| 1. The presentation is well organized and easy to follow. | 1 2 3 4 5 |
| 2. Graphics and other visuals enhance the presentation. | 1 2 3 4 5 |
| 3. Slides/graphics contained no spelling or grammatical errors | 1 2 3 4 5 |
|  |  |
| **Content** |  |
| 4. Content is factually accurate and organized in a clear, logical manner. | 1 2 3 4 5 |
| 5. Presenter provides a concise and well-supported rationale for the purpose of the study. | 1 2 3 4 5 |
| 6. Presenter includes sufficient detail that listeners can understand the study’s purpose, method, and results | 1 2 3 4 5 |
|  |  |
| **Presentation** |  |
| 7. Presenter provides information in a clear way that is easy to understand.  8. Presenter’s responses to questions demonstrated knowledge of topic and project.  9. Overall, the presentation was of high quality. | 1 2 3 4 5  1 2 3 4 5  1 2 3 4 5 |

**/3 =**

**SPC ED 619 Research Proposal Paper Rubric**

The Research Proposal paper should be 15-20 pages in length and written using APA format.

**Introduction** 1 2 3 4 5 x2 \_\_\_\_10

***Essential Quality Indicators*** (Gersten et al., 2005, p. 151)

* *Is a compelling case for the importance of the research made? Is the conceptualization based on well-designed studies and does it reflect the scope of extant knowledge?*[For purposes of this assignment a minimum of 7-10 studies should be reviewed.]
* *If an innovative approach is proposed, is it based on a sound conceptualization formed from sound research?*
* *Are the research questions appropriate and stated clearly for the purposes of this study?*

Comments:

**Method**  1 2 3 4 5 x5 \_\_\_\_25

Included thorough and clear descriptions of all of the following:

* + - **Participants**
    - **Setting**
    - **Materials**
    - **Independent and Dependent variables**
    - **Procedures**
      * **Data Collection**
      * **Research design**
      * **Procedural reliability**
      * **Interobserver agreement**
      * **Social validity procedures**
  + **Proposed analysis of data**
  + **Sample graph**

***Essential Quality Indicators*** (Horner et al., 2005, p. 174)

* *Participants are described with sufficient detail to allow others to select individuals with similar characteristics (e.g., age, gender, disability, diagnosis)*
* *The process for selecting participants is described with replicable precision.*
* *Critical features of the physical setting are described with sufficient precision to allow replication.*
* *Dependent variables are described with operational precision.*
* *Each dependent variable is measured with a procedure that generates a quantifiable index.*
* *Measurement of the dependent variable is valid and described with replicable precision.*
* *Dependent variables are measured repeatedly over time.*
* *Data are collected on the reliability or interobserver agreement associated with each dependent variable, and IOA levels meet minimal standards (e.g., IOA=80%; Kappa=60%).*
* *Independent variable is described with replicable precision.*
* *Independent variable is systematically manipulated and under the control of the experimenter.*
* *Overt measurement of the fidelity of implementation for the independent variable is highly desirable*
* *The majority of single-subject research studies will include a baseline phase that provides repeated measurement of a dependent variable and establishes a pattern of responding that can be used to predict the pattern of future performance, if introduction or manipulation of the independent variable did not occur.*
* *Baseline conditions are described with replicable precision.*
* *The design provides at least three demonstrations of experimental effect at three different points in time.*
* *The design controls for common threats to internal validity (e.g., permits elimination of rival hypotheses).*
* *The results document a pattern that demonstrates experimental control.*
* *Experimental effects are replicated across participants, settings, or materials to establish external validity.*
* *The dependent variable is socially important.*
* *The magnitude of change in the dependent variable resulting from the intervention is socially important.*
* *Implementation of the independent variable is practical and cost effective.*
* *Social validity is enhanced by implementation of the independent variable over extended time periods, by typically intervention agents, in typical physical and social contexts.*

Comments:

**Discussion** 1 2 3 4 5 x1 \_\_\_\_5

* Briefly discuss how findings from such a study might advance practice/research, additional research questions that could arise from such a study

Comments:

**Format and Style** 1 2 3 4 5 x1 \_\_\_\_5

* Used correct mechanics throughout the paper.
* Used correct grammar throughout the paper.
* All sources were attributed appropriately.
* Used correct APA formatting throughout the paper
* Paper was 15-20 pages in length

**TOTAL: \_\_\_\_\_\_\_\_/45**

**CLASS SCHEDULE**

(**NOTE**: The professor may adjust dates/assignments as the course progresses, but will provide adequate verbal and/or written notice if dates/assignments change. **The professor reserves the right to add or substitute additional readings if studies become available during the semester that illustrate key course concepts.)**

**\*See Schedule of Readings for the assigned readings for each week.**

| **Date** | **Topic** | **Assignment Due** |
| --- | --- | --- |
| **Week 1**  **8/20** | Overview of course  Introduction to single-case research |  |
| **Week 2**  **8/27** | History of single-case research; overview of logic and foundations of this research methodology  Ethics and research |  |
| **Week 3**  **9/3** | Characteristics of Quality Single-case Intervention Studies  Developing a Good Research Question  Writing a research proposal | Plagiarism Tutorial Certificate |
| **Week 4**  **9/10** | Measurement & Evaluation  Threats to internal validity  Replication |  |
| **Week 5**  **9/17** | Defining and Measuring Behavior  Selecting relevant dependent measures  Social Validity  **Guest Speaker**: Dr. Megan Griffin |  |
| **Week 6**  **9/24** | Defining and Measuring Behavior, continued  Interobserver Agreement  Visually Representing Data | Comprehensive Article  Review |
| **Week 7**  **10/1** | Visual Analysis of Data |  |
| **Week 8**  **10/8** | Visual Analysis continued  Withdrawal & Reversal Design | Presentation of Design/Research Article |
| **Week 9**  **10/15** | Multiple Baseline & Multiple Probe Designs  **Guest Speaker:** Dr.Ann-Marie Orlando | Presentation of Design/Research Article  Take Home Quiz1  Draft research proposal meetings |
| **Week 10**  **10/22** | Comparative Intervention Designs | Presentation of Design/ Research Article    Draft research proposal meetings |
| **Week 11**  **10/29** | Comparative Intervention Designs, continued | Presentation of Design/ Research Article    Draft research proposal meetings |
| **Week 12**  **11/5** | Variations of Multiple Baseline & Combination Designs | Take Home Quiz 2  Presentation of Design/ Research Article  Draft research proposal meetings |
| **Week 13**  **11/12** | Statistical Analysis & Single Case Research Data  Meta-analysis and Single-Case Research |  |
| **Week 14**  **11/19** | Research Proposal Presentations | Student Research Proposal Presentations |
| **Week 15**  **11/26** | **No Class: Reading Day** |  |
| **11/16**  **12/3** | Course Wrap-up | Final Research Proposal Due |