[EDEP 593 DL 1 – Data-Driven Decision Making: Analyzing and Interpreting Assessment Data
3 Credits, Spring 2021
Asynchronous: 100%

Faculty

Name: Dr. Divya Varier
Office Hours: By Appointment
Office Location: 2106 West Building (Fairfax Campus)
Office Phone: 703-993-5047
Email Address: dvarier@gmu.edu

COVID 19 Procedures: Spring 2021

Students, please be aware of and follow all policies and procedures for Mason's Safe Return to Campus: https://www2.gmu.edu/Safe-Return-Campus

Prerequisites/Corequisites

None
Recommended: EDEP 592

University Catalog Course Description

Focusing on the development of knowledge and skills related to analyzing and interpreting educational assessment data. Offered by <u>School of Education</u>. May not be repeated for credit.

Course Overview

The course will provide an in-depth coverage of connecting data use to instructional and learning improvement. The main focus is on integrating DDDM inquiry with professional knowledge and competencies related to content knowledge, pedagogical content knowledge, and teachers' dispositions. Content will cover framing appropriate questions to identify and organize data sources and the process of inquiry, engaging in sense making with simulated datasets and scenarios to provide technical skills and orientation toward focused data analysis; interpreting findings from inquiry; communicating findings to students, teams, administrators, and parents; the importance of evaluating action plans and outcomes for continuous improvement; critical reflection of facilitators and barriers (in relation to professional knowledge/ competencies) to implement instructional actions based on data and identifying resources and support for the same.

Course Delivery Method

This course will be delivered 100% online using an asynchronous 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 18, 2021.

Though the delivery method is entirely online, it should take you the same amount of time as other 3-credit graduate courses. You should expect to spend *an average of 8 to 10 hours* on coursework for each class session (this includes the time you would have spent in a classroom).

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/Getting_Started/Browser_Support#supported-browsers
  To get a list of supported operation systems on different devices see:
  https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#tested-devices-and-operating-systems

- 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 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.
- The following software plug-ins for PCs and Macs, respectively, are available for free download:
  - Adobe Acrobat Reader: https://get.adobe.com/reader/
  - Windows Media Player: https://support.microsoft.com/en-us/help/14209/get-windows-media-player
  - Apple Quick Time Player: www.apple.com/quicktime/download/

Expectations

- <u>Course Week:</u> Because asynchronous courses do not have a "fixed" meeting day, our week will start on Mondays, and finish on Sundays.

- Log-in Frequency:
  Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access to course materials at least 4 times per week.
- 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.
- Workload:
  Please be aware that this course is **not** self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the **Class Schedule** section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.
- Instructor Support:
  Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues 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 forms a foundation for educators to focus on analyzing and interpreting educational assessment data to make decisions in the context of current school reform initiatives (and

policies) at the federal, state and local levels. Students should have deep knowledge of potential data sources and existing data in their districts or through their jobs.

As a result of this course, the educators will be able to:

- Understand the components of data-driven decision-making

- Understand and explain the differences between the conceptual frameworks underlying classroom and system level assessment data and what constitutes a valid inference from different levels and kinds of data

- Understand the connections between the data and how to interpret, explain, and use classroom, school, or system level data to make changes to teaching and or educational programs

- Relate the concepts of reliability and validity of assessment data to inferences drawn from the data and the use of appropriate analyses

- Identify and report on formative and summative assessments in published research (such as articles, monographs, reports, etc.)

- Use various data analysis techniques that are appropriate for the desired inferences and the available data

- Analyze assessment data using appropriate computer programs (e.g., EXCEL)

- Make data-driven decisions related to multiple education topics, such as instructional strategies, grading practices, or student affective constructs

- Disaggregate data to draw conclusions about sub-populations to determine how best to serve various student needs

- Explain critical issues related to the role of the analysis and interpretation of assessment data as related to social justice, collaboration, ethical leadership, innovation, and research-based practice.

Professional Standards

The goal of the course is to facilitate each educator's reaching a level high of competence and professional-level understanding of assessment design practices used in making decisions related to continuous improvement in student learning.

Learner outcomes are consistent with the Educational Psychology Program standards. The standards, as expressed as learner outcomes for assessment for data-driven decision-making, are:

- 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.

Student Outcomes & Relationship to Professional Standards

The student outcomes are informed by the Standards for Teacher Competence in Educational Assessment of Students (AFT, NCME, NEA, 1990) and the Standards for Competence in Student Assessment (AASA, NAESP, NASSP, NCME, 1990) guide the course content and emphasis for reaching the learning objectives.

Those standards deemed most relevant to addressing the learning targets for the course are those that state that educators will have the knowledge, skill and disposition to:

1. Apply basic principles of sound assessment practices for addressing specific educational needs.

2. Select assessment methods appropriate for instructional decisions.

3. Develop assessment methods appropriate for instructional decisions.

4. Recognize the implications of educational assessments for social justice in schools.

5. Discern critical issues related to the role of the design of assessments for school accountability and high stakes testing.

Required Texts

Holcomb, E. L. (2017). *Getting more excited about using data* (3rd Ed.). Thousand Oaks, CA: Corwin

Love, N., Stiles, K. E., Mundry, S., & DiRanna, K. (2008)*. *The data coach's guide to improving learning for all students*. Thousand Oaks, CA: Corwin Press.

*CD's materials for this book can also be accessed using the following link, but you will need the book to respond to the access questions: https://studysites.corwin.com/datacoach/

Supplementary Texts

Free PDF Access:

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

National Academies of Sciences, Engineering, and Medicine (2020). *Building Educational Equity Indicator Systems: A Guidebook for States and School Districts*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25833

Additional selected readings will be assigned for the course and made available on Blackboard.

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). **Late assignments will not be accepted without prior instructor approval**.

Class Participation (110 points ~14 classes). Students are expected to participate in online discussion boards and assignments in a meaningful way. Assigned readings are to be completed. Active contribution means you post in specified discussion boards and respond to classmates' posts meaningfully. Your original post is due by Wednesdays at 11: 59 p.m. Each student is to respond to each of the original posts by Sunday at 11:59 p.m. Please review Netiquette in preparation for these assignments.

Module 1 Assignment- Reflection Paper (40 points). Students will prepare a 4 – 6 page (double-spaced, 1 inch margins, APA style 6th edition) reflection on their understanding on inquiry approaches to DDDM. The paper will use appropriate research in the literature, including reading assignments throughout the course, to develop a reflective essay addressing the following:

- What is your stance towards using data to inform decisions?
- What inquiry approach best aligns to your teaching or administrative style or use of data? Why?
- What is the role of collaborative inquiry in DDDM? What data literacy skills are needed for individual and collaborative data-based inquiry?

Module 2 and 3 Assignment- Data Coach Toolkit (100 points). Students will prepare a data coaching toolkit using the resources used in class, weekly assignments, and research of their own. The toolkit should be geared toward preparing a data team (e.g., grade-level teachers, program staff, research/evaluation project members) for engaging in data-based inquiry. The toolkit may be developed for a hypothetical scenario/context.

- An introduction to the educational context and goals of the toolkit. (5 points)
- an introduction that provides information on how the toolkit will be used (10 points)
- Approach to inquiry: philosophy, educational issue/problem; members/team information (10 points)
- A summary of the types of data: address quality of data, strengths, limitations (15 points)
- A plan for analysis and interpretation (15 points)
- A description of what resources are needed for effectively implementing data-based inquiry (10 points)
- Communicating results to key stakeholders (10 points)
- A list and description of tasks/activities to facilitate data gathering, analysis, interpretation (15 points)
    - Two sample tasks/activities, for example, slides, handouts, etc. used for training, data analysis or sensemaking, or reporting (10 points)

Throughout the semester you will provide drafts to your peers who will provide feedback for you to consider as you develop your 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 this assignment.

Grading

There are 250 total points for the course distributed among the four assignments listed above.

Grading scale:

A+ = 245-250 points
A = 232-244 points
A- = 225-231 points
B+ = 220-224 points
B = 207-219 points
B- = 200-206 points
C = 175-199 points
F = 174 or fewer points

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.

Weeks	Topic	Readings/Multimedia	Activities/Assignments Due*
Module 1: Inquiry based approaches to DDDM			
Week 1 1/25 – 1/31	Welcome Video Syllabus Overview Module 1 Overview	• Holcomb (2017) Ch. 1 • Mandinach & Gummer (2016) Ch. 6 • Marsh, Pane, & Hamilton (2006-Rand)	Blackboard Discussion: Ice Breaker
Week 2 2/01 – 2/07	Overview of Inquiry-Based Approaches	Holcomb (2017) Ch. 2 & 3	Blackboard Discussion: Getting Started (personal goals for data-based inquiry)
Week 3 2/08 – 2/14	The role of Collaborative Inquiry in DDDM	• Collaborative inquiry and data-based decision making / Douglas Huffman and Kelli Thomas (e-reserve) • Love et al (2008) Ch. 1 & 2 • **Guest Interview Video**: Dr. Jenn Rowan Director of Technology Jefferson County Schools	Blackboard Discussion: Reflection on Dr. Rowan's Interview. **Small Group Assignment**: Collaborative Inquiry Approaches
Module 2: Data Interpretation in Education			
Week 4 2/15 – 2/21	Module 2 Overview Different Types of Data & What it means to interpret data	• Brookhart (2016) Chapter 1 • NASEM (2019) Appendix A + Chapter 4, 5, OR 6 • Holcomb Chapter 9	Blackboard Discussion Board 4: Types of data **Module 1 Assignment Due by 2/21 at 11:59 p.m.: Reflection Paper on Inquiry**

Week 5 2/22- 2/28	Accountability Assessments: Aggregate & Disaggregate level analysis	Love et al (2008) Ch. 4 - only tasks 6 & 7	Blackboard Discussion: Aggregate & Disaggregate level analysis
Week 6 3/01 – 3/07	Accountability Assessments: Strand & Item level analysis	Love et al (2008) Ch. 4 - only tasks 8 & 9	**Assignment:** Data Analysis of accountability assessments
Week 7 3/08- 3/14	Benchmark Assessments & Common Formative Assessments	Watch**:** Assessing Learning Changes During/After COVID-19 school closures (IES, 2020)	Blackboard Discussion: Benchmark Assessments & Common Formative Assessments
Week 8 3/15 – 3/21	Common Formative Assessments Social emotional learning and well-being	Holcomb (2017) Ch. 5 Watch: Addressing trauma; Race Equity Mindsets, Socialemotional well-being, and Outcomes for Students, (IES, 2020)	Blackboard Discussion: Social Emotional Data
Week 9 3/22 – 3/28	Social emotional learning and well-being II	Lyon et al (2013) School-Based Mental Health and DDDM	**Assignment**: on DDDM to promote a safe learning environment for all students
Week 10 3/29 - 4/04	Creating effective data visualizations for interpretation	Holcomb (2017) Ch. 6 Other web resources will be posted	Blackboard Discussion Assignment: Creating effective data visualizations

Week 11 4/05 – 4/11 **: Independent Reading; Module 2 Assignment Preparation; Optional individual meeting with instructor**

Module 3: Taking Action as Teachers and Leaders: Communicating data to students, teams, administrators, policymakers, and parents			
Week 12 4/12 – 4/18	Basing decisions on data and understanding the implications for social justice	• Bambrick-Santoyo (2010) Ch. 3 • Dodman et al (2020) Critical DDDM • NASEM (2020)	Toolkit Prep Assignment: Peer Feedback
Week 13 **4/19 – 4/25**	Supporting educators' use of data Communicating Data	• Holcomb Chapters 10, 11, 12	Toolkit Prep Assignment: Peer Feedback
Week 14 4/26 – 5/02	Ethical Considerations Review and Wrap Up	• Legal dimensions of using employee and student data to make decisions / R. Lance Potter and Jacqueline A. Stefkovich (e-reserve) • Ethics based decision making by educational leaders/	Blackboard Discussion: Ethical Considerations Toolkit Prep Assignment

		P.T. Begley (ereserve)	
Week 15 5/3 – 5/ 9			**Module 3 Due 5/9 by 11:59 p.m.: Data Coaching Toolkit**

*Discussion board posts are due by Wednesday 11:59 pm of each week; respond to at least two classmates by Sunday 11:59 pm

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 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 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 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, interpersonal violence, and stalking:

As a faculty member, I am designated as a "Responsible 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.

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