



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

Spring 2022

EDSE 846 002: Assessment, Evaluation, and Instrumentation in Special Education Research  
CRN: 24523, 3 – Credits

<b>Instructor:</b> Dr. Linda Mason/Dr. Margaret Weiss	<b>Meeting Dates:</b> 1/24/22 – 5/18/22
<b>Phone:</b> Dr. Mason 571-424-0822 Dr. Weiss 703-993-5732	<b>Meeting Day(s):</b> Wednesday
<b>E-Mail:</b> <a href="mailto:lmason20@gmu.edu">lmason20@gmu.edu</a> ; <a href="mailto:mweiss9@gmu.edu">mweiss9@gmu.edu</a>	<b>Meeting Time(s):</b> 4:30 pm – 7:10 pm
<b>Office Hours:</b> in person or virtual by appointment	<b>Meeting Location:</b> Fairfax; Horizon 1011
<b>Office Location:</b> Dr. Mason 208A Finley Dr. Weiss 213 Finley	<b>Other Phone:</b> N/A

**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):**

Admission to PhD in education program, or permission of instructor.

**Co-requisite(s):**

None

**Course Description**

Provides in-depth study, analysis and discussion of the past, present and future directions of assessment, evaluation, and instrumentation research in special education. Emphasizes reliability and validity of the research instruments, evaluating research methodology, analyzing results, synthesizing findings with respect to present assessment and evaluation policies; formulating future research questions relevant to assessment and evaluation of individuals with disabilities.

### **Advising Contact Information**

Please make sure that you are being advised on a regular basis as to your status and progress in your program. Students in Special Education and Assistive Technology programs can contact the Special Education Advising Office at 703-993-3670 or [speced@gmu.edu](mailto:speced@gmu.edu) for assistance. All other students should refer to their assigned program advisor or the Mason Care Network (703-993-2470).

### **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**

Describe various methodologies used in special education assessment and evaluation research.

1. Analyze the reliability and validity of research instruments.
2. Determine the implementation mechanisms for various assessment and evaluation procedures in special education.
3. Demonstrate how to analyze and synthesize special education assessment research.
4. Describe issues surrounding special education assessment research.
5. Develop and present an applied project investigating a selected topic in special education assessment and evaluation.

### **Professional Standards**

Not applicable.

### **Required Texts**

There is no required text for this course. All required readings will be posted on Blackboard.

### **Recommended Texts**

American Psychological Association. (2020). *Publication manual of the American Psychological Association* (7th ed.). <https://doi.org/10.1037/0000165-000>

### **Additional Readings**

As assigned. See Appendix B for partial list. All assigned readings will be posted on Blackboard.

### **Course Performance Evaluation**

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

## **VIA 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 VIA (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 VIA.

For EDSE 846, the required PBA is (NO ASSESSMENT REQUIRED FOR THIS COURSE). Please check to verify your ability to upload items to VIA before the PBA due date.

### ***Assignments and/or Examinations***

#### **Performance-based Assessment**

None

#### **College Wide Common Assessment**

None

### ***Other Assignments***

#### **Weekly Homework (36 points; 3 pts each for 12 weeks)**

One of the purposes of this course is to provide students with the opportunity to complete a focused study and critique of the measures used by authors of studies in an area of particular interest to the student. Given that, each class session, students are expected to bring to class at least one study in their area of interest in which the authors have used a measure that will be the topic of discussion for that session. For example, when standardized assessments are the topic for the class session, a student interested in reading might evaluate and bring to class a study that uses the Woodcock Reading Mastery Test to measure one of the variables of interest.

To complete this weekly assignment, the student will identify and read the study with the related measure. The student will then complete the template in Appendix A BEFORE class and submit the completed template to the OneDrive document folder for the week ([https://gmuedu-my.sharepoint.com/:f/g/personal/lmason20\\_gmu\\_edu/Ep8lW7OnddNKu3EmBjKDLdsBMcnE\\_ikkjUzDWOUgy\\_ScCw?e=xnFU0K](https://gmuedu-my.sharepoint.com/:f/g/personal/lmason20_gmu_edu/Ep8lW7OnddNKu3EmBjKDLdsBMcnE_ikkjUzDWOUgy_ScCw?e=xnFU0K)) and to the Blackboard site assignment (for private feedback).

In class, students will participate in small groups to discuss and critique their findings, using material learned in class. See Course Schedule for class session topics.

#### **Project Proposal (10 points)**

For class in Week 7, students will submit a proposal outlining what they plan to do for their Final Project to the class OneDrive site ([https://gmuedu-my.sharepoint.com/:f/g/personal/lmason20\\_gmu\\_edu/EpBJLCY3LNJGoDuBJ3faMPMBXcGZ7wUtYhFF2zwTHc8-Kw?e=67Qa3p](https://gmuedu-my.sharepoint.com/:f/g/personal/lmason20_gmu_edu/EpBJLCY3LNJGoDuBJ3faMPMBXcGZ7wUtYhFF2zwTHc8-Kw?e=67Qa3p)). and to the Blackboard site assignment (for private feedback).

The format and description of the information to be included in the proposal is available on Blackboard.

### **Applied Project (40 points)**

#### *Option 1: Individual Research Review Paper*

You may select to complete a traditional or integrative research review paper of a selected area in special education assessment and evaluation. Your paper should focus on the identification, analysis, and evaluation of the measures. You should also prepare materials based on the paper to present to the class. Specifically,

- Select a research topic of interest in special education.
- Complete a literature search of Psych Info and other relevant databases to identify relevant original research articles (this can also include studies used in weekly assignments)
- Obtain and read original research articles.
- Develop a coding system to organize your articles based on the measures used in the studies
- Code, organize, analyze, and synthesize the information about measures from the articles.
- Write the paper using the American Psychological Association Publication Manual (6th edition) guidelines:
  - Title Page
  - Abstract
  - Introduction and Purpose
  - Method (literature search procedures)
  - Results (this is the section that will vary according to your specific articles)
    - Overall characteristics of the studies (number of articles, participant characteristics, disability areas,
    - General descriptions of assessment/evaluation procedures
    - Overall findings of the assessment/evaluation procedures related to the research questions; and
    - General quality of studies
  - Discussion – Summary and Conclusions
  - References

#### *Option 2: Research Application Project*

The research application project is designed to provide experience in designing and implementing a research application project in special education. This applied research project may focus on the design, development, piloting, evaluation and refinement of measure or may use an already established measure. The following format must be followed:

#### Questions of the Research Application Project:

- Sample questions:
  - How does on-going assessment impact teachers' instructional decision making in content areas for middle school students with SLD?

- What is the reliability and validity of the Assistive Technology Attitude Scale developed for measuring teachers' attitudes toward assistive technology?

Background Literature:

Provide a brief description of the background literature that indicates a need for your question.

Design/Method of the Project:

This section will be based upon your question. There are a variety of methodologies you could select to investigate your selected question.

Participants: Use the following marker variables as guidelines to describe the participants in your applied project (may be students, in-service teachers, pre-service teachers, etc.). Report the data on:

- Participants' overall characteristics (e.g., age, gender, ethnicity, socio-economic status, etc.)
- Participants' specific characteristics (e.g., years of teaching experience, disability category, achievement scores, etc.)
- Setting (e.g., size, location, etc.)

Materials: Carefully describe all of the materials that were used in your project. Attach copies of the precise materials used in all conditions, including any teacher materials and student materials. This also includes describing fidelity of implementation materials.

Testing materials: Carefully describe all of the testing materials that were developed and/or used. Include copies of any surveys, interview protocols, observation protocols, and/or pre/posttests. Remember these measures will be used to describe whether or not your methods were "EFFECTIVE." You may want to develop and validate a criterion-referenced test of participant's knowledge (pretest/posttest), attitude measures (e.g., I incorporate technology in my classroom instruction. 1 2 3 4 5), as well as include a measure of observable data (e.g., audio or videotape participants).

Procedure: Carefully describe in a step-by-step fashion what you did. Use subheadings if you have multiple conditions (for example, daily assessments of students' performance to guide the instructional decision making).

Testing procedures: Describe how the measures were administered. For example, identify whether there was group versus individual implementation.

Scoring procedures: Describe how the measures were scored. For example, if tests consisted of multiple choice items, scoring is usually straight forward, however, if short answer items were used, then what was the scoring criteria? Did you have multiple raters completing an observational tool of a 1st year special education teacher in the classroom? Describe reliability of scoring and observations.

Data Sources: Provide a listing of all of the sources of data you obtained. We will use this list to help determine the appropriate data analyses procedures.

Results: Describe results all of the dependent variables. You can present individual scores (use the same ID#s used in the demographic data sheets) and then compute a column average (we will learn several statistical tests that you will be able to use for calculating reliability of your instrument and analyzing your data).

Discussion: Provide a discussion of your findings. The first few sentences can provide summary accounts of the findings. For example, method A clearly facilitates an intervention completed with high fidelity, as every teacher's student in method A received 10 points higher on the unit test. Or the instrument has proven to be a reliable and valid mechanism for measuring teachers' attitudes.

Provide some insights as to why you might have obtained the findings. Provide a summary paragraph describing what you learned from the application project and how you could implement projects like this in your teaching to determine which methods work best with your students.

### ***Assignment Summary***

Weekly Homework	36 points
Project Proposal	10 points
Final Project and Presentation	54 points
Total Points:	100 points

### **Course Policies and Expectations**

#### ***Attendance/Participation***

This course is designed as a lecture and discussion. It is expected that you will participate in class activities (including on-line discussion for any on-line class sessions) and complete weekly reading and written assignments as assigned. Our intention is that our time together will be spent in discussion, questioning, and thinking about measurement in research. Your attendance and engagement are critical to the success of this class. We will work diligently to make the class a safe space for differing perspectives and ideas that are based on evidence. We will also attempt to push and challenge you to see multiple perspectives (as we anticipate you will do for us) with professionalism. Therefore, students are expected to (a) attend all classes during the course, (b) arrive on time, (c) stay for the duration of the class time, (d) show evidence of having read/studied material, and (e) participate actively and appropriately in class discussions. If you are unable to attend class, it is your responsibility to make arrangements (with another student) for obtaining notes, handouts, and lecture details. Students who are absent are held responsible for the material covered and assignments given and due. If at any time, you do not feel safe to share your ideas, contact either of us immediately.

#### ***Late Work***

All assignments should be submitted via Blackboard or OneDrive by the due date. Assignments will not be accepted late unless prior arrangements with the instructor have been made. In

fairness to students who make the effort to submit work on time, points (equivalent to 1 letter grade) will be deducted from the final grade for the late assignment.

**Other Information**

**Communication with Dr. Weiss.** The most efficient way to contact me is through email. I check email daily at least at 9am and 2pm Monday through Friday. If your email has reached me by either of those times, I will respond immediately. Otherwise, I will respond within 24 hours during the week. On weekends, I check my Mason account on Sundays and will respond to all received then. I am happy to arrange a convenient time to meet with you individually, if you would prefer. Please contact me via email to arrange.

**Communication with Dr. Mason.** The most efficient way to contact me is through email. You may also text me between 9am and 9pm, if you are unable to access your email easily and have an immediate concern that needs to be addressed. If I do not respond within a few hours, it is because I am in meetings, in a school, at a conference, or travelling. For a individual conference, please contact me vis email to arrange.

**Grading**

To compute final course grades; divide “earned points” by “possible points” for percentage.

A = 95-100%	A - = 90-94%	B+ = 86-89%	B = 80-85%	B- = 77-79%	C = 70-76%	F = > 70%
-------------	--------------	-------------	------------	-------------	------------	-----------

**\*Note:** The George Mason University Honor Code will be strictly enforced. See [Academic Integrity Site](https://oai.gmu.edu/) (<https://oai.gmu.edu/>) and [Honor Code and System](https://catalog.gmu.edu/policies/honor-code-system/) (<https://catalog.gmu.edu/policies/honor-code-system/>). 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 new, original work for this course or with proper citations.

**Professional Dispositions**

Students are expected to exhibit professional behaviors and dispositions at all times. See [Policies and Procedures](https://cehd.gmu.edu/students/policies-procedures/) (<https://cehd.gmu.edu/students/policies-procedures/>).

**Class Schedule**

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

Week/Date	Topic and Activities	Readings & Assignment Due
Week 1 January 26	Course Overview Foundations	Weekly homework-see BB Abulela, M. A. A., & Harwell, M. (2019). Strengthening inferences in quantitative education studies conducted by novice researchers: Capitalizing on standards for sampling, research

		<p>design, and instrumentation. <i>Research Highlights in Education and Science</i>. ISRES Publishing. <a href="https://www.isres.org/books/chapters/9_13-02-2020.pdf">https://www.isres.org/books/chapters/9_13-02-2020.pdf</a></p> <p>U. S. Department of Education. (2013). <i>Common guidelines for education research and development</i>. <a href="https://ies.ed.gov/pdf/CommonGuidelines.pdf">https://ies.ed.gov/pdf/CommonGuidelines.pdf</a></p> <p>Porter, T. (2021). Did it work? Reflections and five humble questions to guide assessment. <i>Journal of Education</i>. Online First DOI: 10.1177/00220574211025064</p>
<p>Week 2 February 2</p>	<p>Foundations</p>	<p>Weekly homework—see BB</p> <p>Jacob, R. T., Doolittle, F., Kemple, J., &amp; Somers, M.A. (2019). A framework for learning from null results. <i>Educational Researcher</i>, 48(9), 580-589. DOI: 10.3102/0013189X19891955</p> <p>Kim, J. S. (2019). Making every study count: Learning from replication failure to improve intervention research. <i>Educational Researcher</i>, 48(9), 599-607. DOI: 10.3102/0013189X19891428</p> <p>Hill, H.C., &amp; Erickson, A. (2019). Using implementation fidelity to aid in interpreting program impacts: A brief review. <i>Educational Researcher</i>, 48(9), 590-598. DOI: 10.3102/0013189X19891436</p>
<p>Week 3 February 9</p>	<p>Issues in Measurement Reliability and Validity Adaptations</p>	<p>Weekly homework—see BB for assignment and readings</p>
<p>Week 4 February 16</p>	<p>Standardized Assessments</p>	<p>Weekly homework—see BB for assignment and readings</p>
<p>Week 5 February 23</p>	<p>Standardized Assessments</p>	<p>Weekly homework—see BB for assignment and readings</p>
<p>Week 6 March 2</p>	<p>CBM Measures</p>	<p>Weekly homework—see BB for assignment and readings</p>
<p>Week 7 March 9</p>	<p>Interviews and Focus Groups</p>	<p>Project proposals submitted before class begins</p>



		Weekly homework—see BB for assignment and readings
<b>Spring Break – No Class</b>		
Week 8 March 23	Observation Measures Guest speaker: Dr. Michael Kennedy	Weekly homework—see BB for assignment and readings
Week 9 March 30	Observation Measures	Weekly homework—see BB for assignment and readings
Week 10 April 6	Researcher-created Measures Guest speaker: Stacie Brady	Weekly homework—see BB for assignment and readings
Week 11 April 13	Researcher-created Measures	Weekly homework—see BB for assignment and readings
Week 12 <b>AERA on-line class</b>	Surveys and Rating Scales	Weekly homework—see BB for assignment and readings
Week 13 April 27	Surveys and Rating Scales	Weekly homework—see BB for assignment and readings
Week 14 May 4	Presentations	

### **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: See [Core Values](http://cehd.gmu.edu/values/) (<http://cehd.gmu.edu/values/>).

### **GMU Policies and Resources for Students**

#### ***Policies***

- Students must adhere to the guidelines of the Mason Honor Code. See [Honor Code and System](https://catalog.gmu.edu/policies/honor-code-system/) (<https://catalog.gmu.edu/policies/honor-code-system/>).
- Students must follow the university policy for Responsible Use of Computing. See [Responsible Use of Computing](http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/) (<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 [Disability Services \(https://ds.gmu.edu/\)](https://ds.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 VIA should be directed to [viahelp@gmu.edu](mailto:viahelp@gmu.edu) or <https://cehd.gmu.edu/aero/assessments>.
- Questions or concerns regarding use of Blackboard should be directed to [Blackboard Instructional Technology Support for Students \(https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/\)](https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/).

### **Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking:**

As a faculty member, I am designated as a “Non-confidential Employee” and must report all disclosures of sexual assault, interpersonal violence, and stalking to Mason’s Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason’s confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance from Mason’s Title IX Coordinator by calling 703-993-8730, or emailing [titleix@gmu.edu](mailto:titleix@gmu.edu).

**For additional information on the College of Education and Human Development, please visit our website [College of Education and Human Development \(http://cehd.gmu.edu/\)](http://cehd.gmu.edu/).**

## Appendix A Weekly Homework Assignment Template and Directions

### Article Review Report

One of the purposes of this course is to provide students with the opportunity to complete a focused study and critique of the measures used by authors of studies in an area of particular interest to the student. Given that, each class session, students are expected to bring to class at least one study in their area of interest in which the authors have used a measure that will be the topic of discussion for that session. For example, when standardized assessments are the topic for the class session, a student interested in reading might evaluate and bring to class a study that uses the Woodcock Reading Mastery Test to measure one of the variables of interest. For topics that repeat for more than one week, find a study that uses the type of measure for week 1 (e.g., standardized assessments) and for week 2, find a study that adapts the measure in some way (e.g., standardized assessments with atypical administration, accommodations, uses in different ways, etc.)

To complete this weekly assignment, the student will identify and read the study with the related measure. The student will then complete the template BEFORE class and submit the completed template to the OneDrive document folder for the week ([https://gmuedu-my.sharepoint.com/:f/g/personal/lmason20\\_gmu\\_edu/Ep8lW7OnddNKu3EmBjKDLdsBMcnE\\_ikkjUzDWOUgy\\_ScCw?e=xnFU0K](https://gmuedu-my.sharepoint.com/:f/g/personal/lmason20_gmu_edu/Ep8lW7OnddNKu3EmBjKDLdsBMcnE_ikkjUzDWOUgy_ScCw?e=xnFU0K)). Include in your report the items below. The bolded items should be used as headings.

In class, students will participate in small groups to discuss and critique their findings, using material learned in class and their individual reports. See Course Schedule for class session topics.

### APA reference

**Abstract Summary.** Provide a brief (but complete) summary of the study:

- Purpose of study and research questions
- *What are the variables being measured according to the research questions?*
- Methods - participants/setting, research design (can be bulleted)
- List all measures used in the study

**Measure Description.** Choose one measure in the study that is in the category of discussion/instruction for the class session. For that measure:

- Identify the specific research questions answered by the assessment
- Identify the variables evaluated/assessed by the measure
  - *(insert question below for adaptations)*
- Describe the measure in detail (e.g., sections, forms, response mode, administration type, scores/results generated)
- Provide all evidence of reliability and validity given about the measure
  - Note what psychometrics supported, or are needed, to evaluate the validity of the measure for study participants.
  - Note reliability, was this strong or weak?

**Measure Critique.** Answer the following questions about the measure:

- In what ways/aspects was the measure effective in answering the specific research question?
- Did the researchers use multiple measures to support findings or address the same variable? If so, describe how the identified measure worked in concert with other measures (or not)?
- What do researchers note as a limitation in the selected measure?
- In what ways/aspects would the measure have been more effective OR would an alternative have been more effective? Justify your answer

**Measure Adaptation.** If the measure you are evaluating was adapted for the research study,

- Describe how it was adapted for the study purpose, research questions, participants, and/or setting
- Was the adaptation effective or do additional adaptations need to be made? Justify your answer.

## Appendix B Partial Reading List

### Week 1

Abulela, M. A. A., & Harwell, M. (2019). Strengthening inferences in quantitative education studies conducted by novice researchers: Capitalizing on standards for sampling, research design, and instrumentation. *Research Highlights in Education and Science*. ISRES Publishing. [https://www.isres.org/books/chapters/9\\_13-02-2020.pdf](https://www.isres.org/books/chapters/9_13-02-2020.pdf)

U. S. Department of Education. (2013). *Common guidelines for education research and development*. <https://ies.ed.gov/pdf/CommonGuidelines.pdf>

Porter, T. (2021). Did it work? Reflections and five humble questions to guide assessment. *Journal of Education*. Online First DOI: 10.1177/00220574211025064

### Week 2

Jacob, R. T., Doolittle, F., Kemple, J., & Somers, M.A. (2019). A framework for learning from null results. *Educational Researcher*, 48(9), 580-589. DOI: 10.3102/0013189X19891955

Kim, J. S. (2019). Making every study count: Learning from replication failure to improve intervention research. *Educational Researcher*, 48(9), 599-607. DOI: 10.3102/0013189X19891428

Hill, H.C., & Erickson, A. (2019). Using implementation fidelity to aid in interpreting program impacts: A brief review. *Educational Researcher*, 48(9), 590-598. DOI: 10.3102/0013189X19891436

### Week 3

Messick, S. (1989). Meaning and values in test validation: The science and ethics of assessment. *Educational Researcher*, 18(2), 5-11. <https://doi.org/10.3102/0013189X018002005>