General Information

Time: Wednesdays, 7:20 PM – 10:00 PM
Location: Commerce II 100
Instructor: Dr. Nada Dabbagh
Phone: (703) 993-4439

Course Objective

This course provides students with the knowledge and skills of designing highly contextualized and engaging learning environments based on the principles of constructivism and open-ended learning. 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 somewhat 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 learning activities.

Course Objectives

1. To develop an understanding of constructivism as a theory of learning including an understanding of the principle concepts in a constructivist perspective.
2. To understand how constructivism serves as a foundation for a comprehensive view of learning and instruction.
3. To develop an understanding of the implications of constructivism 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

Readings

There will be no textbooks for this course. Instead, you are required to become a member of the Association for Educational Communications and Technology (AECT), a leading organization in the field. The URL is aect.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 Handbook of Research for Educational Communications and Technology, which will comprise a majority of the readings for this course. Other readings will be provided as PDF files through WebCT. These readings will include chapters from the book, Online Learning: Concepts, Strategies, and Application, authored by Nada Dabbagh and Brenda Bannan-Ritland. This book will be published by Prentice Hall, Merrill Education in April/May 2004. It is currently in press. Any additional readings will be provided through WebCT, e-reserves, or as class handouts.

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. Students are encouraged to visit those resources on a regular basis to become familiar with the characteristics of contextualized and engaging learning environments.
Learning Activities and Grading Policy

Evaluating Educational Software: Compare and Contrast (C&C) 25% of grade

In groups, students will access and evaluate Riverdeep’s web-based instructional product series. Riverdeep is one of the country’s largest educational software companies. Riverdeep has consolidated the educational software market by purchasing many companies, including The Learning Company, Edmark, Broderbund, Logal, Advantage, and SmartStuff Software among others. Recently, the Keller Institute for Human Disabilities (KIHD) at GMU has joined in a partnership with Riverdeep. This partnership gives KIHD and the Graduate School of Education (GSE) faculty access to Riverdeep’s web-based instructional product series. Students in this course will interact with instructional software in the content areas of math, science, and language arts, and will evaluate the software based on several instructional criteria to determine their pedagogical orientation. Groups will summarize their findings in a report format and present their findings in class. More detail about this assignment will be provided in a separate handout.

Case Study Response 25% of grade

In groups, students will review and create a written response to an instructional design case study. The case study will be web-based. Each group will post their case response to the course website and will critique another group’s case response through online discussion. Each group will amend their case solution based on the peer group critique. More detail about this assignment will be provided in a separate handout.

Designing A Constructivist Learning Environment 35% of grade

Each individual student will select an application 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. The design should include the following:

- An introduction on constructivism and its implications on teaching and learning (references required);
- A justification as to why the learning application that you have selected is based on constructivist principles (references required);
- The context and the parameters of the learning environment that you will be designing and prototyping, specifying the learners, the learning outcomes, the learning medium, the content, the context in which you will anchor the instruction, the learning activities, 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 learning environment to other student populations and content areas.

Online and In Class Participation 15% 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 be facilitated both by the instructor and students. A rubric for evaluating online discussions is provided on the course website. Ten points will be allocated towards online discussion contributions. Five points will be allocated towards in-class participation, which includes discussion of reading material and other activities.

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).
Module 1: Learning Paradigms and Instructional Design

Wednesday, Jan. 21

Readings to be completed by January 28

- Jonassen, D.H. (1996). There is No Need to Reclaim the Field of ID: It's Just Growing. (handout)

Wednesday, Jan. 28

(Assign teams for C&C)

Readings to be completed by February 4

- Duffy, T., & Cunningham, D. (1996). Constructivism: Implications for the design and delivery of instruction. (available on WebCT under readings)

Module 2: Situated Learning Environments, Anchored Instruction, Cognitive Apprenticeships

Wednesday, Feb. 4

Readings to be completed by February 11

- Chapter 6 (handbook@aect.org)

Wednesday, Feb. 11

(online discussion (#1))

Readings to be completed by February 18

- Chapters 7 & 31 (handbook@aect.org)

Module 3: Cognitive Flexibility Hypertexts

Wednesday, Feb. 18

Readings to be completed by February 25

- Chapter 23 (handbook@aect.org)

Module 4: Case-Based Learning and Goal-Based Scenarios

Wednesday, Feb. 25

(C&C assignment due)

Readings to be completed by March 3

- Chapter 32 (handbook@aect.org)
Module 5: Simulations and Computer-Based Microworlds

*Wednesday, March 3*  
(Assign teams for case study)  
*face-to-face class*

Readings to be completed by March 17

- Chapters 21 & 22 ([handbook@aect.org](mailto:handbook@aect.org))

*Wednesday, March 10*  
*No Class (spring break)*

Module 6: Virtual Learning Environments and Learning Communities

*Wednesday, March 17*  
*face-to-face class*

Readings to be completed by March 24

- Chapter 1 (Dabbagh/Bannan-Ritland) (available on WebCT under readings)

Module 7: Instructional Design for Online Learning

*Wednesday, March 24*  
(Case study response due)  
*online discussion (#3)*

Readings to be completed by March 31

- Chapter 4 (Dabbagh/Bannan-Ritland) (available on WebCT under readings)

Module 8: Pedagogical Models for Online Learning

*Wednesday, March 31*  
(Case study response critique begins)  
*face-to-face class*

Readings to be completed by April 7

- Chapters 5 & 6 (Dabbagh/Bannan-Ritland) (available on WebCT under readings)

Module 9: Evaluation of Online Learning

*Wednesday, April 7*  
(Case study response critique ends)  
*online discussion (#4)*  
(Select model for individual design project)

Readings to be completed by April 21

- Chapter 7 (Dabbagh/Bannan-Ritland) (available on WebCT under readings)

*Wednesday, April 14*  
(Submit design project proposal)  
*No Class (AERA conference)*

*Wednesday, April 21*  
(Feedback on project proposal)  
*face-to-face class*

*Wednesday, April 28*  
*No Class (work on design project)*

*Wednesday, May 5*  
*face-to-face class (project due)*