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

Summer 2018
EDSE 621 648: Applied Behavior Analysis: Empirical Bases
CRN: 43051, 3 – Credits

Instructor: Dr. Christine Barthold	**Meeting Dates**: 5/10/2018 – 8/2/2018
Phone: 703-993-5450	**Meeting Day(s)**: Thursday
E-Mail: choffner@gmu.edu	**Meeting Time(s)**: 5 pm – 8:30 pm
Office Hours: By appointment	**Meeting Location**: Off Campus
Office Location: Suite 100 Finley	**Other Phone**: 703-691-6827 (preferred)

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

Prerequisite(s): EDSE 619
Co-requisite(s): EDSE 619

Course Description
Focuses on basic content of applied behavior analysis. Teaches how to implement behavioral procedures and develop behavioral programs for clients with fundamental behavioral needs. Offered by Graduate School of Education. May not be repeated for credit.

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 teacher candidates/students should contact the Special Education Advising Office at (703) 993-3670 for assistance. All other teacher candidates/students should refer to their faculty advisor.

Advising Tip
Have you met with an advisor? All students should make an appointment to meet with an advisor to outline a plan for completing coursework and non-course requirements such as testing. To make an appointment by phone or in person, go to http://gse.gmu.edu/special-education/advising/.

Course Delivery Method
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, teacher candidates/students will be able to:

1. Describe philosophical assumptions underlying data-based decision making in applied behavior analysis.
2. Define, describe, identify, exemplify, and use direct measures of behavior.
3. Define, describe, identify, exemplify, and use indirect measures of behavior.
4. Construct and interpret equal interval graphs.
5. Construct and interpret standard celeration charts.
6. Describe, identify, and exemplify single subject experimental design.
7. Describe and exemplify data-based decision making using visual inspection of graphically presented behavioral data in the context of single subject experimental designs.
8. Describe and identify utility and factors affecting use of single subject designs for evaluating instructional, behavioral, and other interventions in applied settings.
9. Describe, identify, and exemplify ethical factors regarding data collection, data management, and data based decision making as described by the Guidelines for Responsible Conduct and the Disciplinary Standards.
10. Read, interpret, and evaluate articles from the behavior analytic literature.

Course Relationship to Program Goals and Professional Organizations
This course is part of the George Mason University, Graduate School of Education (GSE), Special Education Program for Applied Behavior Analysis Graduate Certificate. The content of the courses in this program is derived from the Task List published by the national Behavior Analyst Certification Board (BACB) as well as the Professional and Ethical Compliance Code for Behavior Analysts. The Professional and Ethical Compliance Code for Behavior Analysts is listed on the following website: http://bacb.com/wp-content/uploads/2016/03/160321-compliance-code-english.pdf. For more information on the Board and the examination, please visit the Board's website at www.bacb.com.

Required Textbooks
Cooper, J.O., Heron, T.E., & Heward, W.L. (2007). *Applied behavior analysis for teachers (2nd Ed.).* Upper Saddle River, NJ: Pearson Merrill Prentice Hall. ISBN 0-13-142113-1

Jacobson, J.W., Foxx, R.M., & Mulick, J.A. (2015). *Controversial therapies for developmental disabilities: Fad, fashion, and science in professional practice (2nd Ed).* Mahwah, NJ:

Lawrence Earbaum Associates. ISBN 978-1138802230. **It is imperative you purchase the second edition, NOT the first. There are substantial changes to the book.**

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

Required Resources
Students should have access to a computer with full access to the internet (i.e., administrator access).

Additional Readings
Readings may be assigned by the instructor throughout the semester and will be posted to Blackboard. Students are responsible for ALL readings.

Course Performance Evaluation
Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, Tk20, hard copy).

Tk20 Performance-Based Assessment Submission Requirement
It is critical for the special education program to collect data on how our students are meeting accreditation standards. Every teacher candidate/student registered for an EDSE course with a required Performance-based Assessment (PBA) is required to upload the PBA to Tk20 (regardless of whether a course is an elective, a one-time course or part of an undergraduate minor). A PBA is a specific assignment, presentation, or project that best demonstrates one or more CEC, InTASC or other standard connected to the course. A PBA is evaluated in two ways. The first is for a grade, based on the instructor's grading rubric. The second is for program accreditation purposes. Your instructor will provide directions as to how to upload the PBA to Tk20.

For *EDSE 621,* the required PBA is <u>Make Your Own Experiment and Final Exam Feedback.</u> Failure to submit the assignment to Tk20 will result in reporting the course grade as Incomplete (IN). Teacher candidates/students have until five days prior to the University-stated grade change deadline to upload the required PBA in order to change the course grade. When the PBA is uploaded, the teacher candidate/student is required to notify the instructor so that the "IN" can be changed to a grade. If the required PBA is not uploaded five days prior to the University-stated grade change deadline and, therefore, the grade not changed, it will become an F. Please check to verify your ability to upload items to Tk20 before the PBA due date.

Assignments and/or Examinations
Performance-based Assessment (Tk20 submission required)
<u>Make your own experiment</u>

Given two hypothetical scenarios (one basic, one applied), you will define, describe, and exemplify the use of data- based decision making in a single subject research design. As you identify, measure, and assess behaviors, you will incorporate ethical and professional guidelines outlined by the BACB. The components of the assignment are listed in the evaluation rubric. Drafts of components of this assignment will be due on Google docs throughout the semester and will be revisable up to the full points. *The final submission must be in Word and one Continuous Document* **(55 Points for Each Assignment).**

Final Exam Feedback Form

A final exam will be given to test knowledge of measurement, assessment, and experimental design concepts. Each test item is correlated to the BACB Task List to help the student identify strengths and weaknesses in empirical methods. The instructor will provide written feedback on students' correct and incorrect response. Upload the final exam feedback form onto Blackboard. **(100 Points)**

College Wide Common Assessment (TK20 submission required)
N/A

Performance-based Common Assignments (No Tk20 submission required)
Interteaching
This assignment will allow you to have hands-on access to the reading materials, as well as discussion. Each week, you will be given an activity that will extend your knowledge of the readings. This will consist of a study sheet. While you may choose to complete parts of the assignment independently, the goal is for you to work with a partner to discuss the readings and complete the study guide together. You will be responsible for completing a study guide relating to the readings and any class activity. This guide will consist of both factual and open-ended questions. Your study guides will be the basis for your unit quizzes and final exam. **(5 points per assignment).**

Unit Quizzes
This course is broken into four units. For each unit, students will be responsible for a 20 item Multiple Choice quiz. Quizzes will be delivered online through Blackboard. Questions will be randomized from a pool of questions. It is not possible to memorize answers to increase your grade. Students are encouraged to complete guided lecture notes, all activities and readings, and actively participate in study groups, as these are the basis for the weekly quizzes. Quizzes will be the basis for the final exam. Due dates for quizzes are available on the Google Calendar. **(20 Points per Quiz).** An additional quiz on academic honesty and syllabus requirements will be administered at the beginning of the semester and is worth **20 points**.
Weekly Discussion Boards

Students will be divided into groups. Each week, you are required to discuss the assigned readings within your groups. Discussion Board prompts will be open-ended enough that there will be room for discussion.

Students will be assigned two chapters during the semester that corresponds to readings assigned to the Foxx, Jacobsen, and Mulick book. Students will be responsible for preparing a 5-10 minute video presentation on the chapter with an open-ended discussion question at the end. The goal is not to be an expert on the chapter, but to summarize the information as best you can and to foster discussion on the topic. Note that not all chapters will be assigned a presenter for all groups. (**10 points per presentation**)

Each week (including the week that you present), you are responsible for posting a response that answers the writing prompt as it relates to your experience in clinical and educational settings, the readings, class discussion, and your own personal experience. You must also leave a comment on the post of *at least* one of your group members. Any questions posted on your thread should be answered. Comments should build upon the presenter's ideas, and connect to other ideas we have explored in class. Posts and responses MUST stay in the group assigned, unless arrangements are made with the instructor. Once the discussion board is graded, the student may not edit or add to the post to increase their grade.

A schedule of presentations and due dates will be posted in Google Calendar (NOTE THAT DUE DATES DO NOT NECESSARILY CORRESPOND TO CLASS MEETINGS TO INSURE THAT THERE IS ENOUGH TIME TO FOSTER CONVERSATION). *No student or school personnel should be referred to by name.* When posting or commenting, it is important to stay on-topic, and to treat other individuals in the class with respect. Bullying, abusive, or other derogatory conversation will not be tolerated, and may result in a 0 for the poster. Discussion boards will not be graded after one week past the due date unless arrangements are made with the instructor in advance. (**5 points per response per week**)

Other Assignments
CITI Training
You will be responsible for completing the basic human subjects research modules recommended for anyone conducting research at GMU. These modules are available through https://www.citiprogram.org/. Please be sure to take the Social and Behavioral Science Research Basic course. Registering for the wrong course will not count towards this class and may result in significant time lost (**30 Points**).

Course Policies and Expectations
    Attendance/Participation
    Due to the interactive nature of the course, students are expected to attend all class meetings. While presentations of the materials will be available online, this should be considered a supplement, not a substitute, for class attendance. Computers should be used for class work only. Students should refrain from texting or using other mobile devices during class.

    Late Work
    Work is considered on-time if it is submitted by **11:59pm** on the date that it is due. Work submitted after the assigned due date will be assessed a 10% possible point penalty. Discussion Board Item responses entered after the due date will be assessed a 50% point penalty. *No Discussion Board revisions will be accepted once a grade has been submitted for the week. No work will be accepted after the final examination has been submitted.*

    Other Requirements
    Students are responsible for following these guidelines for grading:
- All students are required to create a Google Account and send the address to the instructor within one week of the first class meeting.
- All assignments must be submitted through Blackboard, with the exception of drafts and Partner Assignments submitted through Google docs.
- Emailed and hard copies of assignments **will not be graded** unless approved in advance by the instructor, as these methods of submission lead to a high probability of lost student work.
- Assignments, whenever possible, should be in Word format and in one continuous file (with the exception of those submitted through Google docs).
- Your Make Your Own Experiment and Research Outlines must be accompanied by a self-evaluation of your work. You can self evaluate by grading yourself using the rubric for the assignment. You do not have to justify your choice. The instructor will not track down missing self evaluations. Any assignment without a self evaluation submitted with it will be immediately assigned a grade of 0.
- Detailed information about each assignment, including grading rubrics and a task analysis, is posted on Blackboard. Due dates for all assignments are available through Google calendar. Failure to review all documents available often results in low performance.

Grading Scale
Point values are assigned to exams and assignments. Letter grades will subsequently be assigned on the basis of overall class performance. That is, percentages will be determined by dividing the TOTAL number of points earned by the total possible points.

Grading Criterion:

Grade	Percentage	Grade	Percentage	Grade	Percentage
A+	97-100%	A	96-93%	A-	92-90%
B+	87-89%	B	83-86%	B-	80-82%
C	77-79%	F	76% and Below		

Assignment	Points
Make your own experiment Applied	55
Make your own experiment Basic	55
Academic Honesty and Syllabus Quiz	20
Unit Quizzes (4 at 20 points apiece)	80
Final Exam	100
Interteaching Assignments (11 at 5 points apiece)	55
Discussion Board Summary Post	20
Discussion Board Responses (11 at 5 points apiece)	55
CITI Training	30
Total Points	**470**

*Note: The George Mason University Honor Code will be strictly enforced. Students are responsible for reading and understanding the Code. "To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this honor code: Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work." Work submitted must be your own or with proper citations (see https://catalog.gmu.edu/policies/honor-code-system/).

Professional Dispositions
Students are expected to exhibit professional behaviors and dispositions at all times. See https://cehd.gmu.edu/students/polices-procedures/

Class Schedule
*Note: Faculty reserves the right to alter the schedule as necessary, with notification to students.

Changes made to this class schedule will be made on the Google Calendar. Students are encouraged to consult the Google calendar at least weekly and not rely on instructor reminders.

Week	Date	Topic	Readings	Assignments
1	5/10	• Introduction to Class • APA Style and Summing Sources • Evidence-Based Practices		
2	5/17	• Research Ethics • Research Basics	Cooper, Ch. 7 JFM, Ch. 1-3	• DB 1 • Interteaching 1 • CITI Training Due • Syllabus and Academic Honesty Quiz Due
3	5/24	• CLASS ONLINE • Defining Behavior • Sampling	Cooper, Ch. 3 JFM, Ch. 4-6	• DB 2 • Interteaching 2 • Quiz 1 • Informed Consent Form for Make your Own Experiment Due
4	5/31	• Continuous Measurement	Cooper, Ch. 4 JFM, Ch. 8-10	• DB 3 • Interteaching 3 • Operational Definitions for Make your Own Experiment Due
5	6/7	• Discontinuous Measurement • Choice	JFM, Ch. 11-12	• DB 4 • Interteaching 4
6	6/14	• Treatment Integrity • Inter-observer agreement	Cooper, Ch. 5 Ch. 10 JFM, Ch 13-14	• DB 5 • Interteaching 5
7	6/21	• Equal Interval Graphing	Cooper, Ch. 6 JFM, Ch. 15-17	• DB 6 • Interteaching 6 • Data collection for Make your Own Experiment Due • Quiz 2
8	6/28	• Celeration and Scatterplot	JFM, Ch 18-20	• DB 7 • Interteaching 7
9	7/5	• Designing an Experiment • Withdrawal Design	Cooper, Ch. 8 JFM, Ch 21-22	• DB 8 • Interteaching, 8 • Quiz 3
10	7/12	• Multiple Baseline/Multiple Probe	Cooper, Ch. 9 JFM, Ch. 23-24	• DB 9 • Interteaching 9 • Quiz 3

11	7/19	- Alternating Treatments - Component and Parametric Analyses	Review Cooper, Ch. 8 JFM, Ch. 25, 28	- DB 10 - Interteaching 10 - Quiz 4 - Methods for Make Your Own Experiment Due
12	7/26	Work on Make Your Own Experiment		
13	8/2			- Make your Own Experiment Final - Final Exam

- DB = Discussion Board. Posts due on Monday at Midnight; Responses due by Friday at Midnight.
- Quizzes and Final Exam are due on the date posted on the Google Calendar

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

GMU Policies and Resources for Students

Policies
- Students must adhere to the guidelines of the Mason Honor Code (see https://catalog.gmu.edu/policies/honor-code-system/).

- Students must follow the university policy for Responsible Use of Computing (see http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/).

- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.

- Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see http://ods.gmu.edu/).

- Students must silence all sound emitting devices during class unless otherwise authorized by the instructor.

Campus Resources

- Support for submission of assignments to Tk20 should be directed to tk20help@gmu.edu or https://cehd.gmu.edu/aero/tk20. Questions or concerns regarding use of Blackboard should be directed to http://coursessupport.gmu.edu/.

- For information on student support resources on campus, see
  https://ctfe.gmu.edu/teaching/student-support-resources-on-campus

For additional information on the College of Education and Human Development, please visit our website https://cehd.gmu.edu/students/.

Appendix
      Assessment Rubric(s)
            Assessment #5 EDSE 621—Make Your Own Experiment Project

Task List Items	1 Does Not Meet Expectations	2 Meets Expectations	3 Exceeds Expectations

Measurement – Applied Research	Given a scenario describing a behavioral need in an applied setting, the candidate:
	• Defines the behavior, including any relevant private events, in behavior-analytic (non-mentalistic) terms.
	• Selects one measure for the behavior of interest, and does four or fewer of the following for that measure:
	   o Gives a clinically sound rationale for the measure chosen that addresses dimensions of the behavior and logistics of observing and recording.
	   o Develops a behavioral data recording form.
		Given a scenario describing a behavioral need in an applied setting, the candidate:
		• Defines the behavior, including any relevant private events, in behavior-analytic (non-mentalistic) terms.
		• Selects one measure for the behavior of interest, and does each of the following for that measure:
		   o Gives a clinically sound rationale for the measure chosen that addresses dimensions of the behavior and logistics of observing and recording.
		   o Develops a behavioral data recording form.
			Given a scenario describing a behavioral need in an applied setting, the candidate:
			• Defines the behavior, including any relevant private events, in behavior-analytic (non-mentalistic) terms.
			• Selects two or more measures for the behavior of interest, and does each of the following for that measure:
			   o Gives a clinically sound rationale for the measure chosen that addresses dimensions of behavior and logistics of observing and recording.
			   o Develops a behavioral data recording form.

	o Writes step by step instructions for collecting the data (including the schedule of observation and recording periods). o Prepares a graph potential behavioral data using either an equal interval graph, cumulative record, or a standard behavior chart. o Measures from which the student chooses are: ▪ Count ▪ Rate ▪ Duration ▪ Latency ▪ IRT ▪ Percentage ▪ Trials to Criterion	o Writes step by step instructions for collecting the data (including the schedule of observation and recording periods). o Prepares a graph potential behavioral data using either an equal interval graph, cumulative record, or a standard behavior chart. o Measures from which the student chooses are: ▪ Count ▪ Rate ▪ Duration ▪ Latency ▪ IRT ▪ Percentage ▪ Trials to Criterion	o Writes step by step instructions for collecting the data (including the schedule of observation and recording periods). o Prepares a graph potential behavioral data using either an equal interval graph, cumulative record, or a standard behavior chart. o Measures from which the student chooses are: ▪ Count ▪ Rate ▪ Duration ▪ Latency ▪ IRT ▪ Percentage ▪ Trials to Criterion
Experimental Design	**Given a scenario describing a behavioral need in an applied setting, the candidate does four or fewer of the following:** ▪ Selects an experimental design that will answer the scenario's question, ▪ Gives a clinically sound rationale for that design selection,	**Given a scenario describing a behavioral need in an applied setting, the candidate does each of the following:** ▪ Selects an experimental design that will answer the scenario's question, ▪ Gives a clinically sound rationale for that design selection,	**Given a scenario describing a behavioral need in an applied setting, the candidate does each of the following:** ▪ Selects an experimental design that will answer the scenario's question, ▪ Gives a clinically sound rationale for that design selection,

	▪ Writes step by step instructions for how that experimental design will be implemented, including: 　○ Decision Rules for introducing the intervention 　○ Decision rules for withdrawing the intervention (if there are withdrawals) or for introducing the intervention in another setting, for another therapist, with another participant, etc.; 　○ Designs from which one may select include: 　　▪ Withdrawal Design (minimum ABAB) 　　▪ Alternating treatments design 　　▪ Changing criterion design 　　▪ Multiple baseline design 　　▪ Multiple probe design 　　▪ Pairwise comparison ▪ Identifies at least two relevant threats to internal validity given the scenario	▪ Writes step by step instructions for how that experimental design will be implemented, including: 　○ Decision Rules for introducing the intervention 　○ Decision rules for withdrawing the intervention (if there are withdrawals) or for introducing the intervention in another setting, for another therapist, with another participant, etc.; 　○ Designs from which one may select include: 　　▪ Withdrawal Design (minimum ABAB) 　　▪ Alternating treatments design 　　▪ Changing criterion design 　　▪ Multiple baseline design 　　▪ Multiple probe design 　　▪ Pairwise comparison ▪ Identifies at least two relevant threats to internal validity given the scenario	▪ Writes step by step instructions for how that experimental design will be implemented, including: 　○ Decision Rules for introducing the intervention 　○ Decision rules for withdrawing the intervention (if there are withdrawals) or for introducing the intervention in another setting, for another therapist, with another participant, etc.; 　○ Designs from which one may select include: 　　▪ Withdrawal Design (minimum ABAB) 　　▪ Alternating treatments design 　　▪ Changing criterion design 　　▪ Multiple baseline design 　　▪ Multiple probe design 　　▪ Pairwise comparison ▪ Transforms the design into either a parametric analysis or a component

	▪ Writes step by step instructions for how each of those threats to internal validity will be managed or minimized.	▪ Writes step by step instructions for how each of those threats to internal validity will be managed or minimized.	analysis to assess necessary levels of intervention or necessary intervention components: ○ Writes step by step instructions for conducting the parametric analysis or component analysis ○ Provides decision rules for making condition changes in the context of parametric analysis or component analysis ▪ Identifies at least two relevant threats to internal validity given the scenario ▪ Writes step by step instructions for how each of those threats to internal validity will be managed or minimized.
Measurement – Basic Research	Given a scenario describing a basic research question, the candidate: • Defines the behavior, including any relevant private events, in behavior-analytic (non-mentalistic) terms. • Selects one measure for the behavior of	Given a scenario describing a basic research question, the candidate: • Defines the behavior, including any relevant private events, in behavior-analytic (non-mentalistic) terms. • Selects one measure for the behavior of	Given a scenario describing a basic research question, the candidate: • Defines the behavior, including any relevant private events, in behavior-analytic (non-mentalistic) terms. • Selects two or more measures for the

	interest, and does four or fewer of the following for that measure:
	o Gives a clinically sound rationale for the measure chosen.
	o Develops a behavioral data recording form.
	o Writes step by step instructions for collecting the data.
	o Prepares a graph potential behavioral data using either an equal interval graph, cumulative record, or a standard behavior chart.
	o Measures from which the student chooses are:
	  ▪ Count
	  ▪ Rate
	  ▪ Duration
	  ▪ Latency
	  ▪ IRT
	  ▪ Percentage
	  ▪ Trials to Criterion
		interest, and does each of the following for that measure:
		o Gives a clinically sound rationale for the measure chosen.
		o Develops a behavioral data recording form.
		o Writes step by step instructions for collecting the data.
		o Prepares a graph potential behavioral data using either an equal interval graph, cumulative record, or a standard behavior chart.
		o Measures from which the student chooses are:
		  ▪ Count
		  ▪ Rate
		  ▪ Duration
		  ▪ Latency
		  ▪ IRT
		  ▪ Percentage
		  ▪ Trials to Criterion
			behavior of interest, and does each of the following for that measure:
			o Gives a clinically sound rationale for the measure chosen.
			o Develops a behavioral data recording form.
			o Writes step by step instructions for collecting the data.
			o Prepares a graph potential behavioral data using either an equal interval graph, cumulative record, or a standard behavior chart.
			o Measures from which the student chooses are:
			  ▪ Count
			  ▪ Rate
			  ▪ Duration
			  ▪ Latency
			  ▪ IRT
			  ▪ Percentage
			  ▪ Trials to Criterion

Experimental Design	Given a scenario describing a behavioral need in an applied setting, the candidate does four or fewer of the following:	Given a scenario describing a behavioral need in an applied setting, the candidate does each of the following:	Given a scenario describing a behavioral need in an applied setting, the candidate does each of the following:

	▪ Selects an experimental design that will answer the scenario's question,
	▪ Gives a clinically sound rationale for that design selection,
	▪ Writes step by step instructions for how that experimental design will be implemented, including:
	  ○ Decision Rules for introducing the intervention
	  ○ Decision rules for withdrawing the intervention (if there are withdrawals) or for introducing the intervention in another setting, for another therapist, with another participant, etc.;
	  ○ Designs from which one may select include:
	    ▪ Withdrawal Design (minimum ABAB)
	    ▪ Alternating treatments design
	    ▪ Changing criterion design
	    ▪ Multiple baseline design
		▪ Selects an experimental design that will answer the scenario's question,
		▪ Gives a clinically sound rationale for that design selection,
		▪ Writes step by step instructions for how that experimental design will be implemented, including:
		  ○ Decision Rules for introducing the intervention
		  ○ Decision rules for withdrawing the intervention (if there are withdrawals) or for introducing the intervention in another setting, for another therapist, with another participant, etc.;
		  ○ Designs from which one may select include:
		    ▪ Withdrawal Design (minimum ABAB)
		    ▪ Alternating treatments design
		    ▪ Changing criterion design
		    ▪ Multiple baseline design
			▪ Selects an experimental design that will answer the scenario's question,
			▪ Gives a clinically sound rationale for that design selection,
			▪ Writes step by step instructions for how that experimental design will be implemented, including:
			  ○ Decision Rules for introducing the intervention
			  ○ Decision rules for withdrawing the intervention (if there are withdrawals) or for introducing the intervention in another setting, for another therapist, with another participant, etc.;
			  ○ Designs from which one may select include:
			    ▪ Withdrawal Design (minimum ABAB)
			    ▪ Alternating treatments design
			    ▪ Changing criterion design
			    ▪ Multiple baseline design

	▪ Multiple probe design
	▪ Pairwise comparison
	▪ Identifies at least two relevant threats to internal validity given the scenario
	▪ Writes step by step instructions for how each of those threats to internal validity will be managed or minimized.
		▪ Multiple probe design
		▪ Pairwise comparison
		▪ Identifies at least two relevant threats to internal validity given the scenario
		▪ Writes step by step instructions for how each of those threats to internal validity will be managed or minimized.
			▪ Multiple probe design
			▪ Pairwise comparison
			▪ Transforms the design into either a parametric analysis or a component analysis to assess necessary levels of intervention or necessary intervention components:
			  o Writes step by step instructions for conducting the parametric analysis or component analysis
			  o Provides decision rules for making condition changes in the context of parametric analysis or component analysis
			▪ Identifies at least two relevant threats to internal validity given the scenario
			▪ Writes step by step instructions for how each of those threats to internal validity will be managed or minimized.