

# Evaluating ClassEval

For the Academic Policy Committee

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# History

- EOTC considered centralizing and online administration in 1999-00; piloted and recommended centralizing but not putting it online; not funded until 2006 due to budget constraints
- Fall 2004: UPA began preparing reports for some departments from scanned paper forms, but data quality extremely poor
  - 15% datasets unusable
  - Late datasets rendered some reports inaccurate
  - Response rate – based on students enrolled – was 46% overall, section rates ranged from 5 to 200%
- Spring 2006: UPA was asked to administer online for all depts, piloted with 6 depts in fall
- Spring 2007: full implementation
- Fall 2008: “unique questions” feature added

# Process

- <http://www2.acs.ncsu.edu/UPA/classeval/index.htm>
- Questionnaire: closed- and open-ended, core and “unique” questions
- Schedule: Last 2 weeks of classes, closes 8 am on first day of finals
- Dashboard for whole, dept, section
- Incentives: none for university; discouraged for individual sections, but some instructors still use them
- Section reports by question: instructor mean, SD, SEM; department mean and SD for undergrad and grad courses
- Continuing administrative challenges

## Summary Statistics

- The overall response rate has varied between 54.7% and 60.6%.
- The total number of surveys is between 120,000 and 150,000.
- Over 4,000 classes taught by over 2,000 instructors are evaluated by almost 30,000 students.
- Consistent response rate patterns have emerged...for example, females and graduate students have higher response rates than their counterparts.

# Evaluation

- 1) How do paper and online response rates and ratings compare?
  - 2) What factors contribute to high and low response rates?
  - 3) What response rate is necessary for meaningful results?
- Advised by Professor Reiland, Statistics

# Research Question #1

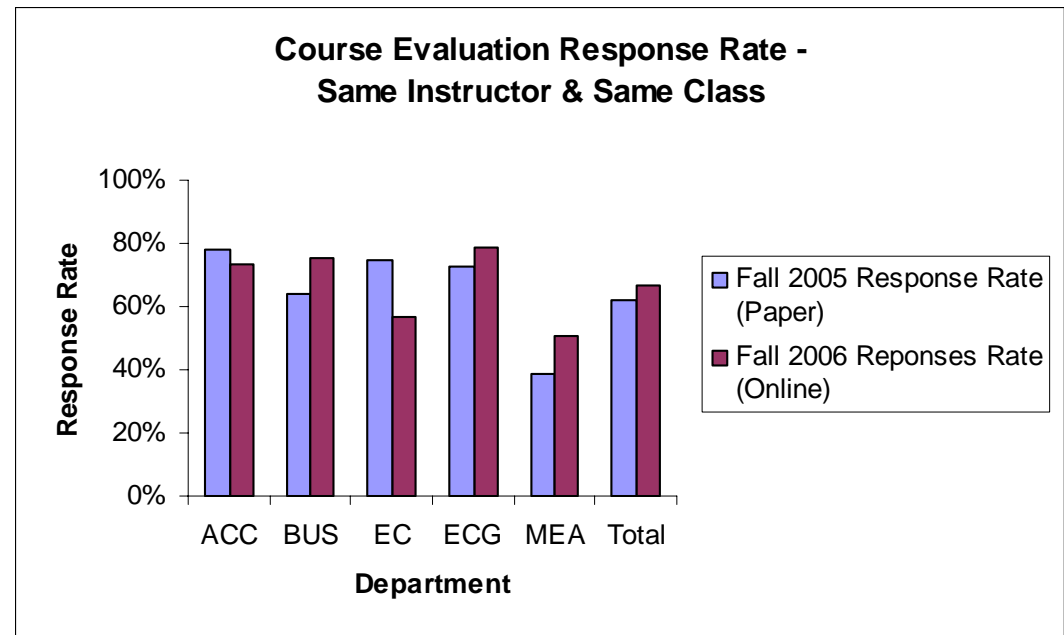
How do paper and online evaluations  
compare?

# Study Methodology

- Compared Fall 2005 Paper Evaluations and Fall 2006 Online Evaluations.
- Limited to departments with both paper and online evaluations available to UPA: Business Mgmt, Accounting, Economics, MEAS.
- Means test

# Online - Paper Comparison – Same Instructor & Same Class

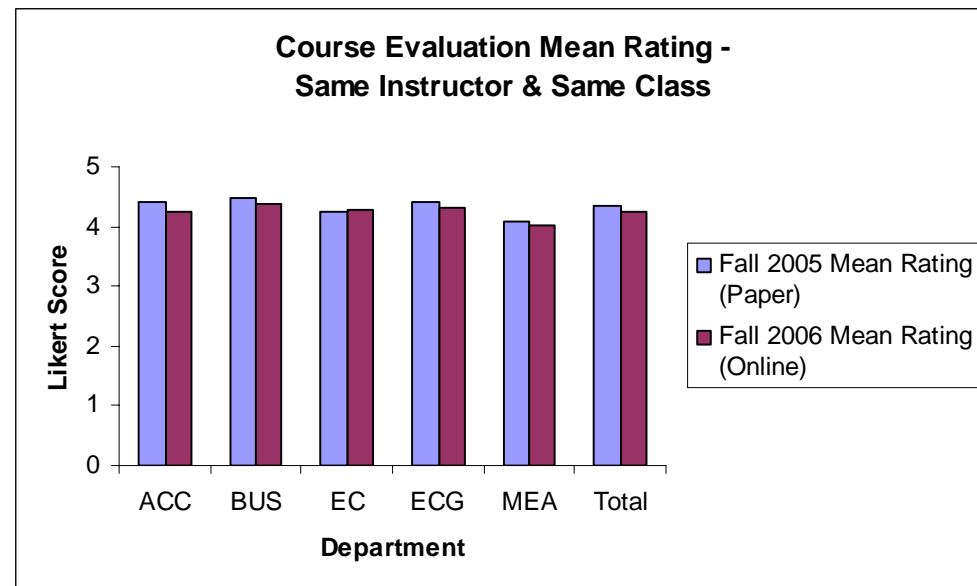
- Online response rate was slightly higher (66.3% vs. 62.1%) for lecture sections taught by the same instructor in both semesters. The difference was not statistically significant.





# Online - Paper Comparison – Same Instructor & Same Class

- Mean score from online evaluations was slightly lower (4.25 vs. 4.34) for lecture sections taught by the same instructor in both semesters. The difference was not statistically significant.



**Research Question 2:**  
What response rate is required for  
meaningful results?

# Study Methodology

## Ordinary Least Squares Regression

- The dependent variable was average score on Question 9
- The independent variables used include:
  - Student demographics
  - Student college, department, & level
  - Student performance & courseload
  - Course college, department, time, & level
- Each observation is one class section (approx 4,500)
- The results generally apply to all sections but may not apply to any given section

# Study Methodology

## Ordinary Least Squares Regression

Why use Question 9?

- To conserve computing requirements
- Every submission includes question 9
- Question 9 is most highly correlated with the student's average response for all questions
- Question 9 has the highest response rate
- Question 9 has the most variability

# Study Methodology

## Monte Carlo Experiment

- The Monte Carlo analysis was performed on all class sections with a 100% response rate (n=15)
- Within each section, the average of every possible combination of respondents was computed and compared to the actual mean
- The class sizes ranged from 10 to 22

# Meaningful Results Analysis

## Summary of Results

- On average, as response rates increase, so does the mean score on question 9.
- On average, when the response rate reaches 50%, the mean score on question 9 stabilizes.
- Possible conclusion: on average, the results are meaningful when the response rate exceeds 50%.
- These results apply over all class sections but may not apply to any given section.

**Research Question 3:**  
What factors contribute to high and  
low response rates?

# Study Methodology

## Logistic Regression

- The dependent variable was if a student answered question 9
- The independent variables include:
  - Student demographics
  - Student college, department, & level
  - Student performance & courseload
  - Course college, department, time, & level
- Each observation is one submission (~130,000)



# Response Rate Analysis – Course Characteristics

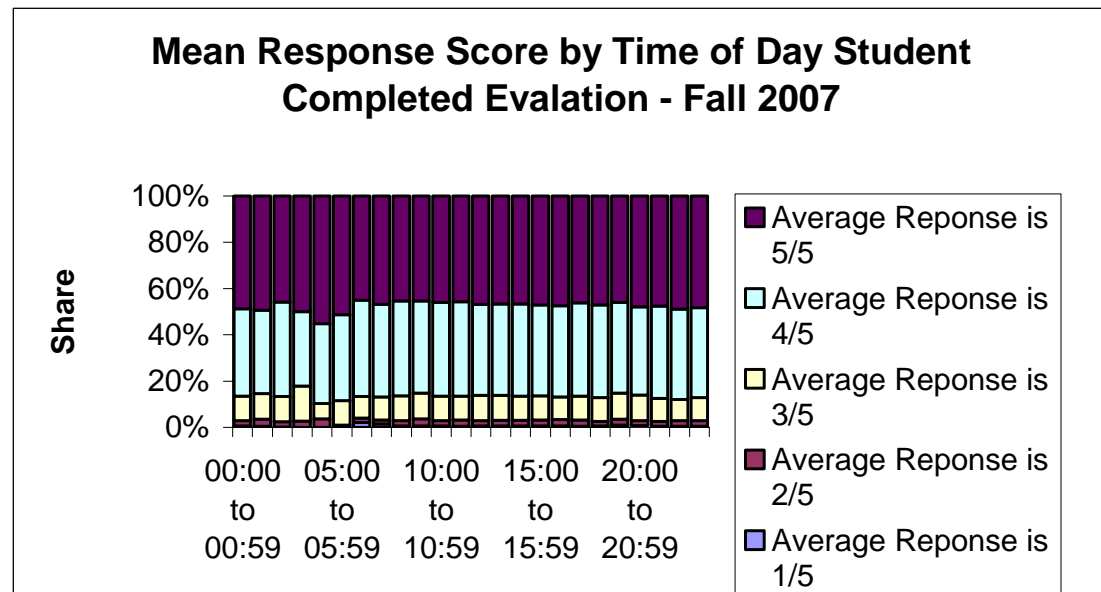
- Classes with significantly higher response rates:
  - On-campus classes
  - Higher level classes
  - DUAP, College of Management
  - Higher Average Grade Awarded
- Classes with significantly lower response rates:
  - Distance Education classes
  - Lab sections
  - Small classes
  - Lower level classes
  - Colleges of Design and Textiles, Music and PE

# Response Rate Analysis – Student Characteristics

- Students with significantly higher response rates:
  - Taking more hours
  - International students
  - Female students
  - Students in a CHASS, DUAP, or Management program
  - Graduate students
- Students with significantly lower response rates:
  - Males
  - Students in Design and AGI
  - Upperclass undergraduates

# Response Rate Analysis – Time of Day

- Time of day, day of week, and the date the student submits the evaluation have no effect on the evaluation scores.



Questions about what we've done

Questions for additional analyses