Advanced Instructional Design
EDIT 732 – 3 credits (*pre-requisite EDIT 705*)
Course Syllabus
Fall 2008

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) Jonassen, D. H. & Land, S. M. (2000). *Theoretical Foundations of Learning Environments*. Erlbaum.

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 is 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 ***(subject to change)***

Module 1: Learning Paradigms and Instructional Design

Tuesday August 26 ***f2f class***

- Intro to Course
- General discussion on learning theories and epistemologies
- Post bios and initial idea for final project to CE6 main discussion area
- Read bios and project ideas and post comments by next class

Readings/resources to be completed/explored by Tuesday September 2

- Ertmer & Newby. (1993). Behaviorism, Cognitivism, Constructivism: Comparing Critical Features from an Instructional Design Perspective. (handout)
- 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)
- Visit module 1 online resources (Take the C Test)

Tuesday September 2 **ASSIGN TEAMS FOR C&C** ***f2f class***

Readings/resources to be completed/explored by Tuesday September 9

- Duffy & Cunningham (1996). Constructivism: Implications for the design and delivery of instruction (CE6)
- Chapter 1 (Jonassen & Land text)
- Chapter 1 (Dabbagh & Bannan-Ritland text)
- Continue exploring module 1 online resources

Tuesday September 9 ***f2f class***

Module 2: Situated Cognition, Anchored Instruction, Cognitive Apprenticeships

Readings/resources to be completed/explored by Tuesday September 16

- Chapters 2 & 3 (Jonassen & Land text)
- Dennen – Cognitive Apprenticeship article (CE6)
- Visit module 2 online resources

Tuesday September 16 **ONLINE DISCUSSION #1** ***No f2f class***

- Discussion begins Tuesday the 16th and ends Sunday the 23rd at 5 pm. Discussion questions will be posted on CE6 by Monday the 15th or earlier.

Tuesday September 23 **RECAP DISCUSSION** ***f2f class***

- Work on C&C presentations

Tuesday September 30 **C&C PRESENTATIONS** ***f2f class***

Tuesday October 7 **C&C PRESENTATIONS** ***f2f class***

Tuesday October 14 **WORK ON CASE STUDY** ***No f2f class***

Module 3: Instructional Design for Online Learning

Readings/resources to be completed/explored by Tuesday October 21

- Chapters 4, 5, & 6 (Dabbagh & Bannan-Ritland text)
- Visit module 3 online resources

Tuesday October 21 ***f2f class***

Readings/resources to be completed/explored by Tuesday October 28
- Chapter 7 (Dabbagh & Bannan-Ritland text)
- Continue exploring module 3 online resources
- Read peer group case study draft solution and post questions/critique

Tuesday October 28 ***f2f class***

Tuesday November 4 ***No f2f class***

- Post case study draft solution before class time
- Read peer group case study draft
- Begin case study discussion online

Module 4: Cognitive Flexibility Hypertexts, Case-Based Learning, and Goal-Based Scenarios

Readings/resources to be completed/explored by Tuesday November 11
- Kim, Hannafin, & Thomas (2004). Case-Based Reasoning. (CE6)
- Chapter 9 (Jonassen & Land text)
- Godshalk, Harvey, & Moller (2003). The Role of Learning Task on Attitude Change using CFH. (CE6)
- Explore module 4 online resources

Tuesday November 11 **CASE STUDY AMENDMENTS DUE** ***f2f class***

Module 5: Games, Simulations, and Computer-Based Microworlds

Readings/resources to be completed/explored by Tuesday November 18
- Harper – Constructivist Simulations (CE6)
- Gredler – Games and Simulations (CE6)
- Rieber – Microworlds (CE6)
- Explore module 5 online resources

Tuesday November 18 **ONLINE DISCUSSION #2** ***No f2f class***

- Discussion begins Tuesday the 18th and ends Sunday the 23 at 5 pm. Discussion questions will be posted on CE6 by Monday the 17th or earlier.
- **FINAL PROJECT PROPOSAL DUE**

Module 6: Problem-Based Learning

Readings/resources to be completed/explored by Tuesday November 25
- Dabbagh paper on PBL (CE6)
- Barrows chapters on PBL (handout)
- Kolodner, et al. (2003). PBL Meets CBR. (CE6)
- Explore module 6 online resources

Tuesday November 25 ***f2f class***

Tuesday December 2 **GUEST SPEAKERS AND PRESENTERS** ***Last class***

Tuesday December 9 **FINAL PROJECT DUE** ***No 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.