Student evaluations, testing…

Thursday Afternoon Session

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Points of discussion:

1. Why do we evaluate
2. What do we evaluate
3. How do we evaluate
4. Other issues
5. Conclusions

1. Why do we evaluate

   Society/system wants a straightforward and simple metric to compare and identify best students for: scholarships, grad. school, med. school, job market, etc. (Not ideal but hard to change this)

2. What do we evaluate

   Understanding and problem solving rather than memorization (Teach/test transferable skills)

   Essential to test "drawing skills": structure, mechanisms, logic (multistep-synthesis), some nomenclature but not too much, etc.

   Exams must be representative of course contents and emphasis.

3. How do we evaluate

Need to reward best students, those who understand the subject matter and can apply it.

More tests with smaller term% is preferable. Limited time (especially for midterms) an issue: evening exams?

Multiple choice questions hard to avoid with large sections (limited instructor time and resources). Should be kept to a minimum.

Curving? O.K. for large sections.

Absolute mark (Percent) vs Letter Grade? Homogeneity between school/countries would be helpful. More informative transcripts: class avg, rank/class size?

Exams not a perfect evaluation method but instructors have huge impact by carefully designing "fair" exams representative of course contents (emphasis) and test real understanding and problem solving.

Pros and Cons of:

Formative (low-stakes, feedback oriented) *Ex: Quizzes, assignments.*

"Learn how to learn", encourages self-assessment
E-learning
Collaboration vs collusion
Means to engage students but students have limited time (may see assignments just as extra work, not so much as a learning/feedback exercise)

vs

Summative (high-stakes)

Exam technique, students' stress and time management
Encourages cramming

Balance is needed. Class size and instructor time are big limitations (exam preparation/administration).

4. Other issues and concerns:

Cheating/copying: growing problem, both in lab reports and exams, unfair to other students.

Common exams in multiple sections: some pros, some cons

Labs: integrated or separated from classroom component?

Test communication skills: written and presentation skills? Limited by class size and instructor time (marking).

5. CONCLUSIONS

Test understanding, problem-solving, over memorization/cramming

Evaluation techniques are very dependant of class size, instructor time, resources (T.A.'s, etc.)

Grade assessment not perfect, inescapable, but instructors have a big influence by preparing fair examinations:

Test understanding, problem-solving
Minimize cheating, copying (from past exams and reports, etc.)
Exams representative of course objectives, contents, emphasis
Good balance of formative and summative assessments

Interesting question (from Peter):

Would you teach differently if you didn't have to assess grades?
(e.g. Pass/Fail)