

George Mason University
College of Education and Human Development
Instructional Design and Technology Program (IDT)
EDIT 730 - Advanced Instructional Design – Section 001 – 3 Credits
Spring 2019 Syllabus

General Information

Time: Tuesdays, 4:30 PM – 7:10 PM
Location: Thompson Hall L003
Instructor: Dr. Nada Dabbagh
Phone: (703) 993-4439

Division of Learning Technologies
IDT Program: <http://learntech.gmu.edu/idt/>
Office: Thompson Hall, L047 (office hours by appointment)
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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, situated cognition, and connectivism. Readings expose students to a range of epistemological and theoretical perspectives as evidenced by instructional design literature and applications. The focus is on **grounded or theory-based design**, which differs from the systematic process of instructional design as discussed in EDIT 705 (e.g., ADDIE). However, 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 online (75% or more) 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 the first day of class. The course will have **five mandatory face-to-face meetings** as follows:

- Tuesday January 22, 4:30 – 7:10, Thompson Hall L003
- Tuesday February 12, 4:30 – 7:10, Thompson Hall L003
- Tuesday March 19, 4:30 – 7:10, Thompson Hall L003
- Tuesday April 16, 4:30 – 7:10, Thompson Hall L003
- Tuesday May 7, 4:30 – 7:10, Thompson Hall L003

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 the day that our face-to-face meetings take place (**Tuesday**) and finish 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 attend all **five face to face meetings** listed above.
- 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 insure accessibility must be registered with George Mason University Disability Services.

Learner Outcomes or Objectives

1. Develop an understanding of epistemological approaches to learning and cognition such as **objectivism, behaviorism, cognitivism, constructivism, situated cognition, 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 **meaningful learning experiences** using the **Meaningful Online Learning Design Framework**.
4. Examine a variety of constructivist-based **pedagogical models and instructional strategies** and their implications for the design of meaningful learning experiences using a variety of 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) or as handouts in class. 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 (e.g., Bb, TK20, etc.)

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

In groups, 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 or Behaviorist Learning Environments (OLEs), (c) find and share an example of a CLE that is **technology supported** and subscribes to the CLE principles and characteristics identified, and (d) critique the extent to which the selected CLE example embodies the principles of constructivism. The end product for this assignment is a 20-25 minute in-class presentation that describes the findings of the group with respect to these items. More detail is provided on the course website under assignments.

Online and In-Class Participation **25% of grade**

The course includes online and in-class discussions and activities. Online activities include the use of blogs, vlogs, or discussion forums (15%) designed to help you articulate your understanding of the readings, share multiple perspectives and provide constructive peer feedback. In-class activities (10%) include group work and whole group discussions. *Students are expected to come to class fully prepared to discuss the readings*. Rubrics for evaluating class participation are provided on the course website under assignments. **On time class attendance is critical to successful class participation.**

Research Brief **25% of grade**

Each student will select a constructivist based pedagogical model (e.g., cognitive apprenticeship, community of practice, situated learning, problem based learning) OR an instructional strategy (e.g., collaboration, articulation, scaffolding, 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? (5) What are its implications for instructional design? References should include course readings as well as new empirical research related to the selected model, strategy, or technology. 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 meaningful learning characteristics and will apply a **grounded design approach** i.e. the **Meaningful Online Learning Design Framework** to develop a **prototype of the TSCLE** for a specific target audience and learning content. The prototype will demonstrate how supportive, dialogic, and exploratory instructional strategies are implemented. **This is a Performance Based Assessment or PBA (rubric provided at end of syllabus).**

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

1. A **proposal** (design document) describing the parameters of the TSCLE including the learning problem, target audience, learning outcomes (knowledge/skills/content), pedagogical model or meaningful learning framework, 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.
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 classes over the semester can also result in grade reduction. If you miss class, it is **your responsibility** to **make up** the work (this includes classwork).

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

- 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://coursesupport.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/>

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 22 – Monday January 28****f2f class**

- Course intro
- In-class 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 Module 1
- Post a blog on the ice breaker activity
- Post a brief summary of a learning or training design problem that you have recently encountered or solved to the “Learning Design Problems” discussion forum
- Share your team’s *objectivism-cognitivism-constructivism-connectivism* comparison table in the wiki space

Week 2: Tuesday January 29 – Monday February 4**online**Readings:

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

Learning Activities:

- Explore online resources under Module 1
- Continue refining epistemology comparison table based on new readings and instructor and peer feedback
- Begin researching an example of a CLE with your teammate
- Comment on two Learning Design Problems posts in the discussion board
- Post a blog on week 2 readings, guidelines will be provided in Bb

Week 3: Tuesday February 5 – Monday February 11**online**Learning Activities:

- Comment on two peer blogs from week 2 readings
- Complete epistemology comparison table
- Work on and complete CLE assignment

MODULE 2: SITUATED LEARNING, COGNITIVE APPRENTICESHIP, COMMUNITIES OF PRACTICE**Week 4: Tuesday February 12 – Monday February 18****CLE PRESENTATIONS****f2f class**

- **CLE presentation in class on Tuesday February 12**

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 Module 2
- Post responses to Module 2 resources/examples in the discussion board, guidelines provided in Bb

MODULE 3: INSTRUCTIONAL DESIGN FOR TECHNOLOGY SUPPORTED CONSTRUCTIVIST LEARNING ENVIRONMENTS (TSCLE)

Week 5: Tuesday February 19 – Monday February 25 **online**

Readings:

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

Learning Activities:

- Explore online resources under Module 3
- Participate in the online discussion, guidelines will be provided in Bb

Week 6: Tuesday February 26 – Monday March 4 **online**

Readings:

- Chapter 4 (MOL textbook)

Learning Activities:

- Select topic for research brief
- Explore online resources under Module 3
- Post a blog on chapter 4, guidelines will be provided in Bb

Week 7: Tuesday March 5 – Monday March 11 **online**

Readings:

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

Learning activities:

- Work on research brief
- Comment on two peer blogs from week 6 readings

Week 8: Tuesday March 12 – Monday March 18 **spring break**

Week 9: Tuesday March 19 – Monday March 25 **f2f class**

- **Research Brief Due**
- **Face to face class on Tuesday March 19**

Readings:

- Chapter 8 (MOL textbook)

Learning activities:

- Post blog on chapter 8, guidelines will be provided in Bb

MODULE 4: GOAL-BASED SCENARIOS

Week 10: Tuesday March 26 – Monday April 1 **online**

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:

- Comment on two peer blogs from week 9 readings
- Explore online resources under Module 4
- Participate in online discussion, guidelines will be provided in Bb

MODULE 5: PROBLEM-BASED LEARNING**Week 11: Tuesday April 2 – Monday April 8** **online**Readings:

- 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 Module 5
- Create a comparison table across pedagogical models, guidelines will be provided in Bb

MODULE 6: GAMES & SIMULATIONS**Week 12: Tuesday April 9 – Monday April 15** **online**Readings:

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

Learning activities:

- Explore online resources under Module 6
- Work on final project proposal
- Participate in online discussion

Week 13: Tuesday April 16 – Monday April 22 **f2f class**

- **Final project proposal due**
- **Face to face class on Tuesday April 16**
- **Class synthesis**

Week 14: Tuesday April 23 – Monday April 29 **online**

- Work on final project

Week 15: Tuesday April 30 – Monday May 6 **online**

- Tuesday April 30, office hours, consultations on final project

Week 16: Tuesday May 7 **f2f class**

- **In-class Final Project Presentations**

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