

EDUC 7310 FOUNDATIONS OF TEACHING AND LEARNING
Spring 2007

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Course Description

EDUC 7310, Teaching and Learning Foundations of Education, traditionally focused on psychological research and theories that under girded educational research and practice. Throughout the 20th Century most research related to learning and instruction stemmed from a behavioral psychology paradigm. Towards the middle of the century, theories from cognitive psychology began to dominate schools of education, but were quickly contested by emerging sociocultural views. Some now despair because of the wealth of theories and research paradigms that have emerged towards the end of the previous century. They see this wealth as a “proliferation” that has led either to incoherence making synthesis impossible or to an exacerbation of the disciplinary wars in fields such as literacy and mathematics education. For the past quarter century, fields such as anthropology and sociology, neuroscience, neural networks, evolutionary/ecological psychology and ethology have been used to frame discussions in education. It would be impossible to address all of these paradigms in-depth. Thus, to provide breadth in the course, we will first exam a “genealogy” of teaching in which many of the traditional worldviews or metatheoretical orientations about educational practice are traced back to philosophical distinctions made in early Western civilization and then turn to newer orientations that have emerged in the last quarter century. To provide depth, we will explore cognitive, sociocultural, and bio-ecological models.

Required Texts

Davis, B. (2004). *Inventions of teaching: A genealogy*. Mahwah, NJ: Erlbaum.

Rogoff, B. (2003). *The cultural nature of human development*. NY: Oxford University Press.

Gee, J. P. (2003). *What video games have to teach about learning and literacy*. NY: Palgrave.

Electronic Reserves: Password CAM7310.

Course Goals

1. Review “traditional” theories of teaching/learning.
2. Distinguish between everyday theories and scientific theories and models.
3. Understand the historical roots of current paradigmatic orientations to research and theory on teaching and learning.
4. Understand philosophical discussions about the nature of science and scientific research.
5. Analyze and describe a particular theoretical orientation and its implications for research and/or instruction.

Assignments

Attendance and participation are required. It is essential that you do the assigned readings before each class session and come prepared to discuss the material. See participation rubric below.

Synthesis and reaction to the Davis text.

Presentations (15 minutes maximum time) – RUBRIC TO BE DISTRIBUTED

Historical/synthesis paper that focuses on a particular theoretical orientation that dominates your field or under girds the topic of your dissertation research.

Grading Criteria

Assignment completed as required: **C**

Assignment completed as required and represents thoughtful and articulate integration of ideas. **B**

Assignment completed as required, represents thoughtful and articulate integration of ideas and is surprisingly insightful. **A**

Tentative Schedule

January 9-11 Introductions and Overview

Chapter 7 Philosophy (hru6190)

Schaeffer, D. R. (2002). Theories of human development. In *Developmental psychology* (6th ed.) (PP. 35-67). Belmont, CA: Wadsworth/Thomson Learning. (cam7310)

January 16-19 Worldviews and Paradigms

January 23-25 Worldviews, paradigms, and theories

Driscoll Chapter 1 – What is a theory of learning?

Davis Chapters 1-6

Presentations

Malhotra, Y. (1994). Role of science in knowledge creation: A philosophy of science perspective URL: <http://wmbbook.com/science.htm>

Science for all Americans Online: Chapter 1: The nature of science.
URL: <http://www.project2061.org/tools/sfaaol/chap1.htm>

Science for all Americans Online: Chapter 6: The human organism.
URL: <http://www.project2061.org/tools/sfaaol/chap6.htm>

January 30-February 1 Word views, paradigms, and theories

Davis Chapters 7-9

Presentations

Kuhn (<http://plato.stanford.edu/entries/thomas-kuhn/>)

Popper (<http://plato.stanford.edu/entries/popper/>)

Thomas, G. (1997). What's the use of theory? *Harvard Educational Review*, 67, 75-104.

Kanavillil, R. (1998). On the theoretical trappings of the thesis of anti-theory; or, Why the idea of theory may not after all, be all that bas: A response to Gary Thomas. *Harvard Educational Review*, 68, 335-354.

February 6-8 Sociocultural and Cognitive Information Processing Theories

Davis Chapters 10-13

Lecture Cognitive Information Processing

February 13-15 Sociocultural and Cognitive Information Processing Theories

Driscoll Chapters 3, Cognitive information processing & Chapter 4, Meaningful learning and schema theory.

Lecture Vygotsky and sociocultural theories

February 20-22 A Sociocultural Theory and Complexity

Rogoff Chapter 1, Orienting concepts.....

Davis Chapters 14-16

February 27- March 1 Sociocultural Theory and Situated Cognition Synthesis paper due on Davis

Rogoff Chapter 2, Development as transformation...., & Chapter 3, Individuals, generations....

Situated and Embodied Cognition Lecture

Presentation

Brown, Collins, & Duguid (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18, 32-42.

March 6-8 Sociocultural, Situated and Embodied

Gee Chapters 1-4

Presentations

Rogoff Chapters 7, 8 and 9

March 13-15 Spring Break

March 20-22 Embodied Theories

Gee Chapters 5-8

Presentations

Nunez, R., Edwards, L., & Matos, J. (1999). Embodied cognition as grounding for situatedness and context in mathematics education. *Educational Studies in Mathematics*, 39, 45-65.

Wilson, M. (2002). Six views of embodied cognition. *Psychonomic Bulletin & Review*, 9, 625-636.

March 27-29 Biological Models

Bjorklund, D.(2000). Biological bases of cognitive development. In D. Bjorklund, *Children's thinking: Developmental function and individual differences*. NY: Wadsworth.

Presentation

Darwinism (<http://plato.stanford.edu/entries/darwinism/>)

Katzir, T., & Pare-Blagoev, J. (2006). Applying cognitive neuroscience research to education: The case of literacy. *Educational Psychology, 41*, 53-74.

April 3-5 Gibson's Ecological Theory

Reed, E. (1996). An evolutionary psychology. Chapter 2 in E. Reed *Encountering the world*. New York: Oxford University Press.

Gibson, E., & Pick, A. (2000). Historical perspectives and present-day confrontations. Chapter 1 in E. Gibson and A. Pick *An ecological approach to perceptual learning and development*. New York: Oxford University Press.

Gibson, E., & Pick, A. (2000). An ecological approach to perceptual development. Chapter 2 in E. Gibson and A. Pick *An ecological approach to perceptual learning and development*. New York: Oxford University Press.

Presentation

Barab, S., & Roth, M. (2006). Curriculum-based ecosystems: Supporting knowing from an ecological perspective. *Educational Researcher, 35*, 3-13.

April 10-12 Dynamical Systems Theories

Lerner, R. (2002). Developmental systems theories. Chapter 7 in R.M. Lerner *Concepts and theories of human development*. Mahwah, NJ; Erlbaum.

April 17-19 Dynamical Systems Theories

Brofenbrenner, U., & Ceci, S. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review 101*, 568-586.

Presentation

Davis, B., & Sumara, D. (1997). Cognition, complexity, and teacher education. *Harvard Educational Review, 67*, 453-466.

April 24-26 Wrap up

May 1-4

Final paper due

Participation Rubric

A A student receiving an “A” comes to class prepared; contributes readily to the conversation but doesn’t dominate it; makes thoughtful contributions that advance the conversation; shows interest in and respect for others’ views; participates actively in small groups.

B A student receiving a “B” comes to class prepared and makes thoughtful comments when called upon; contributes occasionally without prompting; shows interest in and respect for others’ views; participates actively in small groups. A “B” grade may also be appropriate to an active participant whose contributions are less developed or cogent than those of an “A” but still advances the conversation.

C A student receiving a “C” comes to class prepared, but does not voluntarily contribute to discussions and gives only minimal answers when called upon. Nevertheless, these students show interest in the discussions, listen attentively, and take notes.

D A student receiving a “D” participates in discussions but in a problematic way. Such students may talk too much, make rambling or tangential contributions, continually interrupt the instructor with digressive questions, bluff their way when unprepared, or

otherwise dominate discussions, not acknowledging cues of annoyance from instructor or students.

F Students in this category often seem on the margins of the class and may have a negative effect on the participation of others. Students receiving this grade often don't participate because they haven't read the material or done the homework.

From, Bean, J.C. (1998). Grading classroom participation. *New Directions in Teaching and Learning*, 74, 33-40.

Tentative Schedule

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