George Mason University
College of Education and Human Development
Educational Psychology

EDRS 630 -DL1 – Educational Assessment
3 Credits, Spring 2024
Tuesdays, 7:20: 10:00 pm
Synchronous Online

Faculty

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Prerequisites/Corequisites: None

University Catalog Course Description
Examines research theory and practice relevant to assessments. Focuses on assessment strategies for students including developing skills to select, score, and interpret educational assessments.

Course Overview
The purpose for the course is for students to attain a high level of professional understanding and competent use of educational assessment practices. Course content focuses on understanding learning and assessment theory, research, and practice in order to assess learning in a variety of settings, such as K-12 formal educational environments, higher education, or informal learning across the lifespan. Specific content addresses standards for educational and psychological measurement; the role of assessment in the context of current school reform initiatives; best practices in assessment development; and use of assessment data for educational decision-making for individuals, groups, educational practices, or policy.

Course Delivery Method
This course will be delivered online (100%) using a synchronous format via Blackboard Learning Management system (LMS) housed in the MyMason portal. You will log in to the Blackboard (Bb) course site using your Mason email name (everything before @masonlive.gmu.edu) and email password. The course site will be available on January 16, 2024.

Under no circumstances, may candidates/students participate in online class sessions (either by phone or Internet) while operating motor vehicles. Further, as expected in a face-to-face class meeting, such online participation requires undivided attention to course content and communication.

Technical Requirements

To participate in this course, students will need to satisfy the following technical requirements:

- High-speed Internet access with standard up-to-date browsers. To get a list of Blackboard's supported browsers see: https://help.blackboard.com/Learn/Student/Ultra/Getting_Started/Browser_Support
- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students will need a headset microphone for use.
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.

Expectations

- Participation:
  Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- Technical Competence:
  Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.
- Technical Issues:
  Students should anticipate some technical difficulties during the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.
- Instructor Support:
  Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.
- Netiquette:
  The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. *Be positive in your approach with others and diplomatic in selecting your words*. Remember that you are not competing with classmates, but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.
- Accommodations:
  Online learners who require effective accommodations to insure accessibility must be registered with George Mason University Disability Services.

Learner Outcomes or Objectives

This course is designed to enable students to do the following:

• Understand and explain the cognitive bases for learning and their connections to various forms of assessments of learning.
• Understand the nature, purposes for, and uses of different types of assessments and be able to select and administer the appropriate assessment for the intended purpose, or develop classroom-based assessments.
• Understand the conceptual framework underlying classroom, school, or system level assessment data, and use the framework to design assessments and scoring methods that will allow stakeholders to draw valid inferences from the assessment data.
• Understand how to administer, score, and interpret results from various types of assessment, such as classroom assessment or standards-based or norm-referenced assessments.
• Use various types of assessment data to make valid inferences and appropriate decisions related to instructional planning, teaching, developing curriculum, educational programs, and/or school improvement.
• Explain scores, results, data, and analysis of various types of assessments to stakeholder groups.
• Understand concepts related to validity, reliability, fairness, ethical use, social justice and other basic principles of sound assessment and apply to practice in development and use and also by addressing misconceptions and misapplications of the concepts when employed by others.
• Identify critical issues, trends, and best practice derived from research related to the role of the design of assessments for accountability.
• Explain the relationship between learning, testing, and issues of social justice.

Professional Standards

Learner outcomes are consistent with the Educational Psychology Program standards:
• Educators will demonstrate an understanding of principles and theories of learning, cognition, motivation, and development as they apply to a wide variety of contemporary assessment contexts.
• Educators will use their knowledge, skills, and dispositions to apply principles and theories of learning, cognition, motivation, and development to analyze and develop instruction based on sound assessment principles.
• Educators will demonstrate an understanding of the basic concepts, principles, techniques, approaches, and ethical issues involved in educational assessment.
• Educators will use their knowledge of quantitative and qualitative research methodology to develop education assessment methods for continuing improvement of student learning.

The student outcomes are also informed by the Standards for Teacher Competence in Educational Assessment of Students (AFT, NCME, NEA, 1990), the Standards for Competence in Student Assessment (AASA, NAESP, NASSP, NCME, 1990), the Standards for Educational and Psychological Testing (AERA, NCME, & APA, 2014), and the InTASC Model Core Teaching Standards (CCSSO, 2011).

Those standards most relevant to address the learning targets for the course are those that state that educators will have the knowledge, skills and dispositions to:

- Apply basic principles of sound assessment practices for addressing specific educational needs.
- Distinguish between the nature and uses for norm-referenced and criterion-referenced tests.
- Select assessment methods appropriate for instructional decisions.

• Develop assessment methods appropriate for instructional decisions.
• Administer, score, and interpret the results of both externally-produced and teacher produced assessment instruments.
• Use assessment results in instructional planning, teaching, developing curriculum, and school improvement.
• Communicate assessment results to varied stakeholders.
• Recognize and appropriately act against unethical, illegal, and otherwise, appropriate assessment methods and uses of assessment information.
• Recognize the implications of educational assessments for social justice in schools.
• Discern critical issues related to the role of the design of assessments for school accountability and high stakes testing.
• Gather evidence from multiple sources of data to draw valid inferences about student learning.

Required Texts

1. American Educational Research Association (AERA), American Psychological Association, & National Council on Measurement in Education. (2014). *Standards for educational and psychological testing*. Washington, DC: AERA.

2. McMillan, J.H. (2013). *Handbook of Research on Classroom Assessment. Principles and Practice that Enhance Student Learning and Motivation*. Sage.

The book is freely available to Mason students through Mason libraries. Link is on Blackboard.

3. National Academies of Sciences, Engineering, and Medicine (2019). *Monitoring Educational Equity*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25389

The book is freely available to users through the NAP website. Link is on Blackboard.

Course Performance Evaluation

Students are expected to submit all assignments on time via Blackboard or in the manner outlined by the instructor. Late submissions will not be accepted – notify the instructor of any extenuating circumstances preferably in advance and with documentation.

A. Class Participation (20%)

Various in-class assignments will be included. The purpose of these assignments is to provide students with hands-on opportunities to practice course content. These assignments typically include reflections, online/paper-based practice exercises or short (one page) essays on the Standards. Homework assignments are due before the beginning of the class period. In-class assignments are due at the end of the class session or as determined by the instructor. Participation includes attendance (coming to class, on time, and notifying the instructor in the event that a student has to miss class), completing assigned readings, and engaging in small group discussions and activities.

B. Assessment Project (80%)

Choose one of the following options.

Option 1: Assessment Development Project (80%)

This is an experiential project and written assignment. The purpose of this assignment is to develop an assessment of learning within a specific context or content area. For example, an assessment of linear equations for high school students, or an assessment of a complex skill (like critical-thinking or analytical skills), or competency acquired through life experience (digital literacy), or assessing learning in an informal environment (a workshop at a museum, for instance). Choose a context/content where there is a need for assessing and making decisions about individuals' learning. Follow APA guidelines to format the final report.

The following components are part of the project:

a. **Introduction and Literature review (10%)**: A one-page summary of the context/content of interest (learning construct), overview of the literature, the gap in assessment of learning in this context, and the purpose of the proposed assessment. In addition, two – four pages discussing learning and assessment issues, reviews of existing assessments, and the assessment methods necessary for measuring your learning construct. The review of existing assessments should address reliability and validity evidence of the measures.

b. **Methods and Measure (25%):** This section outlines your plan to develop, administer, and analyze your assessment. You must include the procedures, participants, how you will gather reliability and validity evidence, and a test blueprint. Follow APA guidelines to inform the draft of your methods section. You must develop a minimum of ten selected-response items (SRIs) that are multiple choice items and answer key. You may also develop other types of SRIs (like true-false) in addition to the multiple choice tests. You must also develop one in-depth measure of performance or constructed-response item (CRI) and rubric to assess that performance.

c. **Pilot test data collection and analysis (25%)**: You will pilot test your measure (both SRI and CRI) together or separately and gather data from a group of participants. Follow ethical guidelines set by the Institutional Review Board even though an IRB approval is not required for this assignment. Conduct data analyses to gather reliability and validity evidence (guidance and resources will be provided in class). Revise your measure based on the data analysis results. Include a revised measure in this section.

d. **Discussion (10%)**: This section (two – three pages) will provide a summary of the results and a discussion about plans for large scale field testing, continued validation efforts, uses for the test, limitations, and areas for research.

e. **Reflection (10%).** Include a 2-3 page reflection on what you learned from doing the project and the skillset required of test developers and users to develop and use the assessment. Describe ethical implications and consequences of using (and not using) the assessment for making decisions about individuals and/or systems.

Option 2: Assessment Use Toolkit Project (80%).

This is an experiential project and written assignment. The purpose of this assignment is to develop a training/coaching toolkit based on the resources used in class, weekly assignments, and students' own research. The toolkit should be geared toward preparing a research or educational team (e.g., grade-level teachers, program staff, and research/evaluation project members) for engaging in assessment use to make decisions about individuals or systems. The toolkit may be

developed for a hypothetical scenario/context and will typically include multiple sources of data or indicators of learning.

a. **Introduction and Literature** (**10%**) A one-page summary of the educational context and goals of the toolkit. Provide a two-page overview of relevant literature as it pertains to the use of assessments in the context, prevalence of assessment use, and challenges. Discuss existing learning and assessment issues, review the reliability and validity evidence of existing measures and (if applicable) need for adopting new assessments.

b. **Toolkit Description** (**10%**). Describe the organization and content of the toolkit and how the toolkit is developed to support ethical and effective data-driven decision making. Describe the appropriate standards of educational testing that informed the creation of the toolkit. Describe the team that will implement the toolkit.

d. **A summary of the types of assessments and other data (20%).** Address all the sources of data and their origin/source, quality of data, rationale, strengths, and limitations. Include at least two educational assessments. Consider weighting in key decisions as appropriate. Identify the test developers, users, and test takers and provide a description of each stakeholder.

e. **A plan for collecting, documenting, analysis and interpretation** (**20%**). Consider how the data will be gathered or collected and documented to facilitate analysis and interpretation. Describe the technologies needed and the skillsets to conduct data analysis.

f. **Communication plan (10%)**. Include a detailed description of scoring and interpretation as appropriate. Consider all the stakeholders and develop a timeline for communicating key results and insights. Create at least two sample tasks/activities/protocols, for example, slides, handouts, etc. that can be used in the training, data analysis, or reporting.

g. **Reflection (10%).** Include a 2-3 page reflection on what you learned from doing the project and the resources needed for effective implementation of the toolkit. Describe ethical implications and consequences of using (and not using) the toolkit for individuals and/or systems.

Note: Drafts for each section should be submitted for feedback from the instructor (see due dates for checkpoints in the course schedule). These drafts will not be graded. The purpose of the checkpoints is to track progress, provide individualized support for your project and divide the project into manageable tasks. The instructor strongly recommends due diligence with regard to checkpoint submissions. Your peers will also provide feedback for you to consider as you develop your assessment/ toolkit. This will be done via videos posted of your materials and then a video response posted by your peers. A rubric along with details of the components of the toolkit will be available on Blackboard to guide your work on the assignment.

- **Grading**

Percent	Letter Grade
98 – 100	A+
93 – 97	A
90 – 92	A-
88 – 89	B+
83 – 87	B

80 – 82	B-
70 – 79	C
Below 70	F

Professional Dispositions

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.

Date	Topic	What's Due?
MODULE : EDUCATIONAL ASSESSMENT IN CONTEXT		
Week 1, Jan 16	Introductions; Syllabus Review	Standards: Preface/Introduction
Week 2, Jan 23	The context of Ed Assessment– system-level (United States)	Monitoring Educational Equity (Chapters 1, 4, 6) The Standards (Chap 13)
Week 3, Jan 30	The context of Ed Assessment – classroom/school level Relationships among Learning, Teaching, Motivation, and Assessments	Shepard, Penuel, & Pellegrino, 2018 McMillan (Chapters 2, 3)
Week 4, Feb 6	Ethical Guidelines Related to the Use of Assessments	The Standards (Chap. 7, 8, 9) **Project Checkpoint**: Idea and draft Introduction/Literature
MODULE 2: TEST DESIGN AND DEVELOPMENT		
Week 5, Feb 13	Test Development Process	The Standards (Chap. 4, 12)
Week 6, Feb 20	High Quality Assessment: Validity, Fairness, and Reliability	Standards: Foundations (1, 2, 3)
Week 7, Feb 27	Standards and Cognitive Learning Targets Test Blueprint or Table of Specifications	Lecture materials Quiz on Week 6 content
Week 8, Spring Recess: No Class		
Week 9: March 12	Formats, Types of Assessment Purposes of Assessment (formative/summative)	Lecture materials
Week 10, March 19	Item development, Pilot and Field Testing **Project Planning Workshop**	Lecture materials **Project Checkpoint 2**: (Option 1 section b; Option 2: b & c)
MODULE 3: TEST USE AND INTERPRETATION		
Week 11, March 26	Aggregate & Disaggregate level analysis	Review case study/toolkit for in-class assignment
Week 12, April 2	Strand & Item level analysis	Review case study/toolkit for in-class assignment

		Peer feedback on project
Week 13, April 9	Making decisions based on data and communicating results	
Week 14, April 16	Project Presentations	**Project Checkpoint 3**: Results (Option 1 section c, d; Option 2: c, d, & c)
Week 15, April 23	Individual Consultation (optional)	
		Final Project: Due May 1st - May 2nd

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/).

Use of Generative-AI tools should be used following the fundamental principles of the Honor Code. This includes being honest about the use of these tools for submitted work and including citations when using the work of others, whether individual people or Generative-AI tools. As a class, we will use AI in class activities.

- Students must follow the university policy for Responsible Use of Computing (see https://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 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 or https://cehd.gmu.edu/aero/assessments. Questions or concerns regarding use of Blackboard should be directed to https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/.

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

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

As a faculty member, I am designated as a "Non-Confidential Employee," and must report all disclosures of sexual assault, sexual harassment, 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 or support measures from Mason's Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu.

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