

ED 269: Principles of Learning for Teaching

Stanford University
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Essential Questions

What is learning? What does it mean to learn?

What does it mean to understand?

What do theories about learning and understanding mean for how I teach my students?

Course Description

This course addresses the relationships among three fundamental aspects of the educational process: the subject matter of the curriculum, the diverse capabilities of students, and the teacher's responsibilities to design and implement instruction. We view the challenge of teaching as the creation of bridges between the knowledge embodied in the subject matter, on the one hand, and the minds and motives of students, on the other hand. In various content areas, we will ask: What is learning? What are the general processes of learning and thinking? How are these processes influenced by aspects of student language, culture, prior knowledge, and experience? What counts as knowledge? How does its character vary across or within disciplines? How can teachers transform their subject matter knowledge into representations that help students draw on their own resources to construct and transform knowledge of their own?

These are tough questions, of a sort rarely answered once and for all, no matter how many years one has been teaching. They are tough because they occupy that contested territory between theory and practice, where both perspectives are needed but neither can suffice. They are tough because, at a theoretical level, they demand the contributions of many disciplines, such as psychology, linguistics, anthropology, and philosophy. They are tough because at a practical level no two situations are quite comparable, and the helpful maxim for one setting becomes balderdash for another. Learning to teach thus demands that we weave delicate webs of the general and the particular, finding ways to enrich our personal experiences through studying the experiences of others, seeking theoretical insights that give meaning to what we do, or raise skeptical questions about what we think we know.

In this course we will engage these challenges through readings, demonstrations, discussions, activities, assignments and lectures about broad principles of learning, in addition to reading and discussing cases of teaching. We view the variety of "case methods" as a vehicle for connecting useful theory with accounts of practice and its problems. You will do many things with cases this quarter. You will read, analyze, and discuss cases of teaching written by teachers and researchers who have written analytic accounts of their practice for their own benefits and as a contribution to others. You will also read and discuss cases written by some of your predecessors in STEP, who have left these accounts as a legacy to you, even as they used their case writing as a form of disciplined reflection to learn from their own experiences. You will write cases of your own teaching, and will use those cases as an occasion for examining aspects of your work. You will comment on and critique each other's cases. You too will leave a legacy of cases.

Texts:

The course readings include substantial excerpts from three books:

* John Bransford, Ann L. Brown and R.C. Cocking, (Eds.) (1999). How People Learn: Brain, Mind, Experience, and School. Washington: National Academy Press, excerpted in your reader and available on-line at: <http://books.nap.edu/html/howpeople1>.

* Howard Gardner, (1991). The Unschooled Mind: How Children Think and How Schools Should Teach. NY: Basic Books, excerpted in your reader and available from amazon.com.

* Martha S. Wiske (Ed.) (1997). Teaching for Understanding: Linking Research with Practice. San Francisco: Jossey-Bass. This can be purchased at the bookstore or from amazon.com.

All of these books are on reserve in the library. There are also 2 volumes of collected readings: including a *casebook* and a *sourcebook*. The casebook sections include a variety of cases of teaching from elementary and secondary classrooms across content areas and diverse contexts of culture and community. The sourcebook includes theoretical, research, and policy papers on teaching, learning, language, culture, and curriculum.

Assignments (detailed instructions for each assignment will be distributed in class):

1) ***ANALYSIS OF LEARNING (10%)***

Write a brief (2-3 page) reflection on your own learning. In general, what learning conditions and teaching strategies do you think most enable you to learn effectively? Now think back to a specific time when you tried to learn something but felt you could not deeply understand it or become proficient. What was the nature of the learning situation? What impeded your learning? How did you feel? Can you imagine what would have allowed you to learn more effectively? Now think back to a time when you successfully learned something that was especially challenging. What was the nature of the content or skill that you were trying to learn? What made it difficult? What finally enabled you to succeed in mastering these difficult ideas or skills?

2) ***ANALYSIS OF TEACHING (10%)***

Write a brief (2-3 page) analysis of a teaching video that we examine in PLT from the 4 lenses presented in How People Learn: learner-centered, knowledge-centered, assessment-centered, community-centered. In what ways does the teacher engage *learners'* interests and connect to their prior knowledge, experiences and ideas? organize the *knowledge* to be acquired so that it is

accessible? *assess* what the students know and are learning? construct a *community* in the classroom? Evaluate the way in which the teacher scaffolds the learning process. What specific steps does s/he take to ensure that learners are able to understand the material to be learned?

3) **CASE REPORT OF INSTRUCTION (40%)**

A case is a first person interpretive narrative account of a sequence of events of teaching and learning taken from your own experiences during these first few months of teaching and examined through the lens of research on learning and teaching. The case you write for this course will be a case of subject-matter oriented teaching and student learning, a “curriculum case.” You will also be expected to solicit *at least two commentaries* to accompany your final draft. One commentary must come from a fellow STEP teacher (which means that you are expected to write one commentary on the case of a colleague). Other commentaries can come from experienced teachers, community members, administrators, or even students. Cases generally run five to ten pages plus appendices (e.g. samples of student work). Commentaries rarely exceed a page or two. Your case and its associated commentaries will become entries in your STEP portfolio. Examples of STEP-written cases and commentaries are in the STEP curriculum library.

4) **COMMENTARY ON A CASE (10%)**

As noted above, your commentary on a colleague’s case will be part of your responsibility as a peer reviewer. In your commentary you will provide an additional perspective on the case from your own vantagepoint as a teacher and a researcher.

5) **REFLECTIVE ESSAY (10%)**

After writing your case and receiving feedback from faculty, STEP colleagues, and others who write commentaries, you will write a brief reflective essay on your case, commentaries, and course readings. This essay will allow you take a metacognitive stance toward your teaching practice and offer the opportunity for you to ask what you have learned from your case and the discussions around it. We will provide the guidelines for the essay in class.

6) **PARTICIPATION (20%)**

Your attendance, timely completion of all assignments, and participation in class discussions and activities, including group projects, class presentations, and case conferences, are an important part of your contribution to class.

DUE DATES

Jan. 15	Analysis of learning due
Jan. 22	Analysis of teaching due
Jan. 29	Initial summary of case (1-2 pages) due
Feb. 12	First draft of case due for peer and instructor review
Feb. 19	Peer review of case due, using rubric
March 5	Penultimate draft of case due to instructor
March 12	Case conference
March 20	Final case, two commentaries, and reflective essay due by 5 pm

POLICY ON GRADING AND COURSE COMPLETION

The course is graded on a letter-grade basis. *A*'s will be given for outstanding performance on all assignments and active participation in discussion sections. A grade of *C* represents marginal quality on all assignments. When assignments do not meet the standard to which they aspire, students will be offered the opportunity to revise. ***INCOMPLETE GRADES WILL NOT BE GIVEN!*** It has been our sad experience that an incomplete grade given out of kindness in March becomes an open wound as graduation looms near in June. Keep up with the assignments. There will be no exceptions other than those associated with family tragedies or serious illness.

CLASS SCHEDULE

January 8

Overview: How Do People Learn?

[To be read before class]

Darling-Hammond et al. (2002). The Learning Classroom, Chapter 1: "Introduction to learning theories."

Gardner, H. (1991). The Unschooled Mind, Chapter 1: "The central puzzles of learning," pp. 1-13.

White, V. (1988). One struggle after another. In J. Shulman & J. Colbert (Eds.) Intern Teacher Casebook. San Francisco: Far West Lab.

January 15

How Can We Organize for Learning?

Bransford, et al. (1999). How People Learn, Chapter 1: "Learning: From Speculation to Science," pp. 14-25. Chapter 6: "The design of learning environments," pp. 131-149.

Wiggins & McTighe, Understanding by Design, Chapter 9: "Implications for Organizing Curriculum," and Chapter 10: "Implications for Teaching." [Review]

Shulman, L.S. (1996). Just in case: Reflections on learning from experience. In J.A. Colbert, P. Desberg & K. Trimble (eds.) The Case for education: Contemporary approaches for using case methods. Boston: Allyn & Bacon.

Case Reader: Erin Hayes, "A case of teaching pre-designed curriculum" (Social Studies)

Due: Analysis of Learning

January 22

Learning Theories: How Does Learning Happen?

Darling-Hammond et al., The Learning Classroom. Chapter 3: "Cognitive processing."

Norman, D. (1980) What goes on in the mind of the learner? In W.J. McKeachie (Ed.), New Directions for Teaching and Learning, pp. 37-49. San Francisco: Jossey-Bass.

Oakes, J. & Lipton, M. (1999). Teaching to Change the World, Chapter 2 (excerpted): “Learning as Behavioral Training,” and Chapter 3: “Contemporary Theories of Learning,” pp. 54-94.
Case Reader: K. Barriger, “The Learning Web” (Mathematics)
K. Gee, “Teaching evolution: A case of overcoming misconception” (Science)

Due: Analysis of Teaching

January 29

What Does It Mean to Understand?

Darling-Hammond et al., The Learning Classroom, “Transfer”
Wiske, M.S. (1998). Teaching for Understanding, Chapter 2: “What is understanding?” pp. 39-57; Chapter 3: “What is teaching for understanding?” pp. 61-82. **READ ONE CHAPTER** – Chapter 6: “What are the qualities of understanding?” pp. 161-196; Chapter 7: “How do students demonstrate understanding?” pp. 197-232.
Casebook: Read the case in your content area –
T. Chao, “Quick Flash Each Other!” (Foreign Language)
G. Corti, “Missing the transfer” (Social Studies)
M. Ellis, “Demystifying pi” (Mathematics)
L. Giffin, “A Punnett square problem” (Science)
A. Reilly, “A case of shortened perspective” (English)

Due: Brief summary of your case event

February 5

How Do We Develop Understanding? Starting with the Learner

Gardner, H. (1999). The Disciplined Mind, Chapter 9, “Multiple intelligences approaches to understanding,” pp. 186-213.
Juarez, D. A. (1999). A question of fairness: Using writing and literature to expand ethnic identity and understand marginality. In S. Freidman, E.R. Simons, J. S. Kalnin, & A. Casareno (Eds.), Inside City Schools, pp. 111-125. NY: Teachers College Press.
Ladson-Billings, G. (1994). The Dreamkeepers. San Francisco: Jossey-Bass. Chapter 5, “Tree of Knowledge,” pp. 78-101, and Chapter 6, “Culturally Relevant Teaching,” pp. 102-126.
Casebook: C. Narez, “Beyond cultural relevance” (Foreign Language)
M. Tovar, “Not everyone plays the same game” (Social Studies)

February 12

How Do We Develop Understanding? Building Scaffolds for Performance

Darling-Hammond et al., The Learning Classroom, “Cognitive Apprenticeship”
Collins, A., Brown, J.S., & Holum, A. (1991). Cognitive apprenticeship: Making thinking visible. American Educator, pp.6-11, 38-46.

Lee, Carol (1995). A culturally based cognitive apprenticeship: Teaching African-American high school students' skills of literary interpretation. Reading Research Quarterly, 30(4), pp. 608-630.

Casebook: Read the case in your content area –

R. Brushett, "Buying into 'the myth'" (Social Studies)

J. Bryan, "Genetic diseases, icebergs, and apprenticeships" (Science)

A. Lee, "Looking beyond the surface" (Math)

J. Lee, "Scaffolding for a divorced part of my curriculum" (English)

M. Linderman, "I want that you learn the subjunctive" (Foreign Language)

February 19

How Do We Develop Understanding? Connecting to the Content

Darling-Hammond et al., The Learning Classroom, "Architecture of Knowledge"

Bruner, J. (1960). The process of education. Chapters 2-3: pp. 17-57.

Gardner, H. The Unschooled Mind, **READ ONE CHAPTER** – Chapter 8: "Difficulties posed by school: Misconceptions in the sciences," pp. 143-166; Chapter 9: More difficulties posed by school: Stereotypes in the social sciences and the humanities, pp. 167-181.

Wiske, M.S. (1998). Teaching for Understanding, Chapter 5: "How does teaching for understanding look in practice?" pp. 122-158.

See also Exhibit 4.1 "Joan's Goal-Setting Form" and "Writing Workshop Unit Goals," pp. 96-99.

Case Reader: S. Bissell, "Text, lies, and audiotape" (English)

I. Tseng, "Short-circuiting the central nervous system" (Science)

T. Ziegler, "A case of complex instruction" (Social Studies)

Due: First Draft of Curriculum Case

February 26

How Do We (and They) Know What They Know?

Darling-Hammond et al., The Learning Classroom, "Metacognition"

Oakes & Lipton, Teaching to Change the World, Chapter 6: "Instruction and assessment," pp. 192-233.

Darling-Hammond, L., Falk, B., & Ancess, J. (1995). Authentic assessment in action. "The Case of Akeem," pp. 217-224.

Casebook: C. Maley, "Multiple choice testing" (Social Studies)

S. Herzman, "How do teachers know when students understand vocabulary?" (English)

M. Phillips, "Is 'same' treatment 'fair' treatment?" (Science)

Due: Peer Review of Curriculum Case

March 5

How Do We Apply This to Teaching?

Bransford, et al. (1999). How People Learn: Ch. 7, “Effective Teaching: Examples in History, Mathematics, and Science,” pp. 143-177.

Gardner, The Unschooled Mind, Chapter 12, “Education for understanding in the adolescent years,” pp. 225-248.

Heller, J. I. and Gordon, A. (1992). Lifelong learning. Educator, 6(1), pp. 4-19.

Due: Penultimate Draft of Curriculum Case

March 12

What Have We Learned? [LAST CLASS]

Case Conference: Presentations and discussions of full case studies

March 20

Due: Final case study, two commentaries, and reflective essay on case and commentaries