George Mason University
College of Education and Human Development
Instructional Design and Technology (IDT)

EDIT 590 DL1 – Educational Research in Technology
3 Credits, Fall 2020
Online Course

Faculty

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Prerequisites/Corequisites

None

University Catalog Course Description

Focuses on developing skills, insights, and understanding basics to performing research with emphasis on interpretation, application, critique, and use of findings in educational settings. Students develop expertise in action research methodology, design, and implementation.

Course Overview

This course introduces fundamental concepts and practices in educational research in technology. Specific applications of educational research methods to problems in instructional design, instructional and/or assistive technologies will be covered. Readings, discussions, and project assignments systematically follow the research design process to ultimately produce a research proposal as well as develop skills to evaluate educational research articles will be explored.

Course Delivery Method

This course will be delivered online using the 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 Wednesday, August 19, 2020.

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 will need a headset microphone for use with the Adobe Connect web conferencing tool.
- 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

- Course Week:
  Because asynchronous courses do not have a "fixed" meeting day, our week will **start** on Sunday, and **finish** on Saturday.
  - Dr. Rucker will produce some short lectures that will need to be reviewed weekly. In addition, **4** synchronous class sessions will be offered (see course schedule for meeting days/times) via Blackboard Collaborate Ultra. The intent of these sessions is for students to receive any assistance or resolve any course-related issues. Attendance to these sessions are highly encouraged and attendance will be recorded.
- Log-in Frequency:
  Students must actively check the course Blackboard site and their GMU email for communications from the instructor, at a minimum this should be 3 times per week.
- Participation:

Students are expected to actively engage in all course activities throughout the semester, which include viewing of 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. 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 ensure accessibility must be registered with George Mason University Disability Services.

Learner Outcomes or Objectives

- Identify various methods of research suitable for different purposes in the field of instructional design and technology
- Compare/contrast quantitative, qualitative, and mixed methods research approaches
- Discuss basic theories and methods of action research in the field of instructional design and technology
- Describe the most common tools for research data analyses in the field of instructional design and technology
- List the most common components or sections of a research study required for publication
- Analyze and critique a published research study in the field of instructional design and technology

- Design a small research study incorporating the most common components or sections required for publication

Professional Standards (2012 International Board of Standards for Training, Performance and Instruction (IBSTPI):

Upon completion of this course, students will have met the following professional standards:
1. Professional Foundations
    1. Communicate effectively in visual, oral, and written form
    2. Apply research and theory to the discipline of instructional design
    4. Apply data collection and analysis skills in instructional design projects
    5. Identify and respond to ethical, legal, and political implications of design in the workplace

Required Texts

Creswell, J. (2017). *Research design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). Thousand Oaks, CA: SAGE Publications.

Publication Manual of the American Psychological Association, Seventh Edition

Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor.

- **Assignments**
  1) Discussion Boards (15% of final grade)

     Throughout the semester you will be asked to demonstrate your understanding of research concepts and terminology by posting to 5 discussion boards. Each discussion board will have multiple questions for you to select. You should select the 1 question you wish to answer and formulate a response. The initial response should be 200 to 350 words (feel free to use your textbook as a source). In addition to the initial post, you are expected to comment on at least 3 other posts.

     Your initial post is due **Wednesday @ 11:59 pm EST** and the 3 replies are due by **Saturday @ 11:59 pm EST**.

     These discussion boards should be posted and submitted via Blackboard.

  2) Research Proposal (45% of final grade)
     Throughout the semester you will develop a "mini" research proposal (15-20 pages). I will provide more details about this product as we move through the semester, but basically, I will be asking you to draft the proposal in pieces as we move through the subject matter of the class. Near the end of the semester you will have a complete draft, which you will submit for peer review by other members of the class (and me). Based on your peer review and my comments on pieces or the complete draft, you will have the opportunity to revise

and ultimately submit the proposal for grading. I expect the proposal to have the following sections:

    a. A statement of the problem to be addressed via the proposal, including an introduction relating your reason for undertaking the research (significance) and leading to a statement of research question(s), problem, or issue, which is guiding the research. Typically, 1-4 paragraphs in-length.

    b. An abbreviated review of theory and research related to the problem (your literature review)—I will ask for a minimum of four articles, though you are welcome to include more to suit your own purposes. Typically, 9-15 paragraphs in-length.

    c. Methodological details—including a description of the data collection approach, desired participants, approach to recruitment of participants, drafts of data collection instruments (e.g. questionnaire, interview or observation guide), your approach to managing the data that you collect, etc.—the who, what, where, why, and how of your research. Typically, 5-15 paragraphs in-length.

    d. A tentative analysis plan—what you plan to do with the data to make sense of it, and

    e. List of references—items referred to in the proposal.

The Research Proposal assignment is a performance-based assessment, the grading for which is located at the end of this syllabus. This assignment must be uploaded to Blackboard under the ASSSIGNMENTS link.

3) Articles Selection & Annotated Bibliography (19% of final grade)

To complete the research proposal, you will need to conduct a short literature review. In order to conduct any literature review, various articles (e.g., journal articles) must be located. For this assignment, you will need to locate 8 articles that you plan on using in the literature review.

Next, you will to place each article in proper APA format (full-text citation) and create an annotated bibliography for each article. Dr. Rucker will provide hints on creating an annotated bibliography closer to the due date.

This assignment should be submitted on Blackboard (under Week #10's folder).

4) Research Blogs (21% of final grade)

For some of the weeks in the course, we will discuss elements related to your research proposal (e.g., selecting the research method). During these weeks, you will need to draft a copy of that section that you will place within the research proposal. Remember, this is an early draft of that section—a work in progress—not your final version. In addition to posting your draft, students are expected to comment/provide feedback to at least 3 classmates. Note: 2 points are given for posting your draft and 1 point for commenting.

Each blog entry and comments to peers will be submitted under the RESEARCH BLOGS link.

Your <u>initial entry</u> is due **Friday @ 11:59 pm EST** and the 3 replies are due by Saturday @ 11:59 pm EST. Please sure the replies are high (substantive) quality.

- **Grading**

Grading Scale:

A	94-100 points
A-	92-93 points
B+	90-91 points
B	85-89 points
B-	80-84 points
C	70-79 points
F	0-69 points

Late Work Policy
I will accept assignments up to **one** week late, except for the Research Proposal, for a 20% deduction off of the final grade. The Research Proposal cannot be submitted late—do not ask for an extension. All due dates for each assignment are provided to you in the schedule within this course syllabus. Please bookmark these dates on your personal calendar

Professional Dispositions

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

Class Schedule

Week #	Learning Module	Textbook Readings Weekly Activities	Due Dates *Saturday by 11:59 pm EST
1 (August 24-29)	Welcome	- Buy required textbook - Review syllabus/schedule Virtual Class #1: Monday, August 24 (8:00 pm-9:00 pm)	Introduce Yourself Discussion Forum
2 (August 30-September 5)	What is Research & Introduction to Research Methods	- Read Chapter 1 (The Selection of a Research Approach) - Read Chapter 3 (The	Research Blog #1 (Select a topic & theoretical framework)

		Use of Theory)	
		• Select research topic • Identify theoretical framework	Discussion Board #1
3 (September 6-12)	Statements of the Problem and Purpose	• Read Chapter 6 (The Purpose Statement) • Write your problem statement • Write your purpose statement	Research Blog #2 (Problem and Purpose Statement)
4 (September 13-19)	Research Questions	• Read Chapter 7 (Research Questions and Hypotheses) • Write 2-4 research questions for your study Virtual Class #2: Monday, September 14 (8:00 pm-9:00 pm)	Research Blog #3 (Research Questions)
5 (September 20-26)	Quantitative Research	• Read Chapter 8 (Quantitative Methods)	Discussion Board #2
6 (September 27-October 3)	Qualitative Research	• Read Chapter 9 (Qualitative Methods)	Discussion Board #3
7 (October 4-10)	Mixed Methods & Selecting Method	• Read Chapter 10 (Mixed Methods Procedures) • Select the method to be used for study Virtual Class #3: Monday, October 5 (8:00 pm-9:00 pm)	Research Blog #4 (Research Method)
8 (October 11-17)	Instrument/Data Collection	• Draft an instrument used for data collection	Research Blog #5 (Instrument Selection)
9 (October 18-24)	Literature Reviews & Locating Articles	• Read Chapter 2 (Review of Literature) • Locate articles for literature review	Discussion Board #4
10 (October 25-31)	Articles Selection/Annotated Bibliography	• Write an annotated bibliography Virtual Class #4: Monday, October 26	Articles Selection & Annotated Bibliography

		(8:00 pm-9:00 pm)	
11 (November 1-7)	Writing Literature Review	• Draft a literature review	Research Blog #6 (Literature Review Draft)
12 (November 8-14)	Work on Draft	• Work on the draft of your proposal	
13 (November 15-21)	Submit Draft & Provide Feedback	• Submit draft of your proposal to blog • Provide feedback to at least 3 classmates.	Research Blog #7 (Proposal Draft) Note: The draft is due by Wednesday, November 18.
Thanksgiving Break November 22-28			
15 (November 29-December 9)	Revise Feedback & Submit Research Proposal	• **Research Proposal due by Wednesday, December 9 @ 11:59 pm ET**	Research Proposal Discussion #5

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

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 https://ds.gmu.edu/).

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

Campus Resources

- 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/ .

Assessment Rubric

Research Proposal Grading Rubric

IBSTPI Competency	Criteria	Does Not Meet Standards	Meets Standards	Exceeds Standards
Professional Foundations: 1: Communicate effectively in written & oral form	**Introduction**	Poorly formulated/no introduction; no evidence specific to the topic Point values: 0-1	Fairly well formulated introduction supported by weak sources of evidence specific to the topic Point values: 2-3	Well formulated introduction supported by strong sources of evidence specific to the topic Point values: 4-5
Professional Foundations: 2: Apply current research and theory to the discipline of instructional design	**Research topic/problem**	Poorly posed/missing problem statement; no evidence to support the problem Point values: 0-1	Fairly well posed statement of the problem but evidence to support the problem is weak Point values: 2-3	Very clearly posed statement of the problem supported by strong evidence Point values: 4-5
Professional Foundations: 2: Apply current research and theory to the discipline of instructional design	**Purpose of the study**	Purpose of the study is poorly stated/missing or does not connect with the introduction and/or problem statement Point values: 0-1	Fairly well stated purpose that connects to the introduction and the problem statement Point values: 2-3	Very clearly stated purpose that connects well to the introduction and the problem statement Point values: 4-5
Professional Foundations: 5: Identify ethical, legal & political implications of design in the workplace	**Literature review**	Superficial review of the literature that does not analyze the findings to identify study limitations justifying the proposed study; fewer than four empirical research study references included	Thorough review of the literature that summarizes the findings but does not use study limitations to justify the proposed study; four or fewer empirical research study references included	Thorough review of the literature that analyzes previous studies and findings whose limitations justify the proposed study; a minimum of four (4) empirical research study references included Point values: 7-10

		Point values: 0-3	Point values: 4-6	
Professional Foundations: 4: Apply data collection & analysis skills to instructional design projects	**Research questions/ hypotheses**	Poorly stated/missing research questions/ hypotheses; no basis in research problem or study purpose Point values: 0-1	Fairly well stated research questions/ hypotheses based somewhat on research problem and study purpose Point values: 2-3	Well stated research questions/hypotheses based on research problem and study purpose Point values: 4-5
Professional Foundations: 4: Apply data collection & analysis skills to instructional design projects	**Methodology**	Superficial/missing description of methodology elements; methodology is not appropriate to research questions/ hypotheses Point values: 0-1	Detailed description of two to three methodology elements; methodology is appropriate to research questions/ hypotheses Point values: 2-3	Detailed description of all four methodology elements - research design, participants/ respondents, data collection and analysis methods; methodology is appropriate to research questions/ hypotheses Point values: 4-5
Professional Foundations: 1: Communicate effectively in written & oral form	**Language**	Rules of English grammar, usage, spelling and punctuation are not followed; multiple language errors throughout the proposal Point values: 0-1	Rules of English grammar, usage, spelling and punctuation are generally followed throughout the proposal; one or two minor language errors Point values: 2-3	Rules of English grammar, usage, spelling and punctuation are followed consistently throughout the proposal; no language errors Point values: 4-5
Professional Foundations: 1: Communicate effectively in written & oral form	**APA style**	Does not adhere to APA 7th edition style in the proposal Point values: 0-1	Generally, adheres to APA 7th edition style throughout the proposal Point values: 2-3	Consistently adheres to APA 7th edition style throughout the proposal Point values: 4-5