Effective Teaching and Its Evaluation

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Objectives

- Introduce the course syllabus
- List the eight factors of effective teaching
- Brief discussion of student learners and the assessment of learning
- Demonstrate the validity of student evaluations of teaching
- Grades as part of evaluations

Before the Course Begins

- What should my students be able to do intellectually as a result of this course?
- How can I help them to develop the necessary intellectual understanding and capacity?
- How can I and the students assess their intellectual progress?
- How do I evaluate my own efforts to foster learning as the course progresses?

The Course Syllabus

- It is a valuable guide for you and your students.
- It begins with a statement that places the course within the intellectual area of the field.
- It provides overall objectives for the course that should be fairly specific.
- Includes appropriate references, including primary literature.

8 Factors Most Important to Students

Subject Matter

- Demonstrates detailed knowledge of the subject matter.
- Shows enthusiasm for the subject.

8 Factors Most Important to Students

Presentation/Facilitation

- Is well prepared for class (clear syllabus and schedule, organized in class).
- Stimulates interest in the subject.
- Encourages discussion/class interaction.
- Explains information clearly.

8 Factors Most Important to Students

Approach to Students

- Shows concern for students.
- Is readily available to students.

- My addition: regular assessment and feedback and allows recovery from a poor performance.

Student Learners*

Received learner –

Procedural learners –

Subjective learners –

Student Learners

Deep understanding –
independent and critical thinkers, evaluating ideas and consistently integrating them into their thinking

Connected learners –
have deep understanding and look at the merits of other ideas often biasing themselves toward the idea they are examining

Separate learners –
have deep understanding but always remain skeptical of ideas and challenge them

HIGH IMPACT EDUCATIONAL PRACTICES THAT FACILITATE "DEEP" LEARNING

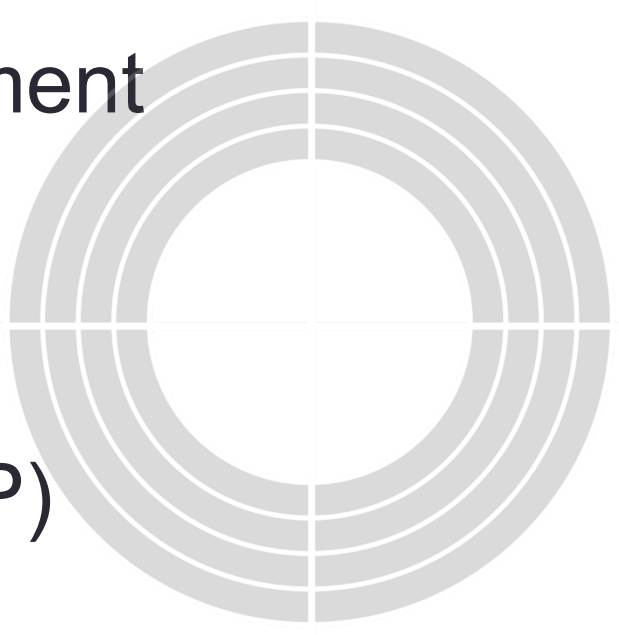
1. First-Year Seminar
2. Learning Communities
3. Undergraduate Research
4. Internships in the Discipline
5. Freshmen Interest Groups
6. Service Learning

Assessment of Learning

- This is much more difficult than it would seem because of the nature and variety of student learners.
- How do we distinguish among students who are “procedural=(gamers)” and those who have “deep understanding?”
- There are few, in any, instruments available and real assessment requires prolonged oral interactions.
- There are published examples of students who received an “A” in a course but who did not have deep understanding of the material.

Assessment Instruments

- National Survey of Student Engagement
- Collegiate Learning Assessment
- ETS Proficiency Profile
- Collegiate Assessment of Academic Proficiency (CAAP)
- ETS Major Fields
- College Senior Survey

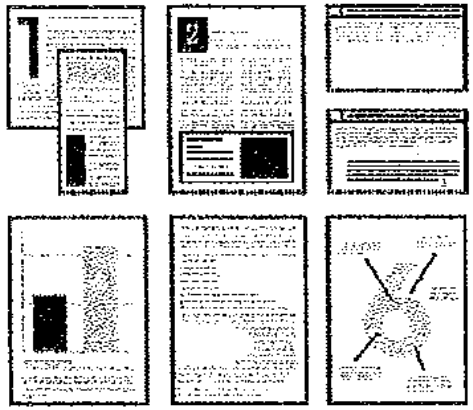


Higher Level Skills

Example: Performance Task

You are the assistant to Pat Williams, the president of DynaTech, a company that makes precision electronic instruments and navigational equipment. Sally Evans, a member of DynaTech's sales force, recommended that DynaTech buy a small private plane (a SwiftAir 235) that she and other members of the sales force could use to visit customers. Pat was about to approve the purchase when there was an accident involving a SwiftAir 235. You are provided with the following documentation:

1: Newspaper articles about the accident
2: Federal Accident Report on in-flight breakups in single engine planes
3: Pat's e-mail to you & Sally's e-mail to Pat
4: Charts on SwiftAir's performance characteristics
5: Amateur Pilot article comparing SwiftAir 235 to similar planes
6: Pictures and description of SwiftAir Models 180 and 235



Please prepare a memo that addresses several questions, including what data support or refute the claim that the type of wing on the SwiftAir 235 leads to more in-flight breakups, what other factors might have contributed to the accident and should be taken into account, and your overall recommendation about whether or not DynaTech should purchase the plane.

Percentage of institutions that use various sources of information for evaluation of teaching

(AAUP survey, May-June 2014)

Information Source	% used in 2000 (n=506)	% used in 2010 (n=401)
Student Evaluation	88.1%	94.2%
Classroom visits	40.3%	60.4%
Course Syllabi & exams	38.6%	4.5%
Grade distribution	6.7%	10.1%
Student exam performance	5%	7.2%

Responses from All Courses

Section D SUSSAI	E	VG	G	F	P	(N)
1. Description of course objectives and assignments	43.8%	31.4	18.9	4.6%	1.2%	98066
2. Communication of ideas and information	45.4%	29.8	17.3	5.6%	2.0%	97958
3. Expression of expectations for performance in class	46.9%	29.4	17.6	4.8%	1.3%	97692
4. Availability to assist students in or out of class	49.3%	27.3	17.7	4.4%	1.2%	97372
5. Respect and concern for students	56.7%	25.5	13.5	3.2%	1.1%	97450
6. Stimulation of interest in the course	48.9%	26.9	16.1	5.7%	2.4%	97287
7. Facilitation of learning	47.4%	28.7	17.1	5.0%	1.8%	97204
8. Overall assessment of instructor	53.6%	25.3	14.1	5.1%	1.8%	97237

Responses for a Course of Concern

Section D SUSSAI	E	VG	G	F	P	(N)
1. Description of course objectives and assignments	3%	3%	38%	29%	18%	43
2. Communication of ideas and information	3%	0	35%	41%	21%	43
3. Expression of expectations for performance in class	3%	0	24%	32%	32%	43
4. Availability to assist students in or out of class	0%	9%	38%	32%	26%	43
5. Respect and concern for students	3%	3%	24%	26%	41%	43
6. Stimulation of interest in the course	6%	24%	24%	44%	21%	43
7. Facilitation of learning	3%	6%	38%	26%	24%	43
8. Overall assessment of instructor	3%	3%	18%	35%	41%	43

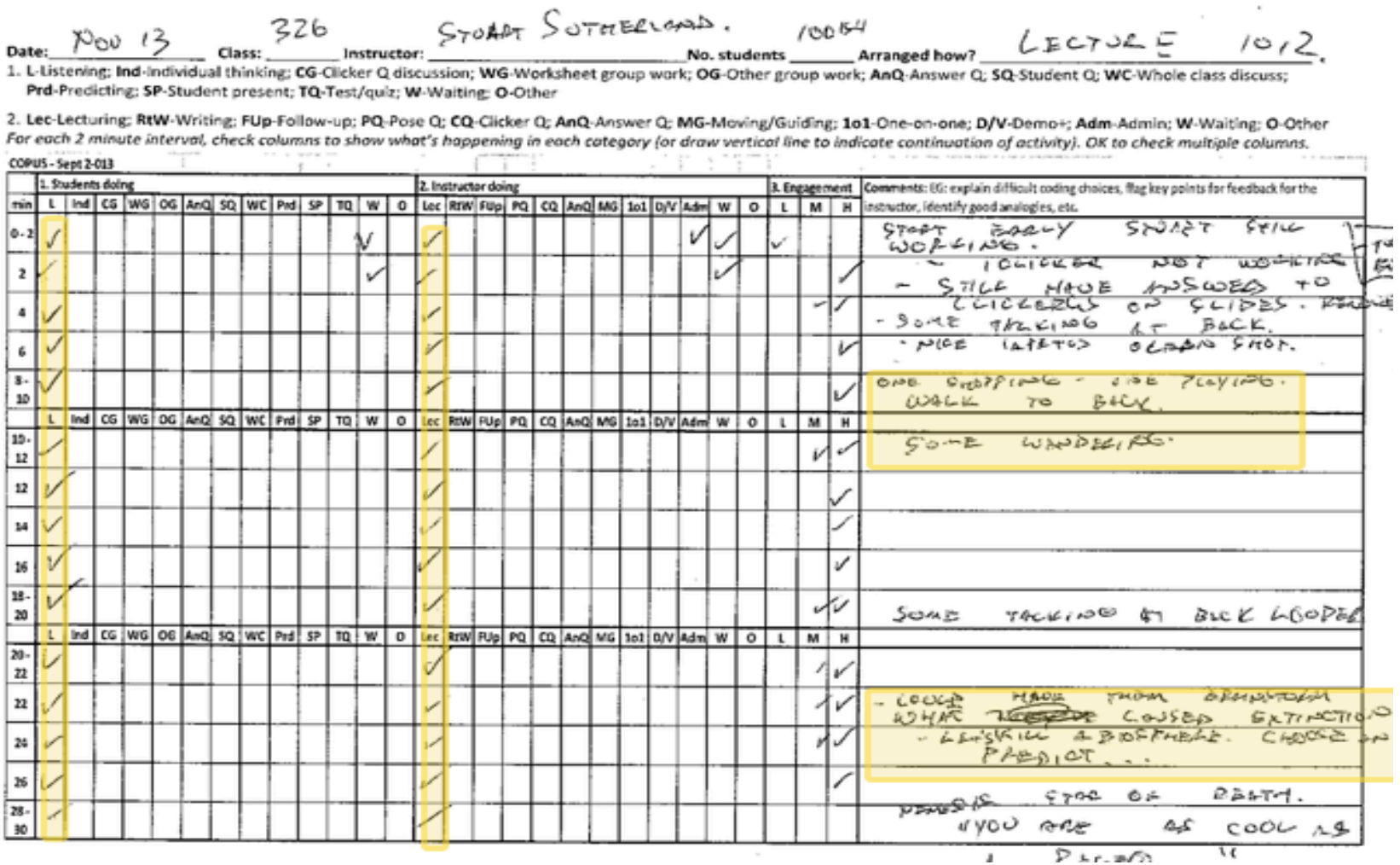
Concerns about Faculty Teaching

- The first poor evaluation should result in a meeting with the department chair to discuss the issues.
- The second poor evaluation should result in a written teaching improvement plan.
- If there is a third poor evaluation, the faculty member should only be permitted to teach under supervision.
- Failure to improve should result in removal from the program.

Holistic Observational Instruments

- Reformed Teaching Observation Protocol (RTOP)
- UTeach Observation Protocol (UTOP)
- Teaching Behaviors Inventory (TBI)
- Teaching Dimensions Observation Protocol (TDOP)
- And several others

A Typical Observation Scoring Sheet with Codes



Date: NOV 13 Class: 326 Instructor: STUART SUTHERLAND. 10054 No. students _____ Arranged how? LECTURE 10:12.

1. **L**-Listening; **Ind**-Individual thinking; **CG**-Clicker Q discussion; **WG**-Worksheet group work; **OG**-Other group work; **AnQ**-Answer Q; **SQ**-Student Q; **WC**-Whole class discuss; **Prd**-Predicting; **SP**-Student present; **TQ**-Test/quiz; **W**-Waiting; **O**-Other

2. **Lec**-Lecturing; **RtW**-Writing; **FUp**-Follow-up; **PQ**-Pose Q; **CQ**-Clicker Q; **AnQ**-Answer Q; **MG**-Moving/Guiding; **1o1**-One-on-one; **D/V**-Demo+; **Adm**-Admin; **W**-Waiting; **O**-Other

For each 2 minute interval, check columns to show what's happening in each category (or draw vertical line to indicate continuation of activity). OK to check multiple columns.

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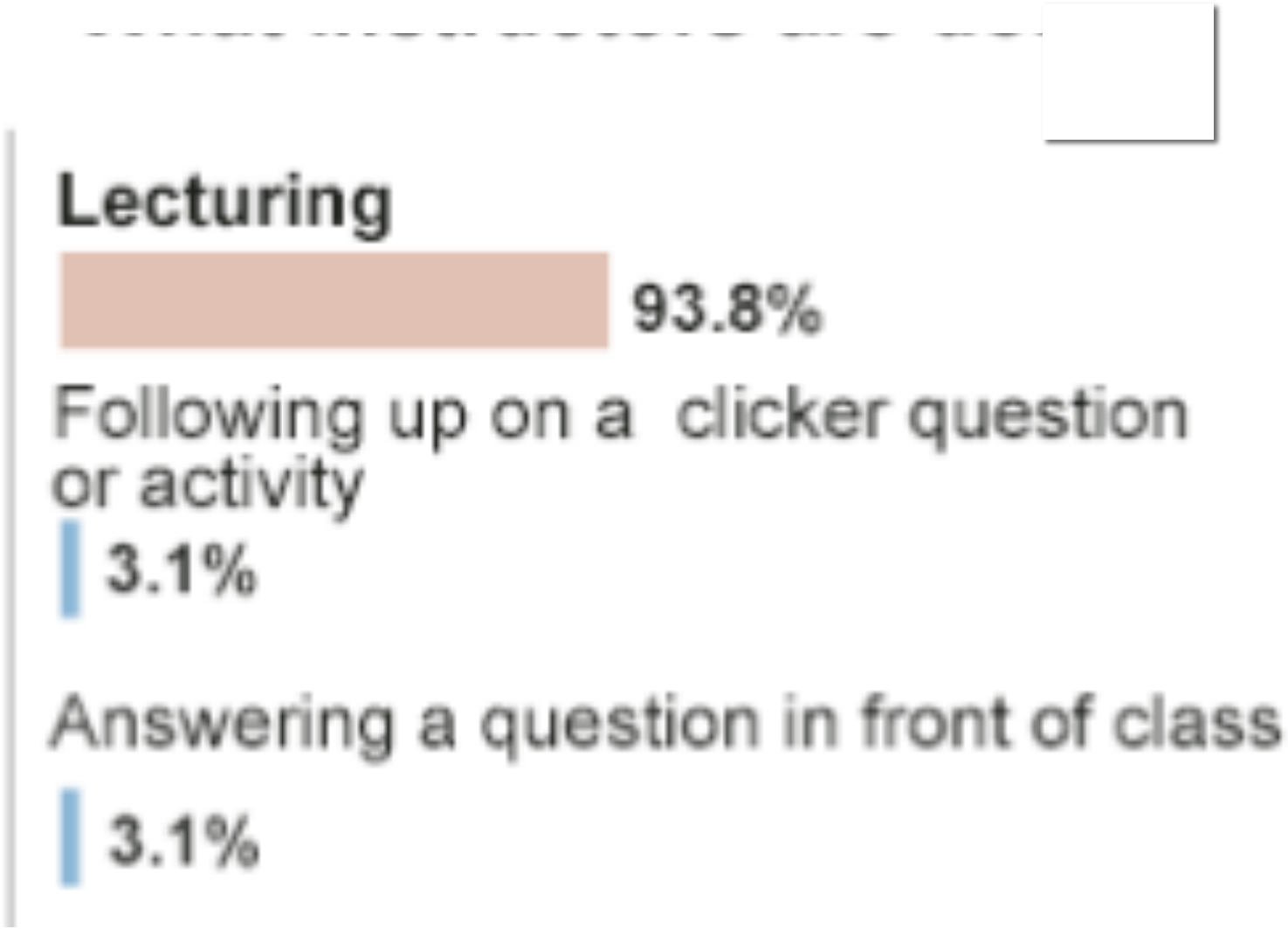
	1. Students doing													2. Instructor doing												3. Engagement			Comments: EG: explain difficult coding choices, flag key points for feedback for the instructor, identify good analogies, etc.
min	L	Ind	CG	WG	OG	AnQ	SQ	WC	Prd	SP	TQ	W	O	Lec	RtW	FUp	PQ	CQ	AnQ	MG	1o1	D/V	Adm	W	O	L	M	H	
0-2	✓											✓		✓									✓	✓		✓			START EARLY SMART STILL WORKING.
2	✓											✓		✓										✓				✓	- ICLICKER NOT WORKING
4	✓													✓														✓	- STILL HAVE ANSWERS TO ICLICKERS ON SLIDES.
6	✓													✓														✓	- SOME TALKING AT BACK. - NICE LATEX CLASS SHOT.
8-10	✓													✓														✓	ONE DROPPING - USE PLAYING. WALK TO BACK.
	L	Ind	CG	WG	OG	AnQ	SQ	WC	Prd	SP	TQ	W	O	Lec	RtW	FUp	PQ	CQ	AnQ	MG	1o1	D/V	Adm	W	O	L	M	H	
10-12	✓													✓													✓	✓	SOME WANDERING.
12	✓													✓														✓	
14	✓													✓														✓	
16	✓													✓														✓	
18-20	✓													✓													✓	✓	SOME TALKING AT BACK LOOPED
	L	Ind	CG	WG	OG	AnQ	SQ	WC	Prd	SP	TQ	W	O	Lec	RtW	FUp	PQ	CQ	AnQ	MG	1o1	D/V	Adm	W	O	L	M	H	
20-22	✓													✓													✓	✓	
22	✓													✓													✓	✓	- LOOK MORE FROM DINOSAURS WHAT CAUSED EXTINCTION - LEAVE A BIT FREE. CHOICE ON PREDICT...
24	✓													✓													✓	✓	
26	✓													✓														✓	
28-30	✓													✓															STOP AT 28TH. IF YOU ARE AS COOL AS

Summary of TDOP



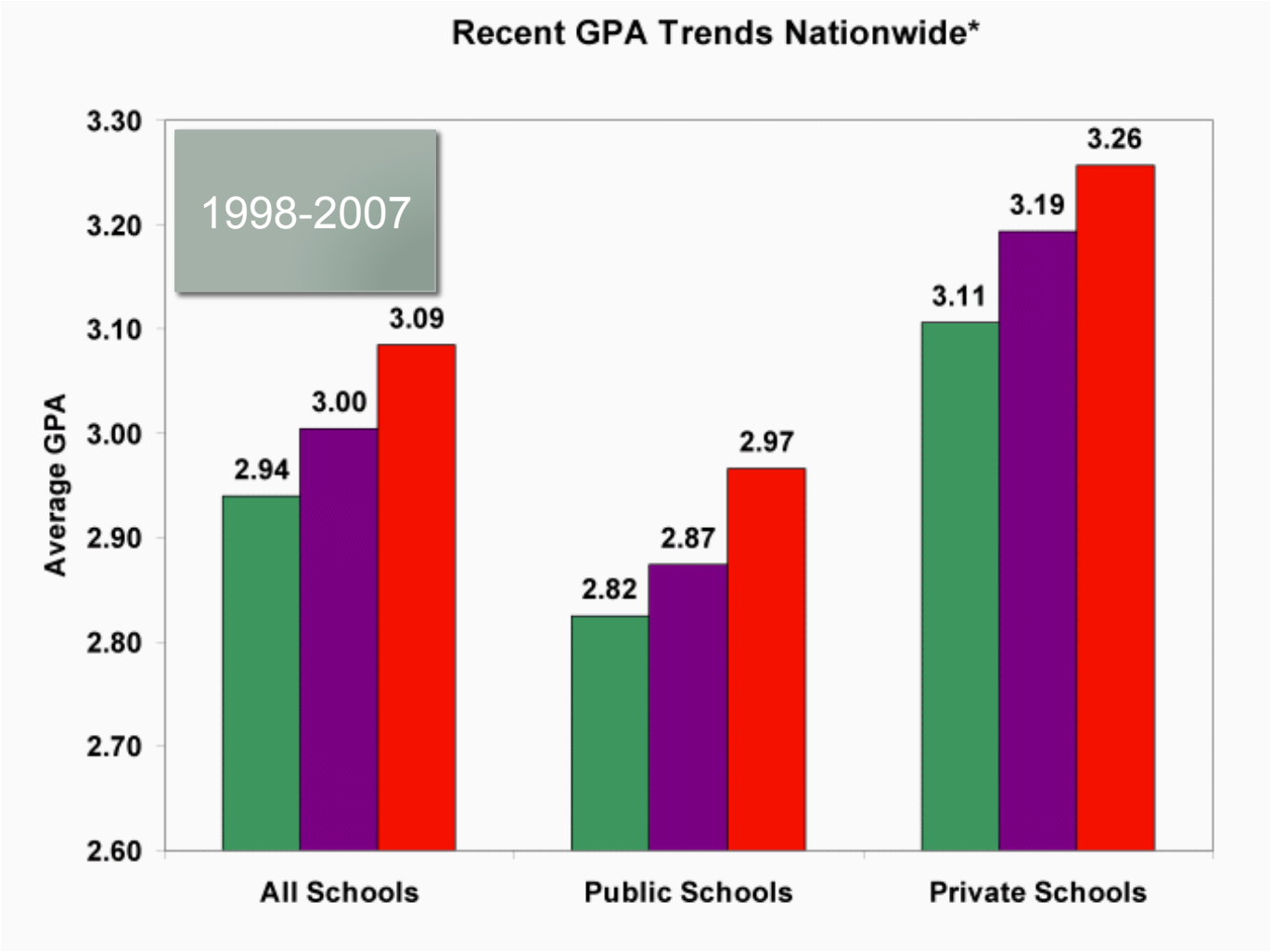
Student Activities when the Instructor is Using an Interactive Teaching Approach

Activity	Percent of Time
Thinking prompted by instructor	28.8%
Listening	27.1%
Group work	25.4%
Answering a question	10.2%
Discussing a clicker question	6.8%
Asking a question	1.7%

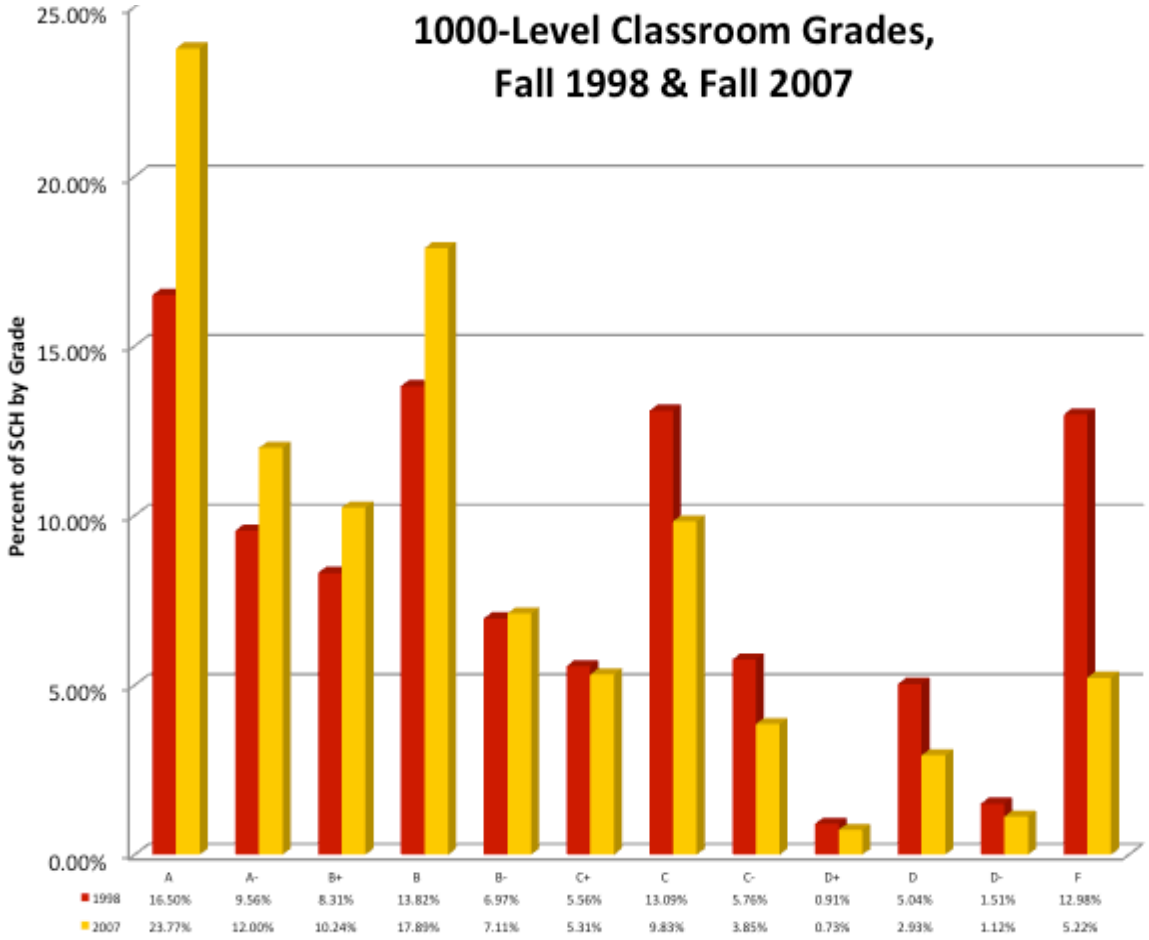
Why Examine Grades

- Employers use grades as one assessment of the potential of a prospective employee and the grades should reflect the student's full abilities.
- Certain awards are associated with high grades and all students should have an opportunity to earn those awards.
- Courses with high failure rates cost both the student and the institution time and money and should be closely examined.
- High failure rates in "gateway" courses limit the kinds of majors a student may pursue and limit the talent available to a country in science, technology, engineering and mathematics .

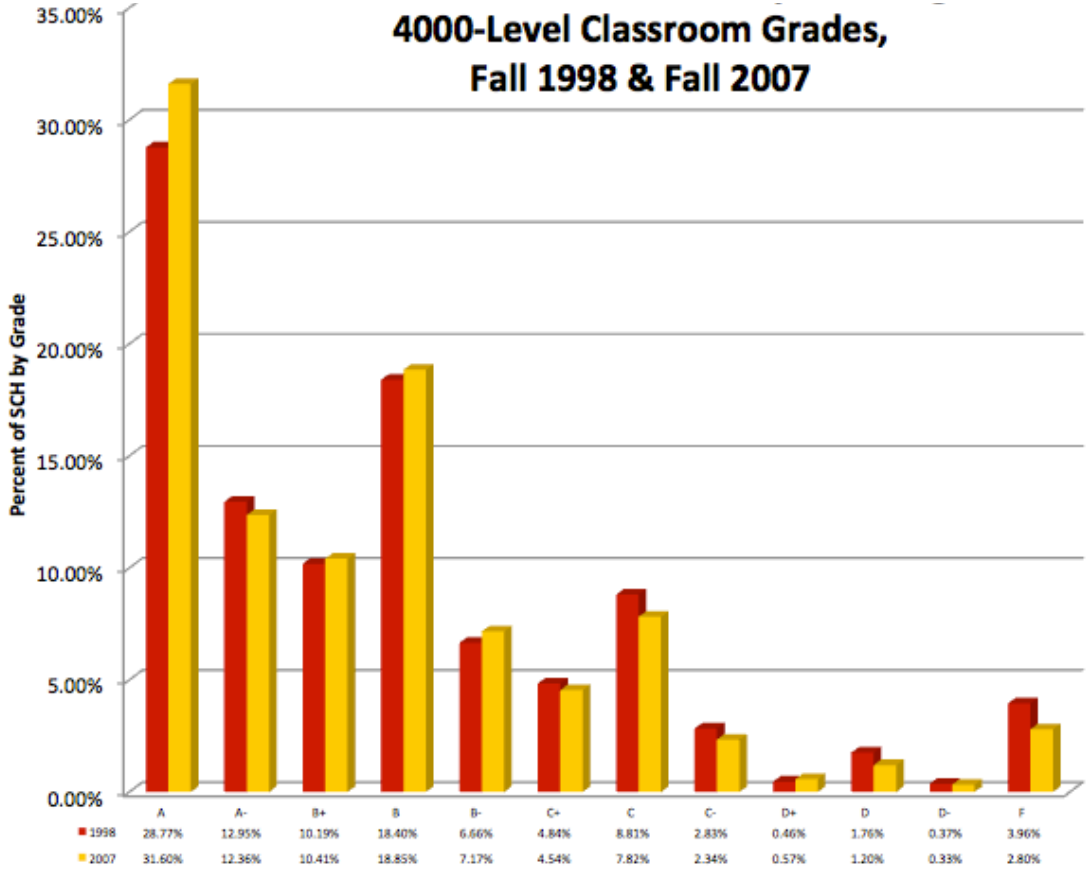
National Trend in Grades



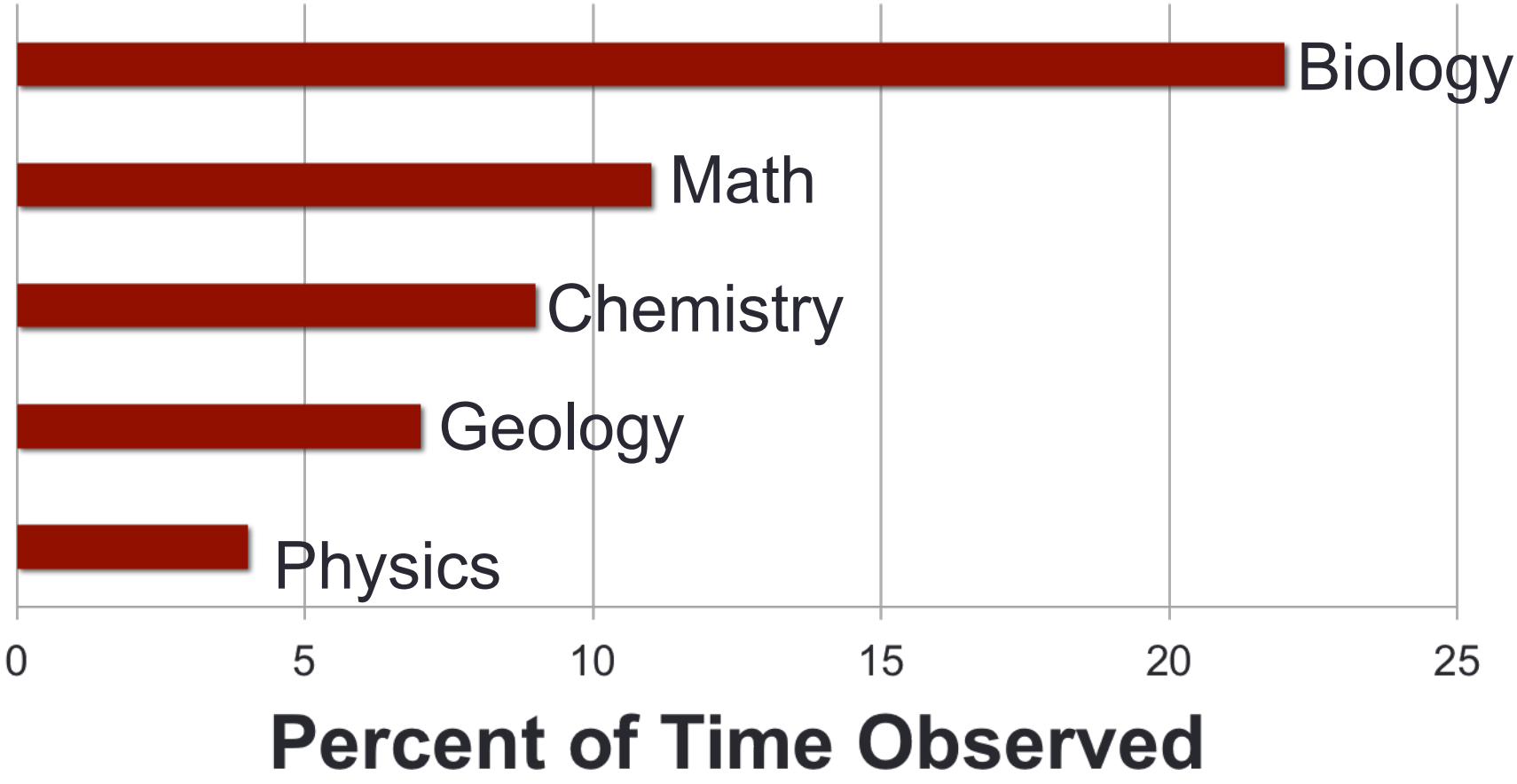
Grade Distribution Over Time: Freshman Courses



Grade Distribution Over Time: Senior Courses



Percent of Time Humor is Used in Class: Math, Physics, Geology, Biology, Chemistry



Questions & Discussion