

Advanced Instructional Design
EDIT 732 – 3 credits (pre-requisite EDIT 705)
Course Syllabus
Spring 2009

George Mason University

<http://courses.gmu.edu>

General Information

Time: Tuesdays, 4:30 PM – 7:10 PM

Location: Commerce II 100

Instructor: Dr. Nada Dabbagh

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Course Objective

This course provides students with the knowledge and skills for designing highly contextualized and engaging learning environments based on the principles of constructivism, situated cognition, open-ended learning, and learner-centered instruction. The readings expose students to current and emerging 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 (ADDIE model) as discussed in EDIT 705. However, many principles of systematic instructional design will be fundamental to understanding and implementing this design approach. Additionally, the course emphasizes the design of e- learning environments using a variety of constructivist-based pedagogical models. The course will be conducted through a mixture of lecture, in-class discussions, online discussions, and project-based individual and collaborative learning activities.

Course Objectives

1. To develop an understanding of epistemological approaches to learning and cognition such as **objectivism**, **cognitivism**, and **constructivism**.
2. To be able to **compare** and **contrast** constructivist and objectivist approaches to learning and instruction.
3. To develop an understanding of **constructivism** and **situated cognition** as a foundation for a comprehensive view of learning and instruction.
4. To develop an **applied** understanding of the implications of **constructivism** and **situated cognition** for instructional design.
5. To explore alternative constructivist **pedagogical models** and their implications for the design and evaluation of technology-supported learning environments.
6. To appreciate the importance of the linkage between theories of learning and instructional design practice.

Instructional Resources

Required Texts:

- (1) Dabbagh, N., & Bannan-Ritland, B. (2005). *Online Learning: Concepts, Strategies, and Application*. Prentice Hall, Merrill Education.
- (2) Duffy, T., & Jonassen, D. (1992). *Constructivism and the Technology of Instruction: A Conversation*. Lawrence Erlbaum Associates).

Additional readings will be in PDF format on Blackboard CE6 or provided as handouts in class. If you miss class, it is **your responsibility** to check on what you missed. The CE6 course website also has a variety of instructional resources **organized according to the learning modules in the timeline below and should be visited with each module**. To access CE6, go to courses.gmu.edu and use your GMU email userid and password to logon.

Learning Activities and Grading Policy

Compare and Contrast Assignment (C&C)

25% of grade

In groups of two, students will identify and compare and contrast two technology supported learning environments (or instructional applications) that are rooted in two opposing learning paradigms (one objectivist and the other constructivist). Students will demonstrate contrasting characteristics of the selected learning environments to the class in a 10-minute oral presentation. Students should justify or support these characteristics using the theoretical principles of each learning paradigm and citing class readings/resources and additional resources. The presentation, characteristics of the applications, theoretical principles, and references/resources used, should be uploaded to CE6. More detail about this assignment is provided on the course website.

Online and In-Class Participation

20% of grade

This course will adopt a **distributed** or **blended** delivery approach. Not all classes will meet face-to-face allowing for both in-class and online discussions. Online discussions will center on the readings and will be facilitated by the instructor. Discussion questions will be posted before the discussion begins to allow students ample time to formulate responses. A rubric for evaluating participation in online discussions is provided on the course website. Ten points will be allocated towards online discussion contributions and ten points will be allocated towards in-class participation, which includes discussion of readings and in-class group activities.

Case Study Assignment

25% of grade

In groups, students will review and create a written response to an instructional design case study. Each group will post their case solution to the course website and will critique another group's case solution through online and/or face-to-face discussion. Each group will amend their case solution based on the peer group critique. More detail about this assignment is provided on the course website.

Designing A Constructivist Learning Environment

30% of grade

Each student will select an application/model of constructivism (see the modules of the course) and design a **prototype of a learning environment** for a specific audience and learning content based on the pedagogical characteristics of the selected application. This final project should include the following elements:

- A short paper depicting **your understanding** of constructivism and its implications on teaching and learning. The paper should begin with (a) a discussion of constructivism, (b) a discussion of why the pedagogical model you selected for this project is based on constructivist principles, (c) a general description of the parameters and context of your learning environment, and (d) a conclusion describing how your prototype can be extended to different learning contexts (e.g., different learner population or different skills/content). **(APA style required)**.
- A matrix (table) demonstrating the parameters of the learning environment that you will be designing. The matrix should illustrate the mapping or alignment of the learning outcomes to: (1) the instructional strategies (i.e., the instructional characteristics of the pedagogical model that you selected), (2) learning activities (what the learners will do), and (3) the assessment criteria.
- A prototype of the learning environment showing all instructional parameters and learning activities. The prototype can be web-based, or, it can be done in PP or a technology tool of your choosing.

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 skills.

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 expectations, good performance), B = 83 - 85 (meets most expectations, good 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.

Course Timeline <i>(subject to change)</i>

Module 1: Learning Paradigms and Instructional Design**Tuesday January 20 (No Class – Inauguration Day!!)****No Class**

- Read Syllabus
- Post bios and initial idea for final project to CE6 main discussion area
- Read bios and project ideas and post comments by next class
- Download the icebreaker activity and jot down your thoughts for in-class sharing

Readings/resources to be completed/explored by Tuesday January 27

- Jonassen (1991). Objectivism versus Constructivism: Do We Need a New Philosophical Paradigm? (CE6)
- Merrill (1996). Reclaiming the Discipline of Instructional Design. (CE6)
- Jonassen (1996). There is No Need to Reclaim the Field of ID: It's Just Growing. (CE6)
- Explore the online resources under Module 1 (Take the C Test)

Tuesday January 27**f2f class**

- Introduce Course, discuss readings, share thoughts on icebreaker activity, explore resources

Readings/resources to be completed/explored by Tuesday February 3

- Ertmer & Newby. (1993). Behaviorism, Cognitivism, Constructivism: Comparing Critical Features from an Instructional Design Perspective. (handout)
- Chapter 1 (Duffy & Jonassen text)
- Chapter 1 (Dabbagh & Bannan-Ritland text)
- Continue exploring the online resources under Module 1

Tuesday February 3**ASSIGN TEAMS FOR C&C****f2f class****Module 2: Situated Cognition, Anchored Instruction, Cognitive Apprenticeships****Readings/resources to be completed/explored by Tuesday February 10**

- Duffy & Cunningham (1996). Constructivism: Implications for the design and delivery of instruction (CE6)
- Chapters 2 (Duffy & Jonassen text)
- Dennen – Cognitive Apprenticeship article (CE6)
- Explore the online resources under Module 2

Tuesday February 10**f2f class****Module 3: Instructional Design for Online Learning****Readings/resources to be completed/explored by Tuesday February 17**

- Chapters 4 (Dabbagh & Bannan-Ritland text)
- Chapters 4, 6, 7, & 9 (Duffy & Jonassen text)
- Continue exploring the online resources under Module 3

Tuesday February 17**FIRST ONLINE DISCUSSION****No Class**

- Discussion begins Tuesday the 17th and ends Sunday the 22nd at 5 pm. Discussion questions will be posted on CE6 by Monday the 16th or earlier.

Tuesday February 24**f2f class**

- Recap online discussion, work on C&C presentations

Tuesday March 3**C&C PRESENTATIONS****f2f class****Tuesday March 10****SPRING BREAK****No Class**

Readings/resources to be completed/explored by Tuesday March 17

- Chapters 5 & 6 (Dabbagh & Bannan-Ritland text)
- Chapters 17 & 19 (Duffy & Jonassen text)
- Continue exploring the online resources under Module 3
- Complete related activity

Tuesday March 17*f2f class*

- Discuss readings, complete class activities

Readings/resources to be completed/explored by Tuesday March 24

- Chapter 7 (Dabbagh & Bannan-Ritland text)
- Chapters 12, 13, & 15 (Duffy & Jonassen text)
- Continue exploring the online resources under Module 3

Tuesday March 24**ASSIGN TEAMS FOR CASE STUDY***f2f class***Module 4: Cognitive Flexibility Hypertexts, Case-Based Learning, and Goal-Based Scenarios**Readings/resources to be completed/explored by Tuesday March 31

- Kim, Hannafin, & Thomas (2004). Case-Based Reasoning. (CE6)
- Chapter 5 & 10 (Duffy & Jonassen)
- Godshalk, Harvey, & Moller (2003). The Role of Learning Task on Attitude Change using CFH. (CE6)
- Explore the online resources under Module 4

Tuesday March 31**ONLINE DISCUSSION #2***No class*

- Discussion begins Tuesday the 31st and ends Sunday April 4th at 5 pm. Discussion questions will be posted on CE6 by Monday the 30th or earlier.

Tuesday April 7*f2f class*

- Recap online discussion, work on case study assignment
- **POST INITIAL CASE STUDY SOLUTION BY MIDNIGHT FRIDAY APRIL 10**

Module 5: Games, Simulations, and Computer-Based MicroworldsReadings/resources to be completed/explored by Tuesday April 14

- Harper – Constructivist Simulations (CE6)
- Gredler – Games and Simulations (CE6)
- Rieber – Microworlds (CE6)
- Explore the online resources under Module 5

Tuesday April 14**FINAL PROJECT PROPOSAL DUE***f2f class***Module 6: Problem-Based Learning**Readings/resources to be completed/explored by Tuesday April 21

- Dabbagh paper on PBL (CE6)
- Barrows chapters on PBL (handout)
- Kolodner, et al. (2003). PBL Meets CBR. (CE6)
- Explore the online resources under Module 6

Tuesday April 21**CASE STUDY AMENDMENT DUE***f2f class*

- Discuss PBL readings, feedback on final project proposal

Tuesday April 28**GUEST SPEAKERS AND PRESENTERS***f2f class***Tuesday May 5****FINAL PROJECT DUE***f2f class*

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT STATEMENT OF EXPECTATIONS:

All students must abide by the following:

Students are expected to exhibit professional behavior and dispositions. See <http://gse.gmu.edu/facultystaffres/profdisp.htm> for a listing of these dispositions.

Students must follow the guidelines of the University Honor Code. See <http://www.gmu.edu/catalog/apolicies/#Anchor12> for the full honor code.

Students must agree to abide by the university policy for Responsible Use of Computing. See <http://www.gmu.edu/facstaff/policy/newpolicy/1301gen.html>. Click on responsible Use of Computing Policy at the bottom of the screen.

Students with disabilities who seek accommodations in a course must be registered with the GMU Disability Resource Center (DRC) and inform the instructor, in writing, at the beginning of the semester. See <http://www.gmu.edu/student/drc/> or call 703-993-2474 to access the DRC.