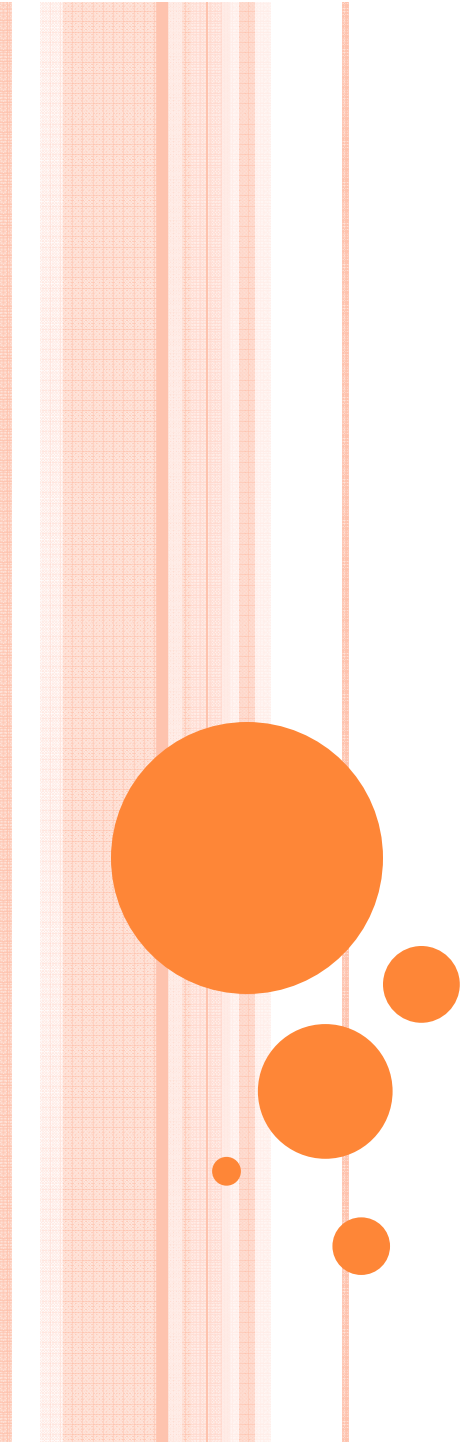




FACULTY ATTITUDES TOWARDS PLUS/MINUS GRADING

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OUTLINE

- Topic of the Research
- Motivation
- Progress
- Sample Selection
- Survey Set Up & Contacting Respondents
- Pretest Results & Changes
- How to deal with Nonresponse issue
- Conclusion



FACULTY ATTITUDES TOWARD PLUS/MINUS GRADING

○ Motivation

- GPA: one of the strongest tool for getting a job
- Carnegie Mellon Univ. Average GPA lower than that of the Nation
- Compare with previous survey done by previous 36-303 class on students attitude



QUESTIONNAIRE

- Demographic Questions
 - Age, title, etc.
- Experience Questions
 - 15. Have you implemented +/- grading at CMU (for mid-semester grades or for students' reference, etc.)
- Opinion Questions
 - 20. Do you think +/- grading will increase or decrease students' chances of getting a job?



PROGRESS

- Created survey questions
- Revised survey questions based on pre-test
- Randomly selected 578 professors from our sample population
- Planning on distributing the survey to selected faculties via e-mail



SAMPLE SELECTION

- Sample Frame

- Professors who are teaching at least one course in Spring 2011

- Sample Size

$$n \geq \frac{Nn_0}{N + n_0}, \text{ where } n_0 = \frac{z_{\alpha/2}^2 (SD)^2}{(ME)^2}$$

- We assumed $z=0.96$, $ME=0.05$, $SD=0.5$
- $n \geq 289 \Rightarrow$ sample at least 578 faculties



SAMPLE SELECTION (CONT'D)

- Simple Random Sampling
 - Randomly selected 578 professors from the pool of 1147 professors
 - Numbered each faculties
 - Used R to generate 578 random numbers
- Advice for the future
 - Stratify faculties by department or school
 - Different survey method; face to face



SURVEY SET UP & CONTACTING RESPONDENTS

- The survey is in a questionnaire format
 - 24 questions total from SurveyMonkey
 - Demographic & Experience & Attitude Questions
 - <https://www.surveymonkey.com/s/6T85PJZ>
- Respondents are contacted via Andrew mail
 - CMU Directory & Department information
 - 3 emails total: sent to every 578 samples



PRETEST RESULTS & CHANGES

- Pretest Results
 - Randomly selected 20 faculties and asked them to fill out the survey
 - Response Rate was extremely low
 - Length of the question & Type of the question (Open-ended)
- Changes
 - Wording of the question
 - Type of the question: multiple choice



QUESTIONNAIRE

1. Job title (assistance professor, lecturer, etc)
2. Department you are associated with.
3. Age
4. Gender
5. Highest degree earned
Bachelors Degree Masters Degree PhD Doctorate Others:
specify _____
6. Years teaching (including years at institutions other than CMU)
7. Years teaching at CMU
8. Number of courses currently teaching in spring 2011 semester?
9. Did you attend schools that implemented +/- grading?
Yes No
10. If you said yes in question 9, do you think +/- grading affected your GPA?
Yes - Positively or Negatively No
11. Do you assign your letter grade quantitatively or qualitatively?
Quantitative Qualitative Other(please specify)
12. Do you have teaching assistant(s) for the course(s) you are currently teaching?
Yes No
13. If you answered 'Yes' in question 12, what range of percentage of grading do TAs do?
a) Less than 10% b) 10% ~ 30% c) 30% ~ 50% d) 50%~70%
e) More than 70%
14. Do you think +/- grading system will create more work for you or TAs for grading?
Yes No Don't know
15. Have you implemented +/- grading at CMU (for mid-semester grades or for students' reference, etc.)
Yes No
16. Have you ever bumped letter grades for students who are on the borderline between two different grades?
Yes No
17. If you answered "Yes" in question 16, What are your criteria for bumping a student's grade up? (For example, students' participation in class, continuous improvement in exams or homework)
18. Do you think +/- grading will affect students' efforts that they put into classes?
Yes No Don't know
19. Do you think +/- grading will increase or decrease students' average GPA?
Yes No Don't know
20. Do you think +/- grading will increase or decrease students' chances of getting a job?
Yes No Don't know
21. Do you think your students in your class will prefer +/- grading system to the current system?
Yes No Don't know
22. On a scale of 1 to 5, how would you rate your opinion on CMU's current grading system?
1 (strongly disapprove) 2(disapprove) 3(neutral) 4(approve) 5 (strongly approve)
23. On a scale of 1 to 5, how would you rate your opinion on implementing +/- grading system at CMU?
1 (strongly disapprove) 2(disapprove) 3(neutral) 4(approve) 5 (strongly approve)
24. If you want to provide more detailed view on +/- grading, please specify here.



NONRESPONSE RATE

- Nonresponse- arises when the respondent data differs from the target population
- Randomly selected 578 professors from the pool of 1147 professors
 - We are assuming a response rate of 50%, 285 professors
 - Spread Across all Departments proportionally
- Variables that could be used to distinguish nonresponders:
 - Age
 - Department
 - Years Taught
 - Education



COUNTERING NONRESPONSE RATE

- Required all the necessary information, to prevent confusion between respondents and nonrespondents
- Procedures to overcome nonresponse
 1. Follow Up Survey Reminder (Tailored to Respondent)
 - Persuade the Interviewee
 - Send reminder emails about the survey



OVERCOMING NON RESPONSE

○ Nonresponse Challenges

1. Failure to deliver the survey request
2. Refusal to Participate
3. Inability to Participate

• Successes

- Delivered all survey requests successfully (no failure to deliver the survey request)
- Quicker survey to reduce refusals because of time constraints
- Professor selection reduces inability to provide requested data (due to professor requirements)



CONCLUSION- FUTURE WORK

- Left to do...
- -send out emails to the randomly selected sample, with a link to the survey
- -wait for a week to see if close to 289 (required response rate) of the 578 participants have responde
- if this is not the case, we will send them a reminder, and thereafter follow up with them face to face
- -cut off data collection once we have 289 respondents
- -store the data in excel



CONCLUSION--FUTURE WORK

Post-processing and Analysis...

- we will explore different relations among the variables
 - which professors who previously taught at a +/- institution did/did not support +/- grading at CMU
 - how old were these professors; which dept, etc
- see what percent of the current faculty supports +/- grading system (and whether it is statistically significant)
- decide if the data needs to be stratified by school or department (depending on similarities within schools or certain departments)
- Finally, compare the responses and results from CMU faculty to the results and responses of CMU students with regard to the +/- grading system at CMU (found by previous 303 students)

