

Instructional Technology Foundations and Theories of Learning

EDIT 704, Fall 2009
Thursday, 4:30 – 7:10 pm
Commerce II, 100

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COURSE DESCRIPTION

Reviews the practical and pedagogical issues related to the design and development of technological instruction. Emphasizes investigating instructional design as a field and community of practice, as well as reviewing core learning theory constructs applicable to the design of instructional technology.

RELATIONSHIP OF EDIT 704 TO PROGRAM GOALS AND PROFESSIONAL ORGANIZATION

This course adheres to the following Instructional Technology Program Goals and Standards for Programs in Educational Communications and Instructional Technologies established by the Association of Educational Communication and Technologies (AECT) under the National Council for the Accreditation of Teacher Education (NCATE).

Standard 1 - Design

- 1.1.b Identify theories from which a variety of instructional design models are derived and the consequent implications.
- 1.1.2.a Demonstrate in-depth synthesis and evaluation of the theoretical constructs and research methodologies related to instructional design as applied in multiple contexts.
- 1.1.3.b Utilize the research, theoretical, and practitioner foundations of the field in the development of instructional materials.
- 1.1.4.a Conduct basic and applied research related to technology integration and implementation.
- 1.1.5.c Articulate the relationship within the discipline between theory, research, and practice as well as the interrelationships between people, processes, and devices.
- 1.3.a Identify multiple instructional strategy models and demonstrate appropriate contextualized application within practice and field experiences.

STUDENT OUTCOMES

By the end of this course, students will be able to demonstrate capabilities in the following areas:

- Identify the underlying principles for each of the learning paradigms/theories discussed in this course;
- Describe the general characteristics of each of the learning paradigms/theories and their impact on knowledge acquisition;
- Compare and contrast the three learning paradigms and their ensuing theories from a cognitive perspective;
- Identify descriptive and prescriptive learning theories;
- Describe the relationship between learning theory, instructional theory, and the practice of instructional design;
- Identify instructional theories, models, and strategies that are suited for each of the learning paradigms/theories;
- Identify instructional applications for each of the learning paradigms/theories discussed in this course;
- Describe the advantages and disadvantages of each of the learning paradigms/theories from an instructional perspective;
- Identify practical applications of each of the learning paradigms/theories in the field of Instructional Technology;
- Describe the implementation of each of the learning paradigms/theories from an Instructional Design perspective.

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT STATEMENT OF EXPECTATIONS

All students must abide by the following:

- Student are expected to exhibit professional behavior and dispositions. See <http://gse.gmu.edu> for a listing of these dispositions.
- Student must follow the guidelines of the University Honor Code. See http://www.gmu.edu/catalog/apolicies/#TOC_H12 for the full honor code.
- Students must agree to abide by the university policy for Responsible Use of Computing. See <http://mail.gmu.edu> and click on "Responsible Use of Computing" at the bottom.
- 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 www.gmu.edu/student/drc or call 703-993-2474 to access the DRC.

REQUIRED READINGS

- Dricoll, Marcy P. *Psychology of Learning for Instruction, Third Edition*.
- Medsker and Holdsworth. *Models and Strategies for Training Design*.
- Additional articles/readings are available on the class Blackboard site.

CLASS ATTENDANCE

Class attendance is required, and I expect that you will make every effort to be in class on time. Class participation and in-class assignments can be made up for **two** absences during the semester; additional absences cannot be made up. To make up attendance points, you must send an email requesting make up assignment within **one week** of the absence.

ASSIGNMENTS

Assignments are due in class on the day shown on the schedule below. Additional details and grading guides for assignments are available on Blackboard. Assignments may be turned in up to one week late with a 10% grade deduction. No late assignments will be accepted beyond one week after the due date. **Exception: The classroom teaching assignment must be completed as scheduled; no late credit will be given for this assignment.**

- **Short paper on learning theory** (250 pts): Select **one** learning theory from the readings or from <http://tip.psychology.org/> (Theory Into Practice Database: TIP) and write a short paper (10-15 pages). The paper should be supported using at least 10-15 references from scholarly journals, books, or credible Web resources, and should be written APA style. You **must** gain approval for your topic. Your paper must:
 - Detail the key concepts and principles of the theory and any underlying paradigms or epistemologies
 - Describe the theories implications on instruction
 - Discuss the effectiveness of the theory in achieving its learning goals through its application to instruction (i.e., find a real world example or a research study in which this theory has been implemented in an instructional context and discuss the effectiveness of this application)
- **Reflections** (200 pts): Keep a running log of your thoughts, questions, and ideas about the readings and the class discussions. The expectation is that you write about $\frac{3}{4}$ to 1 page per week (single spaced) about the readings and class discussions that week. Check Blackboard for Reflections assignment for the week, and post your Reflections to the discussion board **before class**. I will read and assign grades on the Reflections several times during the semester.
- **Two Instructor Guides** (100 pts each): Choose an instructional model/strategy (based on one of the learning theories studied in class) and develop one hour of

instruction on any topic you choose, using the model/strategy as a guide. Your lesson plan/instructor guide should include objectives, clear instructions for all activities, instructor scripting (if appropriate), and any additional materials needed for the lesson (handouts, job aids, slides, etc.). In addition to the lesson, write a 1-2 page explanation that includes:

- A brief synopsis of the learning theory and the model/strategy on which you based the lesson
 - An explanation for why you chose that learning theory and/or the particular model/strategy for the topic presented
 - A short description of how your lesson applies the learning theory
- **Classroom Teaching** (100 pts): One time during the semester, you will present a 30 minute lesson (on a topic of your choice) based on a learning theory or instructional model/strategy. You may have the option to present this with a partner.
 - **Class Participation/In-class assignments** (250 pts): You are expected to come to each class prepared and to participate in classroom discussions, and you will be graded on the quality of those contributions. You may be asked to complete in-class assignments either individually or with a group. Class participation and in-class assignments can be made up for two absences during the semester. Contact me within one week for a make-up assignment.

GRADING SCALE

Your final grade will be based on the following scale:

| | |
|-----------|------------------|
| A | 930 – 1000 pts |
| A- | 900 – 929 pts |
| B+ | 870 – 899 pts |
| B | 820 – 869 pts |
| C | 750 – 819 pts |
| F | 749 pts or lower |

An Incomplete (IN) is a rarely used grade that indicates a contract between instructor and student to complete classwork after the end of the term. The University Catalog states, “The grade of IN may be given to a student who is passing a course but who may be unable to complete scheduled course work for a cause beyond reasonable control”.

PLAGIARISM

Plagiarism is the intentional or unintentional use of other's ideas, words, data, figures, pictures, sequence of ideas, or arrangement of materials without clearly acknowledging the source (based on Mason Honor Code online at <http://mason.gmu.edu/~montecin/plagiarism.htm> . This statement is from the Honor Code:

B. Plagiarism encompasses the following:

1. Presenting as one's own the words, the work, or the opinions of someone else without proper acknowledgment.
2. Borrowing the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgment.

In this class, any plagiarized work will earn a "0" for the entire assignment. For "Reflections," this means not just the particular weekly entry, but the entire grading period.

COURSE SCHEDULE (subject to change)

| Date | Class Topics and Readings Due | Assignments due |
|-------|--|----------------------------------|
| 9/3 | Introductions | |
| 9/10 | Introduction to Learning Theories Learning Paradigms <ul style="list-style-type: none"> • Driscoll, Chapter 1 • Ertmer, P.A., & Newby, T.J. (1993). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. | |
| 9/17 | History of “Instructional Technology” Radical Behaviorism <ul style="list-style-type: none"> • Driscoll, Chapter 2 | |
| 9/24 | Behaviorist Models and Strategies <ul style="list-style-type: none"> • Medsker, Chapters 1 and 3 | |
| 10/1 | Cognitive Information Processing Behaviorism Presentations <ul style="list-style-type: none"> • Driscoll, Chapter 3 • Weinstein & Mayer (1986). The teaching of learning strategies. • Medsker, Chapter 6 | Reflections I |
| 10/8 | Conditions of Learning Mnemonics Presentations <ul style="list-style-type: none"> • Driscoll, Chapter 10 • Medsker, Chapter 4 | 1 st Instructor Guide |
| 10/15 | GMU libraries and databases: Wendy Mann Meet at Johnson library at 4:45 – Enter the first floor enclosed library, go up one level, find the instructional room at the back in the far right corner | |
| 10/22 | Meaningful Learning and Schema Theory 9 Events of Learning Presentations <ul style="list-style-type: none"> • Driscoll, Chapter 4 • Medsker, Chapter 9 | Paper Topic Approval |
| 10/29 | Situated Cognition Advance Organizer Presentations <ul style="list-style-type: none"> • Driscoll, Chapter 5 • Medsker, Chapter 10 | |
| 11/5 | Interactional Theories of Cognitive Development Cognitive Inquiry Presentations <ul style="list-style-type: none"> • Driscoll, Chapter 7 | Reflections II |
| 11/12 | Constructivism <ul style="list-style-type: none"> • Driscoll, Chapter 11 • Medsker, Chapter 11 • Bednar, Cunningham, Duffy, & Perry (1992). Theory into practice: How do we link? | Research Paper |

EDIT 704 Syllabus

| Date | Class Topics and Readings Due | Assignments due |
|-------|--|----------------------------------|
| 11/19 | Learning and Motivation Constructivism Presentations <ul style="list-style-type: none"> • Driscoll, Chapter 9 • Medsker, Chapter 15 | |
| 11/26 | Thanksgiving Break | |
| 12/3 | Adult Learning Theory ARCS Presentations <ul style="list-style-type: none"> • Medsker, Chapter 16 | 2 nd Instructor Guide |
| 12/10 | Adult Learning Presentations Conclusion <ul style="list-style-type: none"> • Driscoll, Chapter 12 | Reflections III |
| 12/17 | TBD | |