# Instructional Technology Foundations
# and Theories of Learning

EDIT 704, Fall 2011
Thursday, 4:30—7:10 pm
Commerce II, 101

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## COURSE DESCRIPTION

This course reviews the practical and pedagogical issues related to the design and development of technological instruction.  The course also investigates 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:

## ACADEMIC INTEGRITY

GMU is an Honor Code university; please see the *Office for Academic Integrity* for a full description of the code and the honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else's work in an aspect of the performance of that task, you will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification.

## DISABILITY ACCOMMODATIONS

If you have a documented learning disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with *Office for Disability Services* (SUB I, Rm. 4205; 993-2474;http://ods.gmu.edu) to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.

## PRIVACY

Students must use their MasonLIVE email account to receive important University information, including messages related to this class. See *http://masonlive.gmu.edu* for more information.

## TECHNOLOGY POLICY

Cell phones, pagers, and other communicative devices are not allowed in this class. Please keep them stowed away and out of sight. Laptops or tablets (e.g. iPads) may be permitted for the purpose of taking notes only, but you must submit a request in writing to do so. Engaging in activities not related to the course (e.g. gaming, email, chat, etc.) will result in a significant reduction in your participation grade.

## CONTACT INFORMATION FOR AT LEAST TWO CLASSMATES

## MY EXPECTATIONS

It is my philosophy that the best learning occurs when you, the learner, are the architect of your own learning activities.  Common sense tells me the most relevant approach to learning in a graduate program occurs when learners direct their own learning.  My experience, however, suggests this can be disconcerting for adult learners. I see my role as evolving from an "information giver" to a "facilitator of learning activities."  For this to occur, you as adult learners must take an active role in order to be a truly educated person.

## REQUIRED READINGS

- Dricoll, M.  (2005). *Psychology of Learning for Instruction, Third Edition.* Pearson:  Boston, MA.
- Medsker, K. & Holdsworth, K. (2001).  *Models and Strategies for Training Design.*  International Society for Performance Improvement:  Silver Spring, MD.
- 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 Course Schedule.  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/Theorist Presentation and Abstract assignment must be completed as scheduled; no late credit will be given for this assignment.**

- **What I Believe Part 1 Essay** (100 pts)

- **Weekly Reflections** (200 pts, 20 pts each for 10 reflections)

- **Instructor Guide**  (200 pts)

- **Classroom Teaching/Theorist Presentation and Abstract** (200 pts total, 100 pts for presentation, 100 for abstract)

- **Class Participation/In-class assignments** (150 pts)

- **What I Believe Part 2 Essay** (150 pts)

## ASSIGNMENT DESCRIPTIONS

*"What I Believe" Part One Essay*

Using bullets, identify 15 notions, thoughts, and opinions you hold about adult learning and learning theory. These should be characteristics and/or behaviors of adult learners, or elements or characteristics of what you believe to be good instructional design.  No references are required.  The purpose of this assignment is for you to bring together in one place your personal beliefs.

*Weekly Reflections*

Throughout this course you will be encouraged to reflect on your thoughts, your actions, your teaching, the class, reading assignments, and the instructor.  The purpose for this is to strengthen and reinforce learning.  As Saphier and Gower point out "To summarize in your own words what you have learned in a given experience is a complex cognitive act; it causes search and retrieval of memory, organization of ideas, and summoning of language to recast the meaning in your own terms.  It is logical that this complex set of cognitive acts would create neural networks and deepen memory traces." (p. 254)

Reflection #1 is a series of structured questions, which you are asked to complete before the second class.  The rest of the weekly reflections are a combination of topics you choose and topics assigned by the instructor.  One former student called his reflections "rants."  He used this weekly writing assignment to express opinions and even to daydream.  I share this experience to demonstrate that reflections are NOT scholarly or academic work.  Reflections are:

- A self-reflection of your own teaching
- A critique of an instructor in a class in which you are currently a student (e.g., What are your thoughts about the class?  What was done well?  What could have been done better?  What would you have done differently?)
- Your reaction or analysis of the required reading
- They should be no less and no more than one page in length
- All reflections will be read and commented on by the instructor
- They will be returned to you at the beginning of the next class

***Instructor Guide***

Develop a curriculum based on the theories and strategies learned in class.  Using the six major components of the behavior modeling methodology:
- Prescribed critical steps/behavior
- Credible model
- Skill practice exercises
- Specific feedback and social reinforcement
- Transfer strategies
- On-the-job reinforcement

Prepare a "package" (one- stop shopping) for an instructor to plan and deliver a lesson.  At a minimum, identify the:
- Objective
- Materials and resources
- Clear instructions for all activities
- Instructor scripting (if appropriate)
- Sequence of instruction
- How learning will be assessed

In addition to the lesson, develop a one- to two-page explanation that includes a brief synopsis of the learning theory and model/strategy used, and explanation for why the particular model/strategy is appropriate for the topic, and a short description of how the lesson reflects learning theory.

***Classroom Teaching/Theorist Presentation and Abstract***

Students are asked to conduct scholarly research of a theory/theorist or "thinker" in learning theory.  You will select your theorist from a sign-up sheet during our second class session.  In a short presentation to the other learners in EDIT 704, provide an overview of the theory, similar or related theories, identify the contribution this "thinker" made to the field of learning theory, and identify four (4) particularly relevant points regarding teaching/learning of adults and the design of instruction for adults.  Prepare for our learning community an abstract, one-page front and back, covering the same topics as the presentation.  Bring enough copies to share with your fellow learners.  Include your references.

***"What I Believe" Part Two***

In a more scholarly paper, re-visit your beliefs.  Using those original 15 bullets, reject or validate your original thoughts and notions in the Part One paper.  Now cite references in APA format to support the characteristics and behaviors of adult learners or effective practices in teaching adult learners.  Use a minimum of six (6) professional literature sources, including the textbook to reaffirm or modify your original 15 beliefs, citing a specific source for each belief.

## GRADING SCALE

Your final grade will be based on the following scale:

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|---|---|---|
| **A** | 930 – 1000 pts | |
| **A-** | 900 – 929 pts | |

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|---|---|
| **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 class work 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. To discourage plagiarism, you may be required to turn it some assignments in both electronic and in hard copy versions so I have the option to use SafeAssign (GMU's plagiarism prevention program).

**COURSE SCHEDULE**

| Week | Date | Class Topics and Readings Due | Assignments Due |
|------|------|-------------------------------|-----------------|
| 1 | 9/1 | Introductions | |
| 2 | 9/8 | Introduction to Learning Theories<br>Learning Paradigms<br>• Driscoll Chapter 1 Introduction to Theories of Learning<br>• Ertmer, P.A. & Newby, T.J. (1993). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective | Syllabus Quiz<br>Reflection #1 |
| 3 | 9/15 | Radical Behaviorism<br>• Driscoll Chapter 2 | Reflection #2 |
| 4 | 9/22 | Behaviorist Models and Strategies<br>• Medsker Chapter 1 Behavior Modification<br>• Medsker Chapter 3 Behavior Modeling | Classroom Teaching/Theorists Presentations:<br>Sternberg<br>Brookfield<br>**What I Believe Part 1**<br>Reflection #3 |
| 5 | 9/29 | Cognitive Information Processing<br>• Driscoll Chapter 3 Cognitive Information Processing<br>• Medsker Chapter 6 Mnemonics | **Class Completely On-Line**<br>Reflection #4 |
| 6 | 10/7 | Conditions of Learning<br>• Driscoll Chapter 10 Gagne's Theory of Instruction<br>• Medsker, Chapter 4 Conditions of Learning | Classroom Teaching/Theorists Presentations:<br>Gagne<br>Merrill<br>Mager<br>Reflection #5 |
| 7 | 10/14 | Meaningful Events and Schema Theory<br>• Driscoll Chapter 4 Conditions of Learning<br>• Medsker Chapter 9 Motivation & Self Regulation in Learning | **Class Completely On-Line** |
| 8 | 10/21 | Situated Cognition<br>• Driscoll Chapter 5 Situated Cognition<br>• Medsker Chapter 10 Cognitive Inquiry | Classroom Teaching/Theorists Presentations:<br>Argyris<br>Bloom<br>Bruner |

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|---|---|---|---|
| | | | Reflection #6 |
| 9 | 10/28 | Interactional Theories of Cognitive Development<br>• Driscoll Chapter 7 Interactional Theories of Cognitive Development | Classroom Teaching/Theorists Presentations:<br>Vygotsky<br>Perry<br>Reflection #7 |
| 10 | 11/3 | Constructivism<br>• Driscoll Chapter 11 Constructivism<br>• Medsker Chapter 11 Constructivism | Classroom Teaching/Theorists Presentations:<br>Gardner<br>Piaget<br>Reflection #8 |
| 11 | 11/10 | Learning and Motivation<br>• Driscoll Chapter 9 Motivation and Self Regulation Learning<br>• Medsker Chapter 15 ACRS Motivational Design | Classroom Teaching/Theorists Presentations:<br>Knowles<br>Dewey<br>**Instructor Guide** |
| 12 | 11/17 | Adult Learning Theory Part 1<br>• Medsker Chapter 16 Adult Learning | Reflection #9<br>Mezirow |
| | 11/24 | Thanksgiving Break | |
| 13 | 12/1 | Adult Learning Theory Part 2 | **What I Believe Part 2** |
| 14 | 12/8 | Conclusion, Affirmations and Evaluation: Putting Theory into Practice | Reflection #10 |