**EDP 7058: Behavioral Interventions: Research and Evaluation**

**Spring, 2020**

Class meets on Tuesdays from 5:00–7:40 PM

Location: OE 222

Professor: Dr. Martha Pelaez (Office: ZEB 242B)

Phone Number: 305-348-2090

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Web Sites: faculty.fiu.edu/~pelaeznm

Office Hours: Tuesdays 2:00-4:45 pm **by appointment**

**Course Description:** Single-subject design or single-case research design is a research design most often used in applied fields of psychology, education, and human behavior in which the participant serves as his/her own control, rather than using another individual/group as comparison. Researchers use single-subject design because these designs are sensitive to individual organism differences vs group designs which are sensitive to averages of groups. Often there will be large numbers of subjects in a research study using single-subject design, however, because the subject serves as their own control, this is still a single-subject design. These designs are used primarily to evaluate the effect of a variety of behavioral interventions in applied research.

**Conceptual Framework:** The conceptual framework of this course is derived from pragmatism, science, reinforcement theory, ethics, and applied behavior analysis. Single-subject research designs provide an alternative for educators, clinicians, and health practitioners who want to study and improve the selected environmental conditions and treatments on the behaviors of individuals/clients/students.

**Course Learning Objectives:** This course is designed to develop knowledge and skills needed to design, implement, and evaluate behavioral interventions using single-subject design in research projects.

The course learning objectives were designed for those graduate students planning to work in educational, psychological, health and clinical/therapy settings, and they include:

1. To articulate the relationship between single-case research methodology and behavior analysis, specifically a student should be being able to:

* + Describe the operant conditioning model and learning principles
  + Explain all components of the three-term contingency
  + Define and apply positive and negative reinforcement and provide examples of each.
  + Define punishment and provide examples.
  + Define stimulus control, discriminative stimulus and S-delta.
  + Describe, extinction, generalization, ad discrimination

1. To apply single case research procedures to address questions and issues in your applied area(s) of interests and empower you to demonstrate competence in making the connection between research questions, design, methods and procedures, methods for analysis of data, interpretation, and discussion of results:
   * Use various single-subject design research methodologies to determine and demonstrate functional relations and apply to the functional behavior assessment plans required for children with disabilities or adults with behavioral and mental health challenges in clinical settings.
   * Develop a research proposal to modify a behavior in an educational, family, or clinical settings.
   * To evaluate and critique single case studies for methodological soundness, in particular by describing and resolving methodological concerns and issues related to using single case designs in applied settings
   * Define functional relationship;
   * Describe the considerations relevant in determining priorities for goals and objectives for students with disabilities and/or clients in clinical settings;
   * Develops skills in pinpointing and assessing target behaviors and identify the reasons for conducting a behavioral assessment;
   * Develops skills in displaying, summarizing and interpreting data;
   * Define and use response measures that provide direct, continuous measurement, and dimensional quantities of behavior (e.g., rate, frequency, latency, magnitude, duration, and topography);
   * Define and use response measures that provide indirect, discontinuous measurement and dimensionless quantities of behavior (e.g., percent of occurrence, trials to criterion, partial interval recording, whole interval recording, and momentary time sampling);
   * Select the best graphic display to effectively communicate quantified relationships.

**Required Course Texts**:

Richards, S. B. (2019*). Single-Subject Research: Applications in Educational Settings.* Wadsworth, CA. (ISBN-13: 978-1-137-56669-8). www.cenagagebrain.com

American Psychological Association. (2005 or later). *The publication manual of the American Psychological Association*, 5th ed. Washington, DC: Author. Go to: [www.apastyle.org](http://www.apastyle.org)

Web-based Reading Material for Learning about “Functional Behavior Assessment” go to:

Miller, J. (2004). [*Multi-modal functional assessment of behavio*r](http://mfba.net/).Web-assisted tutorial maintained by Duquesne University at this URL address: <http://mfba.net/> [http://mfba.net/forms.html]

**Internet Access**: You are required to have access to the Internet, to use line graphs programs, email, and ability to access course notes, library, google scholar, and professor websites.

**Conceptual Framework:** The conceptual framework of this course is derived from pragmatism, science, reinforcement theory, ethics, and applied behavior analysis. Single-subject research designs provide an alternative for educators, clinicians and health practitioners who want to study and improve the selected environmental conditions and/or treatments on the behaviors of individuals/clients/students.

**Course Requirements and Grading:**

**Quizzes. Intermittent written questions will be asked to assess** your understanding of reading material (textbook and articles) and lectures. These 2 unannounced quizzes involve short essay questions that you will answer in class intended to ensure that you have acquired the “language” of single-subject research design for your project. That is, they might be intermittent in-class and composed of only 2-3 short questions each to determine whether you are understanding and reading the material assigned and the articles you have found on your research literature review on SSD.

**RESEARCH PROJECT:**

**Project Requires Data Recording, Coding, and Graphing**: Using one of the 5 single-subjects designs in your textbook, you will be required to conduct a study and write a report. This project should investigate the effects of a particular behavioral intervention on a specific target behavior. For example, your instructor will ask you to design (or replicate) a study to increase child’s attention/eye contact or to decrease his/her avoidant behavior via an intervention that uses synchronized or differential reinforcement provided by caregiver or adult experimenter. Other investigative interventions that will discuss in class include the use of token economies to increase on-task behavior, social imitation, social referencing, join attention, infant smiling and academic behaviors such as early reading and following instructions.

Your project should include:

1) as part of your introduction, you shall include a literature review on the existing related research (on interventions to modified target behavior);

2) describe a single-subject design assigned by your instructor and a procedure as part of a method section. This includes a functional assessment and a detailed description of procedure and method of data collection (see textbook);

3) write the projected results--a section that includes graphs and a narrative description of the presumed results;

4) write a list all references (journal articles are necessary) used for your project. The writing should be in accordance with APA guideline/manual (plagiarism is highly penalized).

It is very important that you create graphs for each participant (follow the *Journal of Applied Behavior Analysis* guidelines for graphs)toshow how the data change from baseline to intervention and/or reversal, depending on the type of design assigned to you by instructor. You will learn various types of child’s behavior problem, several coding strategies and interventions. You will be required to write a form to obtain Parental Consent. I will provide a sample of the consent.

**Organizing your Project:**

**Process**: You will be assigned by Professor M. Pelaez to use one of the following 5 designs:

1) withdrawal (or reversal) design (ABAB, BAB…)

2) multiple baseline (MBD) design

3) changing criterion design (CCD)

4) alternating treatment design (ATD)

5) multiple probe design

**Your first step** is to find and read several articles that use single subject research design and address the topic of your project. These articles are published in many behavioral and educational journals, including behavior analysis (JABA, Behavior Analysis in Practice), school psychology, special education, mental health, and clinical psychology. I have also included an extensive suggested reading list for you (see list at the end of this syllabus). Your responsibility is to find the related articles to your target behavior (approx. -12ticles) and provide the author, date, title, journal, volume, issue, and pages and the abstracts to me on the date listed on the calendar. Explain briefly (in one sentence) why did you select this particular article as part of your literature review.

**The second step** is to write a **5-pages summary (it should include your design and procedure for collecting data and description of the intervention).**

FORMAT FOR YOUR Summary Detail Description of your Research Proposed Project using Single-Subject Design (Please submit the complete list of references you have reviewed and selected at the end of this summary).

Be sure to use APA writing standards across the entire paper and for citing the references and follow these headings:

FOLLOW ALL THE HEADIGS AND SUBHEADINGS PROVIDED BELOW TO WRITE YOUR REPORT.

**RESEARCH BACKGROUND (literature reviewed)**

Research Question(s)

**METHOD:**

Participants

Psychological Assessment(s)

Functional Assessment of Behavior (FAB)

Materials

Setting

Dependent Variable(s)

Independent Variable/Treatment/Intervention

Design

Data Collection and Recording

Procedure (Describe Intervention step by step)

**RESULTS**

Descriptive Statistics

Interobservers’ Agreement (Reliability)

Graphs

**DISCUSSION**

How does your study answer the question(s) formulated?

Suggest Future Research

**CONCLUSION**

**REFERENCES**

**Class Presentation**: You will present your project in class using powerpoint and a short video(s) to illustrate your intervention.

Your course grade will be are based on the percentage of number of points you earned. In keeping with the FIU grading system, final letter grades will be assigned as follows:

95 -100 = A 90 - 94 = A- 87 - 89 = B+

84 - 86 = B 80 - 83 = B- 77 - 79 = C+

74 – 76 = C 70 - 73 = C 67 - 69 = D+

64 – 66 = D 60 - 63 = D- < 60 = F

|  |  |
| --- | --- |
| **Earned Grade** | **Calculate on basis of Percent of 1000 points** |
| A- to A | 90-94% of 100, 95-100% of 100 |
| B- to B to B+ | 80-83% of 100, 84-86% of 100, 87-89% of 100 |
| C to C+ | 70-76% of 100, 77-79% of 100 |

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| --- | --- |
| **Course Requirements and Learning Outcomes:** | **Max Total Points (100)** |
| **Research Project (APA written report 18-20 pages**):  Review of Applied Research Literature  Research Question  Psychological Assessments  Functional Assessment of Behavior (FAB)  SS Design  Data Collection  Intervention Steps  Description of Results  Include Stats and **Graphs**  Discussion and Conclusion  List of Journal References | **75** |
| **In class Power point Presentation of the Proposed Project (including graphs for projected results and video)**: Mail your Power point Presentation ahead to entire class, deliver graphs to instructor the day listed | **10** |
| 2 Intermittent Quizzes material (15 points each) | **15** |
|  | **Max Total points= 100** |

**Academic Honesty:** Academic honesty is the expected norm. When citing journal articles and other references you are expected to paraphrase and quote. Plagiarism and other forms of academic dishonesty will not be tolerated and will be referred to the University’s Committee on Academic Misconduct; *this action that is required of all instructors*. Regarding the consequences of dishonest academic practice, *the instructor shall make an academic judgment* about the participants’ grade on that work and in that course and shall report such incidents to the Primary Administrative Office *In addition, participants are expected to adhere to the code of ethics in the conduct of research and professional practice for school psychologists (*[*http://www.nasponline.org/certification/ethics.html*](http://www.nasponline.org/certification/ethics.html)*) or special educators (*[*http://www.cec.sped.org/ps/ps-ethic.html*](http://www.cec.sped.org/ps/ps-ethic.html)*).* **Therefore, your paper should be submitted to turnitin.com and you should provide me with a copy the report given to you.**

**Attendance: It is expected that all participants will be in attendance for all classes**. This class requires that every student shows active participation. If you miss a class, you would be responsible for any material given or changes made during the class period. *If you miss 2 classes or more, however, you may forfeit your opportunity to earn a grade of A.*

**Office of Disability Services for Students:** If you have a disability and need assistance, please notify me and/or contact the Office of Disability Services for Students (348-3532). Upon contact, the Office of Disability Services for Students will review your request and contact your professors or other appropriate personnel to make arrangements for appropriate reasonable accommodations and modifications and/or assistance.

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| **Class**  **Date:** | **Topic:** |  | **Reading DUE this day:** |
| 01/07  01/14 | Historical Perspectives and Important Concepts in Single-Subject Research  Methods for Changing Target Behaviors  Discussion of your Single Subject Design and your Target Behaviors |  | Chapter 1  Chapter 2 |
| 01/21 | Methods for Changing Target Behaviors  Assignment of Single Subject Design and Target Behaviors |  | Chapter 2  **Bring one index card** that identifies: Two target behaviors,  your 3 (or 2 if single) participants, setting, the research question(s), the design, intervention components and data collection procedure |
| 01/28 | Methods for Recording Target Behaviors  (Dependent Variables= Desired Target Behavior)  (Independent Variable=Treatment/Intervention) |  | Chapters 3  **Bring 1 written page** of Literature Review: List 10 related references in APA style (you will discuss them in class briefly) |
| 02/04 | Discussion: Each student will briefly describe in class (10 minutes max) his/her research project (target behavior(s), IV, data collection, design, etc.) |  |  |
| 02/11 | Withdrawal Designs (ABA, ABAB, BAB)  Applications of Withdrawal Designs |  | Chapter 6  **Bring 5 page proposal summary:** your potential design, method of data recording, the two target behaviors, your 3 participants, your intervention steps, and coding sheet. You need to describe: your method for data recording, one or two target behaviors measurement (dependent measures like rate of response: for example, frequency of verbalizations, on-task behavior, joint attention, etc); describe you 3 participants, your design (i.e., ABAB), intervention steps (i.e., type of reinforcer procedure like verbal imitation, or condition like verbal modeling, token economy, task analysis, DRO, tine out, etc.), and prepare proposed coding sheets |
| 02/18 | Changing Conditions and Changing Criterion Designs |  | Chapter 6 continue & 7 |
|  |  |  |  |
| 02/24  03/03 | **Spring break-NO CLASS**  Multiple Baseline Designs |  | Make sure you continue to work on your research project  Chapter 8 |
| 03/10 | Multiple Baseline Design continue |  | Chapter 8 |
| 03/17 | **Students’ Presentations Begin**  Alternating Treatment Designs |  | Each student will report their simulation project (paper). The **powerpoint** should include research question, research design being implemented, the DV, IV, the specific steps of intervention, how is the observation being conducted, how are the data being collected, the preliminary projected results, and reliability. Adjustments will be made after presentation based on instructors’ feedback. Email the presentation to professor for grading.  Chapter 9 |
| 03/24 | Student’s Presentations  Alternating Treatment Designs |  | Chapter 9 |
| 03/31 | Students’ Presentations  Analyzing Results from Single-Subjects Designs |  | Chapter 10  Deliver graphs to instructor for feedback in class |
| 04/07 | Student’s presentations  Analyzing Results from Single-Subjects Designs |  | Chapter 10  **All students bring a hard copy of term paper on entire project to class for discussion and feedback from instructor** |
| 04/14 | Students’ Presentations  Dr. Pelaez’s review of Chapter 13 (old edition). |  | More discussion and feedback on papers.  See website for Ch. 13 power point |
| 04/21 |  |  | **Submit your final revised 20 –page paper** (include your graphs) via both: email (no later than 5 pm)  **And ALSO BRING FINAL HARD/PRINTED COPY OF YOUR PAPER TO INSTRUCTOR** |

**Suggested Reading for**

**Single Subject Research Designs: Behavior Intervention Projects**

Studies using Withdrawal Designs should be found in the *Journal of Applied Behavior Analysis*. Some references as examples include**:**

Nientimp, E.G., & Cole, C. L. (1992). Teaching socially valid social interaction responses to students with severe disabilities in an integrated school setting. *Journal of School Psychology, 30*, 342-354. (Summarized on pp. 124-129 in textbook).

Muir, K. A., & Milan, M. A. (1982). Parent reinforcement for child achievement: The use of a lottery to maximize parent-training effects. *Journal of Applied Behavior Analysis, 15,* 455-460. (Summarized on pp. 129-133).

Handen, B. C., Parrish, J. M., McCLung, T. J. , Kerwin, M. E. , & Evans, L. D. (1992). Using guided compliance versus time out to promote child compliance: A preliminary comparative analysis in an analogue context. *Research in Developmental Disability, 13,* 157-170. (Summarized on pp. 133-137).

Carnine, D. W. (1976). Effects of two teacher–presentation rates on off-task behavior, answering correctly, and participation. *Journal of Applied Behavior Analysis, 2,* 199-206. (Summarized on pp. 137-143).

**Other Withdrawal and Multiple Probe Designs:**

Costa, A., & Pelaez, M. (2014). Implementing intensive tact instruction to increase frequency of spontaneous mands and tacts in typically developing children*. Behavior Development Bulletin, 19*(1), 19–24.

Egner, A., & Pigeon, G. (1972). Increasing completion and accuracy of assignments for a hyperactive first grade repeater. *School Applications of Learning Theory,4*, 24-30.

McKenzie, H., Egner, A., Knight, M., Perelman, P., Schneider, B., & Garvin, J. (1970). Training consulting teachers to assist elementary teachers in the management and education of handicapped children. *Exceptional Children, 36*, 137-143.

Pelaez, M., Virués-Ortega, J., & Gewirtz, J. L. (2012). Acquisition of social referencing via discrimination training in infants. Journal of Applied Behavior Analysis, 45(1), 23–35. (The acceptance rate is 25%. Impact factor is 1.11.)

Pelaez, M., Virués-Ortega, J., & Gewirtz, J. L. (2011). Reinforcement of vocalizations through contingent vocal imitation. Journal of Applied Behavior Analysis, 44(1), 33-40. (The acceptance rate for papers in 2011 was 25%. For 2010, JABA’s impact factor was 1.11.)

Pelaez, M., Virués, J., & Gewirtz, J. L. (2011). Contingent and noncontingent reinforcement with maternal vocal imitation and motherese speech: Effects on infant vocalizations. European Journal of Behaviour Analysis, 12(1), 277-287. (The acceptance rate for papers fluctuates between 40-55%.

**Multiple Baseline Designs:**

Hargrove, P.M., Roetzel, K., & Hoodin, R. B. (1989). Modifying the prosody of a language-impaired child. *Language, Speech, and Hearing Services in the Schools, 20,* 24-258 (Summarized on pp. 174-179).

Ingalls, K., & Pelaez, M. (2014). Positive effects of peer modeling and positive reinforcement on healthy food intake in elementary school children: Feedback comment sheet*. Proceedings of the Thirteenth Annual South Florida Education Research Conference*, Miami, Fl, 57-64.

Yoder, P.J., Yarren, S. F., Kim, K., & Gazdag, G. E. (1994). Facilitating prelinguistic communication skills in young children with developmental delay: II. Systematic replication and extension. *Journal of Speech and Hearing Research, 37,* 841-851. (Summarized on pp. 179-184).

Cushing, L.S., & Kennedy, C. H. (1997). Academic effects of providing peer support in general education classrooms on students without disabilities. *Journal of Applied Behavior Analysis, 30,* 139-151. (Summarized on pp. 184-190).

Nevin, A., Johnson, D., & Johnson, R. (1982). Effects of group and individual contingencies on academic performance and social relations of special needs students*. Journal of Social Psychology, 116*, 41-59.

**Alternating Treatment Designs:**

Caldwell, M.L., Taylor, R. L., & Bloom, S. R. (1986). An investigation of the use of high-and low-prefernce food as a reinforcer for increased activity of individuals with Prader-Willli syndrome. *Journal of Mental Deficiency research, 30*, 347-354. (Summarized on pp. 210-214).

Pelaez-Nogueras, M., Field, T., Cigales, M., Gewirtz, J. Gonzalez, A., Clasky, S., & Sanchez, A. (1997). The effects of systematic stroking versus tickling and poking on infant attention and affect. *Journal of Applied Developmental Psychology, 18*, 169–177.

Weismer, S. E., Murray-Branch, J., & Miller, J. (1993). Comparison of two methods for promoting productive vocabulary in late talkers. *Journal of Speech and Hearing Research, 36,* 1037-1050. (Summarized on pp. 215-220).

Singh, N., & Winton, A. (1985). Controlling pica by components of an overcorrection procedure. *American Journal of Mental Deficiency, 90*, 40-45. (Summarized on pp. 221-225).

**Examples from FIU/COE Faculty with students with learning disabilities:**

Barbetta, P., & Heward, W. (1993). Effects of active student response during error correction on the acquisition and maintenance of geography facts by elementary students with learning disabilities. *Journal of Behavioral Education, 3*(3), 217-233.

Jerome, A., & Barbetta, P.M. (2004). The effect of active student responding in computer assisted instruction on social-studies learning by students with learning disabilities. *Journal of Special Education Technology,* *20*(3), 13-23.

**Changing Criterion Designs:**

Davis, P., Bates, P., & Cuvo, A. J. (1983). Training a mentally retarded woman to work competitively: Effect of graphic feedback and a changing criterion design. *Education and Training of the Mentally Retarded, 18*, 158-163. (Summarized on pp. 244-248).

Foxx, R. M., & Rubinoff, A. (1979). Behavioral treatment of caffeinism: Reducing excessive coffee drinking. *Journal of Applied Behavior Analysis*, *12*, 335-344. (Summarized on pp. 248-257).

De Luca, R., & Holborn, S. W. (1992). Effects of a variable-ratio reinforcement schedule with changing criterion on exercise in obese and non-obese boys. *Journal of Applied Behavior Analysis, 25,* 671-679. (Summarized on pp. 257-262).

Idol, L., Nevin, A., with Whitcomb, Phyllis Paolucci (1989). *Models of curriculum-based assessment, 3rd ed.* Austin, TX: PRO-ED.

Knight, M., Christie, L., Egner (Nevin), A., Lates, B.J., & Paolucci, P. (1976). Rate of task completion as an evaluation procedure for a field-based graduate training program in special education. In L. Fraley & E. Vargas (Eds.), *Behavior research and technology in higher education* (pp. 99-112). Gainesville, FL: University of Florida.

**Theoretical Papers:**

Pelaez, M. & Monlux, K. (in press). Operant conditioning and reinforcement procedures to investigate infant perception, memory and early learning. *European Journal of Behavior Analysis* (Erik Arntzen, Editor.)

Neimy H., Pelaez, M., Carrow, J., Monlux, K., & Tarbox, J. (in press). Early markers of infants at risk for autism and operant learning as a model for early interventions. *Behavior Development Bulletin* (Michael L. Commons, Editor).

Ossa, N., Pham, A. V., Pelaez, M., & Lazarus, P. (2015). Improving math computation via self-monitoring and performance feedback for second grade students. *Conductual: The International Journal of Interbehaviorism and Behavior Analysis, 3,* 197-210.

Costa, A., & Pelaez, M. (2014). Implementing intensive tact instruction to increase frequency of spontaneous mands and tacts in typically developing children. *Behavior Development Bulletin*, *19*(1)*,* 19–24.

Ingalls, K., & Pelaez, M. (2014). Positive effects of peer modeling and positive reinforcement on healthy food intake in elementary school children: Feedback comment sheet. *Proceedings of the Thirteenth Annual South Florida Education Research*, 57-64.

Pelaez, M., & Novak, G. (2013). “Hidden” skills and deficits in the emergence of autism. *European Journal of Behavior Analysis,* *14*(1), 87-96.

Pelaez, M., Virués-Ortega J., Field, T., Amir Kiaei, Y., & Schnerch, G. (2013). Social referencing in infants of mothers with symptoms of depression. *Infant Behavior and Development, 36*, 548–556.

Pelaez, M., Virues-Ortega, J., & Gewirtz, J. (2013). Acquisition of social referencing via discrimination training in infants. *Faculty Research Bulletin*, *2*, 1-2.

*Pelaez, M., Virués-Ortega, J., & Gewirtz, J. L. (2012). Acquisition of social referencing via discrimination training in infants. Journal of Applied Behavior Analysis, 45(1), 23–35.*

Pelaez, M., Virués-Ortega, J., & Gewirtz, J. L. (2011). Reinforcement of vocalizations through contingent vocal imitation. *Journal of Applied Behavior Analysis*, *44*(1*),* 33-40. **(**The acceptance rate is 25%; impact factor 1.11.**)**

Pelaez, M., Virués, J., & Gewirtz, J. L. (2011). Contingent and noncontingent reinforcement with maternal vocal imitation and motherese speech: Effects on infant vocalizations. *European Journal of Behaviour Analysis*, *12(1),* 277-287.

Novak, G., & Pelaez, M. (2011). *Autism: A behavioral-systems approach*. In E. A. Mayville and J. A. Mulick (Eds.), Behavioral foundations of effective autism treatment (pp. 13-33). Cornwall-on-Hudson, NY: Sloan Publishing.

**Additional Supporting Reading Material:**

[Article Title: Perhaps it would be better not to know everything](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/perhaps-it-would-be-better/).

Baer, D.M. (1977). *Journal of Applied Behavior Analysis, 10*, 167-172.

[Article Title: Some current dimensions of applied behavior analysis.](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/some-current-dimensions/)

Baer, D.M., Wolf, M. M., & Risley, T. R. (1968). *Journal of Applied Behavior Analysis, 1*, 91-97.

[Article Title: Some still-current dimensions of applied behavior analysis.](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/some-still-current-dimensions/)

Baer, D. M., Wolf, M. M., & Risley, T. R. (1987*). Journal of Applied Behavior Analysis, 20*, 313-327.

[Article Title: Procedural reliability: A rationale and an example.](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/procedural-reliability/)

Billingsley, R., White, O. R., & Munson, R. (1980*). Behavioral Assessment, 2*, 229-241.

[Article Title: Inconsistent visual analysis of intrasubject data.](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/inconsistent-visual-analysis/)

DeProspero, A., & Cohen, S. (1979). *Journal of Applied Behavior Analysis, 12*, 573-579.

[Article Title: The effects of code complexity and of behavioral frequency on observer accuracy and interobserver agreement.](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/effects-of-code-complexity/)

Dorsey, B.L., Nelson, R.O., & Hayes, S.C. (1986). *Behavioral Assessment, 8*, 349-363.

[Article Title: A method for combining occurrence and non-occurrence interobserver agreement scores.](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/combining-occurrence-and-non-occurrence/)

Harris, R.C., & Lahey, B.B. (1978). *Journal of Applied Behavior Analysis, 11*, 523-527.

[Article Title: Methods of time sampling: A reappraisal of momentary time sampling and partial interval recording.](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/methods-of-time-sampling/) [More info...](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/methods-of-time-sampling/)

Harrop, A., & Daniels, M. (1986*). Journal of Applied Behavior Analysis, 19*, 73-77.

[Book Title: Single case experimental designs: Strategies for Studying behavior change.](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/single-case-experimental-designs/)

Herson, M., & Barlow, D. H. (1984). New York: Pergamon Press.

[Article Title: The use of single-subject research to identify evidence-based practice in special education.](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/use-of-single-subject-research/)

Horner, R.H., Carr, E.G., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005*). Exceptional Children*, 71, 165-179.

[Book Title: Replication. Strategies and tactics of human behavioral research](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/replication-strategies-and-tactics/)

Johnston, J. M., & Pennypacker, H. S. (1980). (pp. 303-324). Hillsdale, NJ: Lawrence Erlbaum.

[Book Title: The development of behavioral research methods: Contributions of B. F. Skinner. Readings for Strategies and Tactics of Behavioral Research](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/development-of-behavioral-research-methods/). Johnston, J. M., & Pennypacker, H. S. (1993). 2nd Ed. (pp. 8-17). Hillsdale, NJ: Lawrence Erlbaum.

Web-based Reading Material for Learning about “Functional Behavior Assessment”: Miller, J. (2004). [*Multi-modal functional assessment of behavio*r](http://mfba.net/).Web-assisted tutorial maintained by Duquesne University at this URL address: <http://mfba.net/> [http://mfba.net/forms.html]

[Article Title: The integrity of independent variables in behavior analysis.](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/integrity-of-independent-variables/)

Peterson, B. S., Homer, A. L., & Wonderlich, S. A. (1982*). Journal of Applied Behavior Analysis, 15,* 477-492.

[Article: A comparison of frequency, interval, and time-sampling methods of data collection.](http://www.library.unt.edu/research-tools/class-pages/edsp-6800-advanced-single-subject-research-methods/suggested-readings/frequency-interval-and-time-sampling/)

Repp, A. C., Roberts, D. M., Slack, D. J., Repp, C.F., & Berkler, M. S. (1976*). Journal of Applied Behavior Analysis, 9*, 501-508.

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