George Mason University
College of Education and Human Development
Instructional Design and Technology Program

EDIT803.DL1–Design-Based Research
3 Credits, Spring 2018
Mondays 4:30-7:10pm Thompson Hall L003 – Fairfax Campus

Faculty

Name:	Dr. Brenda Bannan
Office Hours:	By Appointment
Office Location:	Thompson Hall L043
Office Phone:	703-993-2067 ‘
Email Address:	bbannan@gmu.edu

Prerequisites/Corequisites

EDIT801 or permission of instructor

University Catalog Course Description

Provides an introduction to systematic cycles of design-based research in education. Applicable to all content domains to explore cycles of research within design, development and implementation of educational and training interventions.

Course Overview

This course will provide students with an introduction to design-based research. Design-based research is a research approach that systematically investigates teaching, learning and/or training phenomena through multiple cycles of design, development, evaluation and implementation of educational interventions (which may consist of curriculum/training interventions, systemic school programs, informal or formal teaching-learning strategies and materials, technology-based products and systems, etc.). This course will examine the history of this research approach along with related current literature, commentary and research.

Course Delivery Method

This course will be delivered online (76% or more) using synchronous and asynchronous formats 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 22, 2018 at 4:30pm.

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 a standard up-to-date browser, either Internet Explorer or Mozilla Firefox is required (note: Opera and Safari are not compatible with Blackboard).
- 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 Blackboard Collaborate 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/
    - WebEx: https://gmu.webex.com

Expectations

- Course Week: Because asynchronous courses do not have a "fixed" meeting day, our week will start on Monday, and finish on Sunday. Any synchronous meetings will take place as indicated on the Schedule of Classes.
- 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 three times per week. In addition, students must log-in for all scheduled online synchronous meetings.
- 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. 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:

1. understand design-based research as a viable research approach;
2. investigate historical and current literature describing and evidencing design research;
3. identify specific teaching/learning/training phenomena to explore through design research cycles;
4. plan multiple cycles of design research to investigate teaching/learning/training phenomenon; and
5. write a literature review with corresponding research plan for a design research study.

Professional Standards (Instructional Design Competencies for the International Board of Standards for Training, Performance and Instruction)

Upon completion of this course, students will have met the following professional standards:

1. Communicate effectively in visual, oral and written form
2. Apply research and theory to the discipline of instructional design
3. Update & improve knowledge, skills & attitudes pertaining to the instructional design process & related fields

.

Required Texts

McKenney, S. and Reeves, T. (2012). *Conducting Educational Design Research*. London: Routledge.

Selected required and optional readings will be posted by week 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).

- **Assignments and/or Examinations**

Requirements	Percentage
Presentation of first and second design research cycle examples	20%
Literature review or synthesis and collegial feedback	30%
Research Plan	40%
Jigsaw Feedback	10%

- **Grading**
  Your final grade will be based on the following scale:

  A+ = 97-100 percent
  A = 94-96 percent
  A - = 90-93 percent
  B+ = 87-89 percent
  B = 84-86 percent
  B- = 80-83 percent
  C+ = 77-79 percent
  C=74-76 percent
  C=70-74 percent
  F = <70

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.

WEEK	IN CLASS ACTIVITIES	PREPARATION FOR FOLLOWING CLASS ACTIVITIES
1 Jan 22 **(F-to-F)**	Introductions/Revisiting Review Syllabus Review Intro to Design Research Begin Literature Review on your individual area of focus in Design Research	Read McKenney & Reeves, Chapter 1 Read Plomp & Nieveen, Chapters 1-2 Available Posted Online Readings
2 Jan 29 (Asynch)	Design Research: A Framework EDR Example Work on Literature Review	Read McKenney & Reeves, Chapter 2 Read Plomp & Nieveen, Chapters 3-4 Read Bannan-Ritland (2003) Available Posted Online Readings
3 Feb 5 (Asynch)	Checking in Face to Face Contributions to Theory and Practice: Concepts and Examples Work on Literature Review	Read McKenney & Reeves, Chapter 3 Read Plomp & Nieveen, Chapters 5-6 Available Posted Online Readings
4 Feb 12 (Asynch)	Methods/Frameworks in Design Research Prepare Educational Design Research Example Presentation Work on Literature Review	Read McKenney & Reeves, Chapter 4 Available Posted Online Readings
5 Feb 19 (Asynch)	Analysis/Informed Exploration Work on Literature Review **First DBR Case Chapter Review DUE** Review Design Research Examples	Read McKenney & Reeves, Chapter 5 Available Posted Online Readings
6 Feb 26 **(F-to-F)**	Finalize literature review Review Design Research Examples	Available Posted Online Readings
7 Mar 5 (Asynch)	Design and Construction Design Research cycle presentations Design Research Plan	Read McKenney & Reeves, Chapter 6 Available Posted Online Readings

8 Mar 12	*SPRING BREAK No Class	
9 Mar 19 **(F-to-F)**	**Literature Review DUE** Evaluation and Reflection Discuss Design Research Plans	Read McKenney & Reeves, Chapter 7 Available Posted Online Readings
10 Mar 26 (Asynch)	Implementation and Spread Work on Design Research Plan Design Research Presentations Read colleagues' Papers	Read McKenney & Reeves, Chapter 8 Available Posted Online Readings
11 April 2 (Asynch)	Writing Proposals for EDR Design Research: Exploration into Methodologies Work on Design Research Plan Feedback on Collegial Papers	Read McKenney & Reeves, Chapter 9 Available Posted Online Readings Refine Design Research Plan
12 April 9 (Asychn)	**Second DBR Case Chapter Review DUE** Reporting EDR Work on Design Research Plan Feedback on Collegial Papers	Read McKenney & Reeves Chapter10 Refine Design Research Plan
13 April 16 (Asynch)	Looking back and ahead Finalize Design Research Plan Group Feedback on Design Plan	Refine Design Research Plan
14 April 23 (**F-to-F**)	Research Plan Finalize Design Research Plan Group Feedback on Design Plan	Refine Design Research Plan
15 April 30 (Asynch)	Research Plan Finalize Design Research Plan Individual Meetings Week **Peer Jigsaw Feedback Due**	Refine Design Research Plan

16 May 7 (Asynch)	**Final Design Research Plan - Due**	**Congratulations!**

Core Values Commitment

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

GMU Policies and Resources for Students

Policies

- Students must adhere to the guidelines of the Mason Honor Code (see https://catalog.gmu.edu/policies/honor-code-system/).
- Students must follow the university policy for Responsible Use of Computing (see http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/).
- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.
- Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see http://ods.gmu.edu/).
- Students must follow the university policy stating that all sound emitting devices shall be silenced during class unless otherwise authorized by the instructor.

Campus Resources

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

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

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

Assignment Details

1. Literature review or synthesis (30%) - Each student will identify a teaching, learning or training phenomenon to thoroughly investigate by examining related literature and provide theoretical grounding for their own potential design research study involving initial or iterative development, evaluation or implementation of an intervention (i.e. curriculum, program, course, system or strategy). Each literature review will adhere to the following parameters. :

- Examination of at least 10 current, related research and conceptual journal articles
- 5-10 page synthesis of the journal articles to represent current state of research in this area and identified gap for a design research study
- Adherence to APA citation standards

2. Review and presentation of first design research case example (10%) -- Each student will write reviews using designated form and present their individual analysis of two design research examples. The EDR case example will include a description of the context and methodological approach (curriculum/training interventions, systemic school programs, informal or formal teaching-learning strategies and materials, technology-based products and systems, etc.) for review.

Each review and presentation will be expected to provide:

- Two written 2- page reviews of two EDR cases according to presented format
- A posted presentation of the two cases – outlining related literature, research questions, research cycles, methods, analysis, results and conclusions
- A statement of how what was learned in the review of the two cases relates to the individual's area of interest in design research

3. Review and presentation of second design research case example (10%) – see criteria above.

4. Jigsaw Feedback on Literature Review and Research Plan (10%) - Each student will read at least two other students' literature reviews and research plans to make suggestions and comments on substance, writing, research plan and implications, etc. This jigsaw feedback circle will require each student to be prepared to select, discuss and make constructive commentary on another's work. In this manner, all will benefit from multiple perspectives on the potential implementation of a design research study which will provide a reviewed plan for future doctoral courses. The jigsaw review will consist of:

- Each small group of three will read at least two other drafts of literature review
- Each student will switch drafts and come together to discuss at each of the three rounds
- Commentary, editing and suggestions will be conducted in one week
- Polished final drafts will be turned in on the due date for Literature Review and at the end

of the course for the research plan.

5. Research Plan (40%) - Each student will write a research plan articulating specific potential phases of an iterative design research program of study related to an identified phenomenon and intervention. This research plan will be written in a manner similar to a grant or dissertation proposal containing the following elements:

- Statement of the problem
- Revision/Addition to existing literature review
- Generated theoretical conjectures and related potential research questions
- Articulated possible program of study including iterative cycles of integrated design and research aligned with specific design research phase(s)
- Alignment of initial learning targets, task analysis, intervention features and research questions
- Justification and rationale related to overall selection of methods, potential research questions for cycle and potential design implications to uncover

Assignment Rubrics

IBSTPI Competency	Criteria	Exceeds Standards	Meets Standards	Does Not Meet Standards
Professional Foundations Communicate effectively in written & oral form Apply current research and theory to the discipline of instructional design	Review and presentation of a first design research case (10 points)	Well-written and presented research study review of cycle(s) of design research with description of the testing of the intervention. Concise overview of research questions literature, research questions, methods, results and conclusions presented. Evidence of consideration how this study could be considered or revised into a cycle of design research. A thorough consideration of how this study relates to the individual's area of interest in design research or what was learned about design research processes in this task. *10*	Written and presented research study review of cycle(s) of design research with adequate description of the testing of the intervention. Overview of research questions literature, research questions, methods, results and conclusions presented. Some evidence of consideration how this study could be considered or revised into a cycle of design research. A statement of how this study relates to the individual's area of interest in design research or what was learned about design research processes in this task. *8-9*	Poorly written and presented research study with little relevance to example of cycle(s) of design research with limited description of the testing of the intervention. Some overview of research questions literature, research questions, methods, results and conclusions presented. Little evidence of consideration how this study could be considered or revised into a cycle of design research. Limited statement of how this study relates to the individual's area of interest in design research or what was learned about design research processes in this task. *7 or below*

Professional Foundations Communicate effectively in written & oral form Apply current research and theory to the discipline of instructional design	Review and presentation of second design research case (10 points)	Well-written and presented research study review of cycle(s) of design research with description of the testing of the intervention. Concise overview of research questions literature, research questions, methods, results and conclusions presented. Evidence of consideration how this study could be considered or revised into a cycle of design research. A thorough consideration of how this study relates to the individual's area of interest in design research or what was learned about design research processes in this task. *10*	Written and presented research study review of cycle(s) of design research with adequate description of the testing of the intervention. Overview of research questions literature, research questions, methods, results and conclusions presented. Some evidence of consideration how this study could be considered or revised into a cycle of design research. A statement of how this study relates to the individual's area of interest in design research or what was learned about design research processes in this task. *8-9*	Poorly written and presented research study with little relevance to example of cycle(s) of design research with limited description of the testing of the intervention. Some overview of research questions literature, research questions, methods, results and conclusions presented. Little evidence of consideration how this study could be considered or revised into a cycle of design research. Limited statement of how this study relates to the individual's area of interest in design research or what was learned about design research processes in this task. *7 or below*

Professional Foundations Communicate effectively in written & oral form Apply current research and theory to the discipline of instructional design	Literature review or synthesis (30 points)	Thorough literature review written on an identified teaching, learning or training phenomena of interest. Synthesis of theoretical grounding to inform future design research study planning. Evidence of review of at least 10 selective, current research and conceptual journal articles, 5-10 reviewed, professionally written pages and adherence to APA format. *30*	Adequate literature review written on an identified teaching, learning or training phenomena of interest. Some synthesis of theoretical grounding to inform future design research study planning. Evidence of review of at least 10 current research and conceptual journal articles, 5-10 written pages and adherence to APA format. *28-29*	Limited literature review written on an identified teaching, learning or training phenomena of interest. Little synthesis of theoretical grounding to inform future design research study planning. Little evidence of review of less than 10 current research and conceptual journal articles, less than 5-10 written pages demonstrating little review/editing and not adequate adherence to APA format. *27 or below*
Professional Foundations Communicate effectively in written & oral form Apply current research and theory to the discipline of instructional design	Research Plan (40 points)	A thorough research plan that well-articulates specific phases of iterative design research. Well-conceptualized with logical connection to research questions. Plan includes logical statement of problem (falling from earlier literature review), theoretical conjectures and related research questions, demonstrated iterative cycles of design and research. The plan provides clear evidence of alignment of initial learning targets, task analysis, potential intervention features and research questions. *40*	A research plan that articulates phases of iterative design research. Conceptualized with logical connection to research questions. Plan includes statement of problem (falling from earlier literature review), theoretical conjectures and related research questions, iterative cycles of design and research. The plan provides evidence of some alignment of initial learning targets, task analysis, potential intervention features and research questions. *38-39*	A limited research plan that presents some phases of iterative design research. Conceptualized without logical connection to research questions. Plan does not include one or more of the following: statement of problem theoretical conjectures and related research questions, iterative cycles of design and research. The plan provides little evidence of alignment of initial learning targets, task analysis, potential intervention, etc. *37 and below*

Professional Foundations Communicate effectively in written & oral form Apply current research and theory to the discipline of instructional design	Jigsaw Feedback (10 points)	Evidence of outstanding commentary/editing on at least two other students' literature reviews and research plans with helpful, constructive suggestions and comments on substance, writing, research plan and implications, etc. Polished drafts are submitted to other students and instructor in a timely manner.	Evidence of commentary/editing on at least two other students' literature reviews and research plans with suggestions and comments on substance, writing, research plan and implications, etc. Polished drafts are submitted to other students and instructor by due dates.	Little or no evidence of commentary/editing on at least two other students' literature reviews and research plans with suggestions and comments on substance, writing, research plan and implications, etc. Drafts are not submitted to other students and instructor by due dates.