Advanced Instructional Design **George Mason University, Spring 2005**

EDIT 732 – 3 credits
Course Syllabus **http://webct41.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 design or theory-based design, which differs from the systematic process of instructional design as discussed in EDIT/EDCI 705. However, many principles of systematic instructional design will be fundamental to understanding and implementing this approach. Additionally, the course emphasizes the design of online 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 collaborative learning activities.

Course Objectives

1. To develop an understanding of constructivism and situated cognition as a theory of learning.
2. To understand how constructivism and situated cognition serve as a foundation for a comprehensive view of learning and instruction.
3. To develop an applied understanding of the implications of constructivism and situated cognition on instructional design.
4. To be able to compare and contrast constructivist and objectivist approaches to learning and instruction.
5. To explore alternative constructivist perspectives and their implications on the design and evaluation of online learning environments.
6. To appreciate the importance of the linkage between theories of learning and instructional practice.

Instructional Resources

Texts:

(1) Dabbagh, N., & Bannan-Ritland, B. (2005). Online Learning: Concepts, Strategies, and Application. Merrill Prentice Hall.
(2) Jonassen, D. H. & Land, S. M. (2000). Theoretical Foundations of Learning Environments. Erlbaum.

Additional readings will be in PDF format on the course website. You are encouraged to become a member of the **Association for Educational Communications and Technology** (AECT), a leading organization in the field of Educational Technology to access these readings and take advantage of other services. The URL is a**ect.org**. The student membership fee is $50. For this fee, you will have access to several membership services as well as print and electronic publications, including the **Handbook of Research for Educational Communications and Technology,** which will provide additional readings for this course. The course website through WebCT will also have a variety of instructional resources related to technology-supported constructivist and objectivist learning environments as well as samples of previous students' projects to allow for comparing and contrasting theory-based instructional designs. To access WebCT, go to webct41.gmu.edu and use your GMU email id for userid and your birth month and birth day as passwod (mmdd). If you are an old WebCT user then your old settings should work.

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 each of the learning environments to the class in a 15-20 minute oral presentation. Students should justify (using class readings/resources and additional resources) the theoretical principles of each learning environment and demonstrate contrasting and opposing characteristics of the selected applications. The presentation, characteristics of the applications, theoretical principles, and resources used, should be uploaded to WebCT. More detail about this assignment will be provided on the course website.

Online and In-Class Participation **20% of grade**

This course will adopt a 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 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 these 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 discussion. Each group will amend their case solution based on the peer group critique. More detail about this assignment will be 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 and develop a learning environment for a specific audience and learning content based on the characteristics of the selected application. This final project should include the following elements:

- A short paper on the theoretical principles of constructivism and its implications on teaching and learning. The paper should also include a justification as to why the learning application/model that you have selected is based on constructivist principles (references required).
- The context and parameters of the learning environment that you will be designing, specifying the learners, the learning outcomes, the content, the context in which you will anchor the instruction (i.e., the cognitive puzzlement), the learning activities that you will engage the learners in, and the evaluation criteria.
- A web-based prototype of the learning environment showing all instructional parameters and learning activities.
- A conclusion on how you can expand your prototype to other student populations and content areas.

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).

Course Timeline ***(subject to change)***

Module 1: Learning Paradigms and Instructional Design

Tuesday January 25, 2005 ***face-to-face class***

- Intro to Course
- General Discussion on Learning Theories and epistemologies

Readings to be completed by February 1

- 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? (WebCT)
- Merrill (1996). Reclaiming the Discipline of Instructional Design. (WebCT)
- Jonassen (1996). There is No Need to Reclaim the Field of ID: It's Just Growing. (WebCT)

Tuesday February 1 **ASSIGN TEAMS FOR C&C** ***face-to-face class***

Readings to be completed by February 8

- Duffy & Cunningham (1996). Constructivism: Implications for the design and delivery of instruction. (WebCT)
- Chapter 1 (Jonassen & Land textbook)

Tuesday February8 ***face-to-face class***

Module 2: Situated Cognition, Anchored Instruction, Cognitive Apprenticeships

Readings to be completed by February 15

- Chapter 1 (Dabbagh & Bannan-Ritland texbook)
- Chapter 3 (Jonassen & Land textbook)

Tuesday February15 ***online discussion #1***

- Discussion begins Monday the 14th and ends Sunday the 20th

Readings to be completed by February 22

- Chapters 5 (Jonassen & Land textbook)
- Dennen – Cognitive Apprenticeship article (WebCT)

Tuesday February22 ***face-to-face class***

Module 3: Instructional Design for Online Learning

Readings to be completed by March 1

- Chapters 2 & 4 (Dabbagh & Bannan-Ritland textbook)

Tuesday March1 **C&C ASSIGNMENT DUE** ***face-to-face class***

Readings to be completed by March 8

- Chapters 5 & 6 (Dabbagh & Bannan-Ritland textbook)

Tuesday March8 **C&C PRESENTATIONS** ***face-to-face class***

Tuesday March15 **SPRING BREAK** **NO CLASS**

Readings to be completed by March 22

- Chapters 3 & 7 (Dabbagh & Bannan-Ritland textbook)

Tuesday March22 **ASSIGN TEAMS FOR CASE STUDY** ***face-to-face class***

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

Readings to be completed by March 29
- Kim, Hannafin, & Thomas (2004). Case-Based Reasoning. (WebCT)
- Chapter 9 (Jonassen & Land textbook)

Tuesday March 29 ***online discussion #2***
- Discussion begins Monday the 28th and ends Sunday April 3rd

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

Readings to be completed by April 5
- Harper – Constructivist Simulations (WebCT)
- Gredler – Games and Simulations (WebCT)
- Rieber – Microworlds (WebCT)

Tuesday April 5 **FINAL PROJECT PROPOSAL DUE** ***face-to-face class***

Tuesday April 12 **CASE STUDY RESPONSE DUE** **NO CLASS**

- Case study response should be posted to WebCT before class time on Tuesday April 12. Groups should spend class time reading and discussing peer group response and preparing a critique. Case study online discussion critique begins on Wednesday April 13 and ends on Sunday April 18. Amendments to case study responses should be posted by Tuesday April 19.

Module 6: Virtual Learning Environments and Learning Communities

Readings to be completed by April 19
- Dede's papers (WebCT)
- Chapter 2 (Jonassen & Land textbook)

Tuesday April 19 **FEEDBACK ON FINAL PROJECT** ***face-to-face class***

Module 7: Problem-Based Learning

Readings to be completed by April 26
- Dabbagh paper on PBL (WebCT)
- Barrows chapters on PBL (handout)

Tuesday April 26 ***online discussion #3***
- Discussion begins Monday the 25th and ends Sunday May 1st

Tuesday May 3 **LAST CLASS** ***face-to-face class***

Tuesday May 10 **FINAL PROJECT DUE** ***face-to-face class***

Tuesday May 17 **FINAL PROJECT DUE** ***(if needed)***