

# Using student feedback surveys in eos114, "Natural Disasters"

## 1. Purposes: Midterm & End of term surveys help assess ...

- ✓ Student reaction to pedagogy
- ✓ Progress towards Department's aims

## Reasons: ask student opinions re. ...

- Optimum meeting times
- Teaching by multiple experts, and which were preferred
- Activities (Disaster Watch, Movie night, field trips, labs)
- Resources, (ECAC, text, course PPTs, video, website, etc)
- Difficulty, scientific depth, & length of exams
- Education and career goals
- Likelihood of recommendations to friends
- TAs (in lieu of the other TA evaluation)
- Clickers, YouTube clips, mini in-class projects, think-pair-share, & homework

## 2. History:

2001 | 2006 | 2007 | 2008 | 2009

Student preferences: topics, instructors, TAs, features, EOS attitudes

Probe 1<sup>st</sup> clicker use

Probe mult. instr's

SALG<sup>(4)</sup> format, drop instr, TA preferences

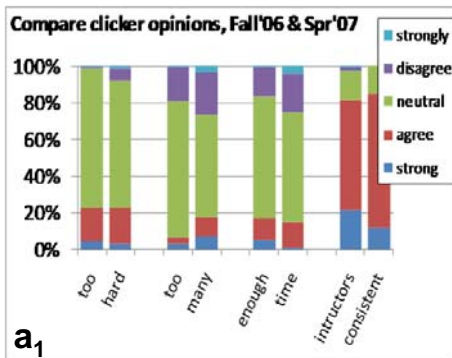
Refinements for clarity

## 3. Examples

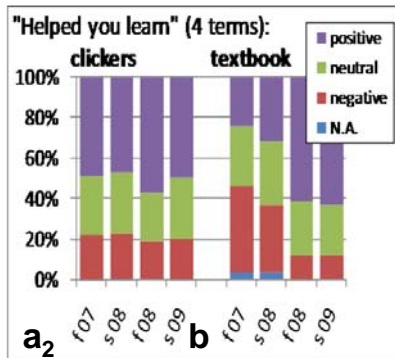
Consistency helps draw long-term conclusions.

a) clickers "liked", BUT hard to compare over 6 terms. b) change to custom text → good. c) better goals.

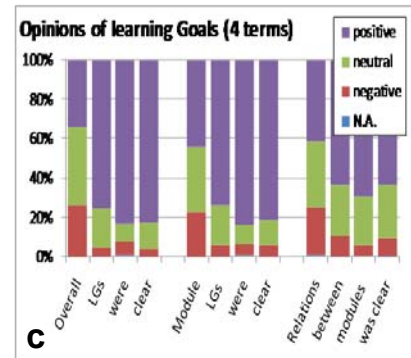
Two lessons: Work to reduce the number (20%) who **do not** like clickers, & strive for survey consistency.



a<sub>1</sub>



a<sub>2</sub>



c

## d) Quantitative information from qualitative data:

"What did you like?" & "What would you improve?" yields:

- Confirmation of other questions,
- Emergent information. (eg improve 'testing'.)

"Was 2-weeks of basic background useful?" yielded an even spread of yes/no/somewhat. Therefore a pre-course diagnostic was introduced.

## 4a. Adjustments to improve student learning:

- Printed copies of the online course notes - BUT later stopped
- Adjusted: Disaster Watch (done by grad students) & ECAC hours
- Added: exam feedback, custom textbook & online homework
- Encouraged standardization for all instructors
- Stopped bonus marks for optional activities (movie night, field trips)
- Recommended changing clicker technology

## 4b. Adjustments re. Department aims:

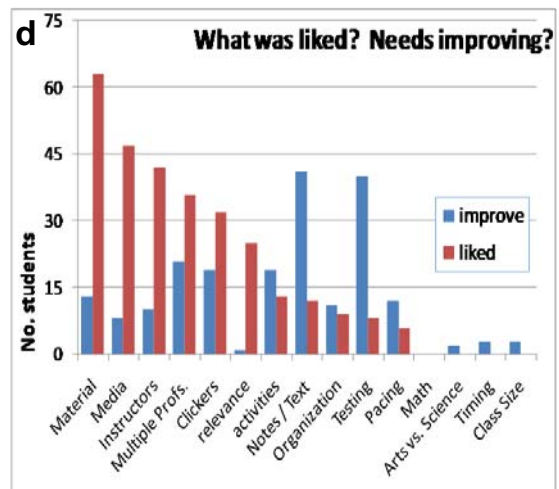
- Moved course into prime times
- Fine tuning ECAC hrs (increases efficiency)
- Last class highlights EOSC / ATSC courses

### Implementation?

- Paper - Scantron
- Vista - Custom code.

### Plans for eos114?

- Continue ... but other changes will happen, **despite** opinions.



## 5. Lessons about how to survey:

- Not too many - start before term's end - bonus pts
- Do midterm surveys only if changes can be made (BUT students DO appreciate adaptability).
- Question only what you can react to.
- Good question-asking practices are important<sup>(2)</sup>
- Open questions are time consuming to process.
- Students are NOT always good judges of pedagogy because learning is "hard".

### Some references

- Gibbs, G., C. Simpson (2005), "Conditions Under Which Assessment Supports Students' Learning", Learning and Teaching in Higher Education, #1, 2004-05.
- Ivie, R. R. Czujko (2007), "What's your survey telling you?", Physics Today, Nov 2007.
- Nuhfer, E.B., 2003 "Of What Value are Student Evaluations?" Idaho State U., <http://www.isu.edu/cit/facultydev/extras/student-evals.html>
- Seymour, E., et al (2000), "Creating a Better Mousetrap: On-line Student Assessment of their Learning Gains", Presentation at the National Meeting of the American Chemical Society. See <http://www.salgisite.org/>.

