

George Mason University
College of Education and Human Development
Instructional Design and Technology Program (IDT)
EDIT 730 - Advanced Instructional Design – Section DL1 – 3 Credits
Spring 2021 Syllabus

General Information

Instructor: Dr. Nada Dabbagh
Office: Thompson Hall, L047 (office hours by appointment)
Email: ndabbagh@gmu.edu
Phone: (703) 993-4439 (voicemail transfers to email)

Division of Learning Technologies
Instructional Design & Technology Program

Course Description

Catalog Description: Provides students with the knowledge and skills for designing highly contextualized and engaging problem-solving learning environments using a grounded, theory-based design approach. Emphasizes the design of technology supported learning environments using a variety of pedagogical models and instructional strategies.

Expanded Description: Provides students with the knowledge and skills for designing and facilitating highly contextualized, engaging, and meaningful learning experiences based on the principles of constructivism and related learning paradigms and instructional theories. The focus is on **grounded or theory-based design**, extending the systematic process of instructional design as discussed in EDIT 705 (e.g., ADDIE). Knowledge of the principles of systematic instructional design are fundamental to understanding and implementing this design approach. The course also emphasizes the design of **online or technology supported learning environments (TSLEs)** using proven pedagogical models, instructional strategies, and learning technologies.

Pre-requisites: EDIT 705; students are expected to be proficient in the principles and processes of instructional design (e.g., performing task and audience analysis, writing learning outcomes or instructional objectives, and aligning learning outcomes with taxonomies for identifying learning domains and assessment).

Course Delivery Method: This course will be delivered **100% online** using mostly in 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 the first day of class. There will be **FIVE synchronous meetings** using Zoom or a similar platform on the following dates (**please mark your calendars accordingly**):

1. Tuesday January 26, 4:30 – 6:00 PM
2. Tuesday February 9, 4:30 – 6:00 PM
3. Tuesday March 9, 4:30 – 6:00 PM
4. Tuesday April 6, 4:30 – 6:00 PM
5. Tuesday May 4, 4:30 – 6:00 PM

Technical Requirements

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.

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: [Add or delete options, as desire.]
 - 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:** Our course week will begin on **Tuesday** and end on **Monday**.
- **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 3 times per week**. In addition, students must plan to attend all **eight synchronous meetings** listed above. The instructor may cancel some of those meetings with due notice and depending on course progress and learning needs.
- **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 (timeline)** 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 Instructional Objectives

1. Develop an understanding of epistemological approaches to learning and cognition such as **objectivism, behaviorism, cognitivism, constructivism, and connectivism**.
2. Develop an understanding of **grounded design** or **theory-based design**.
3. Develop an **applied** understanding of **constructivism** and its implications for designing Constructivist Learning Environments (CLEs) and **meaningful learning experiences**.
4. Examine a variety of constructivist-based pedagogical models and instructional strategies and their implications for the design of meaningful learning experiences using learning technologies.
5. Appreciate the importance of the linkage between theories of learning and instructional design practice.

Professional Standards

The learning outcomes for this course align with the 2012 International Board of Standards for Training, Performance and Instruction (IBSTPI) competencies of *Professional Foundations* and *Design and Development* as follows (see <http://www.ibstpi.org/instructional-design-competencies/>):

- *Professional Foundations (2)*: Apply research and theory to the discipline of instructional design
- *Planning & Analysis (9)*: Analyze the characteristics of existing & emerging technologies & their potential use
- *Design & Development (10)*: Use an instructional design & development process appropriate for a given project
- *Design & Development (11)*: Organize instructional programs/products to be designed, developed, and evaluated
- *Design & Development (12)*: Design instructional interventions

Required Texts

Dabbagh, N., Marra, R.M., & Howland, J.L. (2019). *Meaningful online learning: Integrating strategies, activities, and learning technologies for effective designs*. Routledge.

Additional readings are provided on Blackboard (Bb). The Blackboard course website will have a variety of **instructional resources organized according to the learning modules in the timeline below and should be explored with each module**. To access Blackboard, go to mymason.gmu.edu

Learning Activities, Performance Based Assessments, and Grading Policy

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

CLE (Constructivist Learning Environment) Criteria and Application **25% of grade**

In small groups or individually, students will (a) identify theoretical principles and instructional characteristics of Constructivist Learning Environments (CLEs) based on the readings and additional reliable resources, (b) contrast these to the theoretical principles and instructional characteristics of Objectivist/Behaviorist Learning Environments (OLEs), (c) find and share an example of a CLE that is **technology supported** and adheres to the CLE principles and characteristics identified in (a), and (d) critique the extent to which the selected CLE example embodies the principles of constructivism. The end product for this assignment is a 15-20-minute online presentation that describes the findings of the group with respect to these items. More detail is provided on the course website.

Online Participation **25% of grade**

The course includes synchronous and asynchronous online activities. Asynchronous activities include the use of blogs, vlogs, or discussion forums (20%) designed to help you articulate your understanding of the readings, share multiple perspectives and provide constructive peer feedback. Synchronous activities (5%) include participation in the scheduled synchronous meetings as well as group work related to assignments. Rubrics for evaluating online participation are provided on the course website under assignments.

Research Brief **25% of grade**

Each student will select a constructivist based pedagogical model (e.g., communities of practice, situated learning, problem-based learning) OR an instructional strategy (e.g., collaboration, articulation, problem solving), OR a learning technology (e.g., immersive tools, collaboration tools, knowledge representation tools) and write a **research brief** based on the *5 Things You Need to Know About*: (1) What is it? (2) How does it work? (3) Who is doing it? (4) How effective is it and how has it evolved? (5) What are its implications for instructional design? References can include course readings as well as **empirical research** related to the topic of the brief. More detail is provided on the course website under assignments.

Designing a Technology Supported Constructivist Learning Environment (TSCLE) **25% of grade**

Individually or in small groups, students will select a constructivist based pedagogical model OR the characteristics of meaningful learning as represented in the Meaningful Online Learning (MOL) Design Framework and will apply a **grounded design approach** to develop a **prototype of the TSCLE** for a specific target audience, learning problem, and learning content. The prototype will demonstrate how supportive, dialogic, and exploratory instructional strategies are implemented as learning activities to engage the target audience in meaningful learning. **This is a Performance Based Assessment or PBA (rubric provided at end of syllabus).**

The final deliverable for this PBA should include the following **three** components:

1. A **proposal** (design document or design brief) describing the parameters of the TSCLE including the learning problem, target audience, learning outcomes (knowledge/skills/content), pedagogical model, instructional strategies, learning activities, learning technologies, and assessment approach.
2. A **design table** depicting the grounded design of the TSCLE. The table is a blueprint or storyboard of the prototype and should illustrate the mapping or alignment of the following design elements: (1) learning outcomes, (2) instructional strategies, (3) learning activities or tasks (what the learners will do) and how these activities support meaningful learning, (4) the learning technologies that will enable learners to accomplish these tasks, and (5) assessment criteria/activities.
3. A **prototype** of the TSCLE showing the **learning activities** that the learners will engage in and the supporting learning technologies. The prototype can be developed in PPT or a technology of your choice (e.g., wiki, googlesites, Wix, Wordpress, Adobe Captivate, etc.).

Grades are based on the successful completion of course requirements and on the scope, quality and creativity of the assignments. To get an A in this course, students should demonstrate critical thinking skills through active synthesis of reading material, integration of prior knowledge and experience, and through problem-solving, argumentation, and reasoning.

Grade distribution is as follows: A+ = 97 - 100 (exceeds expectations on all requirements); A = 93 - 96 (meets expectations, excellent performance); A- = 90 - 92 (meets expectations, very good performance); B+ = 86 - 89 (meets most expectations, good performance); B = 83 - 85 (meets most expectations, satisfactory performance); B- = 80 - 82 (meets some expectations, average performance); C = 70 - 79 (notably below expectations).

The instructor reserves the right to deduct up to 10% of an assignment grade per day for late submissions without a valid excuse. Missing more than 2 synchronous classes over the semester can also result in grade reduction.

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

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/>

GEORGE MASON UNIVERSITY 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://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/>

Class Schedule**(Faculty reserve the right to alter the schedule as necessary, with notification to students)****MODULE 1: LEARNING PARADIGMS AND INSTRUCTIONAL DESIGN****Week 1: Tuesday January 26 (synchronous 4:30 – 6 PM) – Monday February 1**

- Course intro
- Icebreaker activity
- General discussion on learning theories, epistemologies, and grounded design
- Post bios to Blackboard “Meet & Greet” forum
- **Assign teams for CLE assignment**

Readings:

- Ertmer & Newby (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective (Bb)
- Jonassen (1991). Objectivism versus constructivism: Do we need a new philosophical paradigm? (Bb)
- Siemens (2005). Connectivism: A learning theory for the digital age (Bb)

Learning Activities:

- Provide comments on the “Meet & Greet” forum as appropriate
- Explore online resources under Week 1
- Explore resources under student-created OER intervention link
- Post a blog on the ice breaker activity, guidelines provided in Bb (blog #1)
- Work on *objectivism-cognitivism-constructivism-connectivism* comparison table

Week 2: Tuesday February 2 – Monday February 8Readings:

- Mattar (2018). Constructivism and connectivism in educational technology (Bb)
- Dabbagh (2005). Constructivist based pedagogical models (Bb)

Learning Activities:

- Explore online resources under Week 2
- Continue refining epistemology comparison table based on new readings and instructor and peer feedback
- Review existing CLE example presentation in the MERLOT database
- Begin researching an example of a CLE with your teammate
- Post a blog on week 2 readings, guidelines will be provided in Bb (blog #2)

Week 3: Tuesday February 9 (synchronous 4:30 – 6 PM) – Monday February 15Learning Activities:

- Comment on two peer blogs from week 2 readings
- Complete and post epistemology comparison table
- Work on and complete CLE assignment (use synchronous class time for this)
- **CLE presentations due by midnight Monday February 15**

MODULE 2: SITUATED LEARNING, COGNITIVE APPRENTICESHIP, COMMUNITIES OF PRACTICE**Week 4: Tuesday February 16 – Monday February 22**Readings:

- Herrington & Oliver (n.d.). Critical characteristics of situated learning (Bb)
- Collins & Kapur (2014). Cognitive apprenticeship (Bb)
- Communities of Practice: A brief introduction by Etienne Wenger (Bb)

Learning Activities:

- Explore online resources under Week 4
- Post responses to Week 4 resources/examples in the discussion board, guidelines provided in Bb (disc #1)
- Provide peer critique on CLE presentations
- **Submit idea (learning design problem) for final project**

MODULE 3: GOAL-BASED SCENARIOS, PROBLEM-BASED LEARNING***Week 5: Tuesday February 23 – Monday March 1***Readings:

- Schank, et al. (2009). The design of goal-based scenarios (Bb)
- Hsu & Moore (2010). An example implementation of Schank's goal-based scenarios (Bb)

Learning Activities:

- Explore online resources under Week 5
- Post a blog on the readings, guidelines will be provided in Bb (blog #3)

Week 6: Tuesday March 2 - Monday March 8Readings:

- Newman (2005). Problem Based Learning: An introduction and overview (Bb)
- Dabbagh (2019). Effects of PBL on critical thinking skills (Bb)

Learning activities:

- Explore online resources under Week 6
- Comment on two peer blogs from Week 5 readings
- Create a comparison table across pedagogical models, guidelines will be provided in Bb
- **Select topic for research brief, post to wiki space by March 8**

MODULE 4: INSTRUCTIONAL DESIGN FOR TSCLE***Week 7: Tuesday March 9 (synchronous 4:30 – 6 PM) – Monday March 15***Readings:

- Chapters 1, 2, & 3 (MOL textbook)

Learning Activities:

- Discuss PBL (week 6) readings online
- complete pedagogical models' comparison table
- Explore online resources under Week 7
- Participate in the online discussion, guidelines will be provided in Bb (disc #2)

Week 8: Tuesday March 16 – Monday March 22Readings:

- Chapter 4 (MOL textbook)

Learning Activities:

- Work on research brief
- Explore online resources under Week 8
- Post a blog on chapter 4, guidelines will be provided in Bb (blog #4)

Week 9: Tuesday March 23 – Monday March 29Readings:

- Chapters 5, 6, & 7 (MOL textbook)

Learning activities:

- **Research brief due by midnight Monday March 29**
- Comment on two peer blogs from Week 8 readings
- Participate in the online discussion, guidelines will be provided in Bb (disc #3)

Week 10: Tuesday March 30 – Monday April 5Readings:

- Chapter 8 (MOL textbook)

Learning activities:

- Post blog on chapter 8, guidelines will be provided in Bb (blog #5)

MODULE 5: GAMES & SIMULATIONS**Week 11: Tuesday April 6 (synchronous 4:30 – 6 PM)–Monday April 12**

- **Final project proposal due by midnight Monday April 12**

Readings:

- Barab, Gresalfi, Ingram-Goble (2010) – Transformational Play (Bb)
- Prensky (2001) – Simulations: Are They Games (Bb)

Learning activities:

- Explore online resources under Week 11
- Work on final project proposal
- Comment on two peer blogs from Week 10 readings
- Participate in online discussion, guidelines will be provided in Bb (disc#4)

Week 12: Tuesday April 13 – Monday April 19Learning activities:

- Feedback on final project proposal
- Revise research brief if needed

Week 13: Tuesday April 20 (individual consultations if needed) – Monday April 26

- **Work on final project**

Week 14: Tuesday April 27 - Monday May 3

- **Final project due by midnight Monday May 3**

Week 15: Tuesday May 4 (synchronous 4:30 – 6 PM)

- **Final project presentations online**
- **Class Synthesis**

Performance Based Assessment Rubric
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Rubric for the Performance Based Assessment “Designing a Technology Supported Constructivist Learning Environment (TSCLE)” (rubrics for the other assignments are available on the course website)

IBSTPI Competency	Criteria	Exceeds Standards(3)	Meets Standards (2)	Does Not Meet Standards (1)
Professional Foundations #2 5 points	Project Proposal	All parameters of the TSCLE are included and clearly described	Most parameters of the TSCLE are included and clearly described	Some parameters of the TSCLE are missing or not clearly described
Design & Development #10 5 points	Design Table	The Meaningful Online Learning Design Framework is effectively applied and the elements are pedagogically aligned	The Meaningful Online Learning Design Framework is effectively applied but some of the elements are missing or not pedagogically aligned	The Meaningful Online Learning Design Framework is not applied or the elements are not pedagogically aligned
Design & Development #11 5 points	Design Table	All elements of the design table are included and pedagogically aligned	Most elements of the design table are included and pedagogically aligned	Several elements of the design table are missing or not pedagogically aligned
Planning & Analysis #9 5 points	Prototype	The learning activities are demonstrated in the prototype using appropriate technologies	Most learning activities are demonstrated in the prototype using appropriate technologies	Several learning activities are missing in the prototype or the technologies used to demonstrate them are not appropriate
Design & Development #12 5 points	Prototype	The prototype effectively demonstrates the design of a TSCLE	The prototype mostly demonstrates the design of a TSCLE	The prototype does not effectively demonstrate the design of a TSCLE