You forgot to discuss the articles you already found, in the introduction. One of these should be the previous 303 study on +/- grading, so you can set up comparisons between your results and those of the previous 303 survey (in the results or discussion part of your paper).

[if you need their original 303 paper let me know]

Introduction

This survey was done on faculty members to study attitude towards different grading system, +/- grading system. Currently Carnegie Mellon University has grading system of qualitative grading system. To know the view from the faculty members, the survey was drawn for the only instructors who are currently (2011 spring) teaching at least one undergraduate course in Carnegie Mellon University in Pittsburgh.

This research was motivated from the importance of GPA from college life. GPA represents how the students worked during the school year. GPA should not be the only factor that measures how the student did in the college, because many people has job, research, volunteer work, fraternity and so on. However, even though there are many things done in school year, it is true that many people ask about the GPA when they talk about the quality of college life. GPA usually becomes one of the standards to get into graduate school such as schools for Ph.D, Medical schools, Law schools and so on, and get jobs. GPA is not the only factor to get into graduate school and get a better job, but it takes a huge roll for admission office for graduate school and for the company recruiter.

In this case, Carnegie Mellon University students can get some of disadvantages, since the average GPA of Carnegie Mellon University students are lower than the Nation's average GPA for college students. The group thought about the reason why Carnegie Mellon University students' GPA is lower than that of Nation's. It was found that other peer institutions using +/– grading system had a lot higher average GPA than that of Carnegie Mellon University. This lead a question that if the grading system differs from now, would it causes elevation of average QPA or would the students more motivated to study if it is +/- grading system.

There was a research done on the same topic but with different target populations. Previous research was done to survey on the views of students how they think about +/- grading system. The research showed that 68 percent of undergraduate students were against the implementation of +/– grading.

Since this research was done on students, the views from faculty members were not reflected. Our group decided to design a research to survey on faculty members to know their views about the effect of other grading system. For this survey, 24 questions were asked through web site, survey monkey (https://www.surveymonkey.com/s/6T85PJZ). The survey consists of three types of questions; 8 questions of demographic questions such as job title, 8 questions of experience questions such as Did you attend schools that implemented +/- grading, and 8 questions of opinion based questions such as Do you think +/- grading will increase or decrease students' chances of getting a job?

brief summary of the survey results can go here too.

Method

The sampling population of this study is faculties in CMU who are teaching at least one undergraduate course in Spring 2011 semester. This does not include undergraduate or graduate student instructors and professors in Qatar. Our sampling frame is the Schedule of Classes provided in CMU website. For our sampling method, simple random sampling is employed to ensure well represented sample with less selection bias. If we were to

distribute survey to all faculties in the sampling population, this may subject to the self-selection bias as we have no control over who decides to complete the survey. In this case, faculties who have strong opinions regarding plus/minus grading are more likely to respond which may lead to measurement bias as well.

faculty is both the singular and the plural...

The total number of faculties who are teaching at least one undergraduate course was 905 faculties. Under the assumption of simple random sampling and response rate of 50%, we calculate our sample size to be 289, which indicates that we should have at least 289 respondents. Since we have assumed 50% response rate of survey, the survey should be distributed to at least 578 faculties. Because our survey is anonymous, we have no information on who have completed the survey or not. If the goal sample response is not met, a reminder email will be sent to all faculties who were selected initially. Since the our survey is self-administered computerized questionnaires, samples who choose not to answer the survey may do so because they do not want to invest time to complete the survey or have no interest about implementation of plus/minus grading at CMU.

respondents

or ...

We chose to do an online survey using SurveyMonkey.com. The survey is a questionnaire format with 24 questions. There are eight demographic questions, nine experience questions, and seven opinion questions.

From our pretest results, we found that we encountered missing item problems in couple of the questions. Reviewing those questions, we found that these were open-ended questions, which may have brought confusions in answering those questions. Therefore, we revised our questionnaire to lean more towards multiple choice rather than open-ended questions.

The chosen participants of 540 faculty members are contacted via email. An initial email is sent providing a brief introduction of the survey and asking them to kindly participate in our survey by following a link provided. A second reminder email is sent to all 540 faculty members in order to assure the confidentiality of the participants. About three days prior to the end of the survey, a last email will be sent to all for a final reminder.

past tense?

new parag

In addition to the use of email for contacting the chosen participants, we thought about adding a face-to-face paper-pencil survey method as a secondary mode of collection. However, respondents have feel threats to the confidentiality of their responses. Such would result in errors in our data, such as measurement error and non-response error. Therefore, we decided to stick with only the use of emails as our mode of collection.

was this actually the feedback you got from responses?

In any survey involving a questionnaire the surveyor has to worry about a variety of biases that may arise; the most significant of these biases being non-response. By definition non-response bias arises when the respondent data differs from the target population. In other terms, non-response bias is when the represented data does not accurately reflect the entire population because a segment of the population was not accounted for accurately, as a result of flaws in the survey design.

Common non-response challenges include failure to deliver the survey request and inability to participate in the survey. However we feel that our survey has been designed to overcome these challenges. Since all teaching faculty are listed in the Carnegie Mellon directory we have had no problems with failing to deliver the survey. Furthermore the fact that all of the targeted respondents are Carnegie Mellon professors there should be no issues where they are

unable to participate due to the language or literacy level of the questionnaire.

If non-response bias does arise, our survey questionnaire includes a variety of demographic questions that will help us indentify variables that distinguish non-responders. Based on those variables we can weigh the corresponding variables to improve survey estimates for underrepresented categories. But to avoid weighting variables we have included measures in our survey design to counter non-response. First off the survey questionnaire requires all necessary information before it is submitted, so we do not have to distinguish if incomplete surveys are counted as non-responders. Furthermore if professors do not respond we have a follow up survey reminder to persuade the interviewee to complete our survey. This is intended to reduce our non-response rate and as a result decrease our non-response bias.

Result

We used the statistical software R to generate a random selection of 578 numbers, each corresponding to a unique faculty member. We have sent out a standard email to these randomly selected faculty members with a link to the survey. We would wait till the first week of April to see if close to 289 (required response rate) of the 578 participants have responded. If this is not the case, we will send them a reminder email asking the participants to kindly take the survey, and ignore the email if they have already done so. Thereafter we may follow up with a face to face interview with non responders. By April 7th, we would cut off data collection, and will hopefully have close to 289 respondents.

The data will then be recorded in Microsoft Excel to explore various different relations among the variables; such as: which professors who have previously taught at a plus/minus grading institution also supported the plus/minus grading system at CMU; what was the age range of these professors; how do these responses differ by department, etc. We are interested in finding out what percentage of the current faculty supports the plus/minus grading system (and whether it is statistically significant).

We also plan to carry out ANOVA to see if differing opinions exist among differently groups of faculties. We also hope to answer our research hypothesis of what the CMU faculty's views are on the plus/minus grading system and then compare their opinions to the responses of the CMU students with regard to the plus/minus grading system at CMU (found by previous 303 students).

In the future, it will be interesting to analyze whether stratifying samples by school or department (depending on similarities within schools or certain departments) produces more interpretable result.

Appendix 1: Emails

We created a separate email account in Gmail, from which we sent and received all survey-related emails.

First Email:

Dear Professor,

We are members of the 36-303 class (Sampling, Survey, and Society) conducting a survey on faculty members' opinion on plus/minus grading system as our class project.

You are randomly selected from the list of faculty members teaching a course this semester.
The survey is conducted anonymously.

We would greatly appreciate if you could spare 5-10 minutes of your time to complete our survey.

Please follow the link below:

https://www.surveymonkey.com/s/6T85PJZ
(The required fields are marked with an asterisks(*))

Your input would be valuable for the success of our project. Please let us know if you have any questions/concerns regarding the survey either directly to this email or Andrew email found on the first page of the survey.

Thank you for your time and participation. We need your input from each one of you!

With much appreciation,
Hye Jung (Allie) Cho
Dong Seob Kim
John Shoup
Erica Choi
Aeina Garg

Appendix 2: Informed Consent

Our group in 36-303 is conducting a survey on Carnegie Mellon University faculty members' opinions on plus/minus grading system. We hope to utilize the information collected to better understand the effects of plus/minus grading system and compare the differences in opinions between the students and the faculty members on this issue. This survey has been prepared for several weeks before implementation. Chosen participants were randomly selected from the list of all faculty members teaching at least one course this semester (Spring 2011). A link is provided via email, which contains 24 questions, mostly multiple choices. The survey will take about 5-10 minutes to complete, and the required fields are marked with an asterisk.

The risks and discomfort associated with participation in this study are no greater than those ordinarily encountered in daily life or during other online activities. The survey is done anonymously, so no personal information is required. There is no risk associated with completing the survey. There may be an indirect benefit to those for plus/minus grading system of a possible implementation of the plus/minus grading system in CMU. There is no compensation for participation in this study, and there will be no cost to you if you participate in this study.

If you have any questions about this study, you should feel free to ask them by contacting any one of our group members listed below:

Dong Seob Kim: dongseok@andrew.cmu.edu
Hye Jung Cho: hyejungc@andrew.cmu.edu
Erica Choi: ejchoi@andrew.cmu.edu
Aiena Garg: aiena@cmu.edu
John Shoup: johnshou@andrew.cmu.edu

If you have questions later, desire additional information, or wish to withdraw your participation please contact the Principle Investigator by mail, phone or e-mail in accordance with the contact information listed above.

If you have questions pertaining to your rights as a research participant, or to report objections to this study, you should contact Brian Junker in the Statistics Department at brian@stat.cmu.edu.

By pressing "next" below, you read and agree to participate in the survey.

We greatly appreciate your participation in our survey!

Appendix 3: Survey Questionnaire

after you have the data you can put summary statistics for each question in this part also...

*** 1. What is your Job title (assistant professor, lecturer, teaching professor, etc)?**

*** 2. Department you are associated with? (For example, Statistics, English, Chemistry, etc)?**

3. Age?

*** 4. Gender?**

- Male
- Female

5. Highest degree earned?

- Bachelors Degree
- Masters Degree
- PhD
- Doctorate
- Other (please specify)

*** 6. Years teaching (including years at institutions other than CMU)**

*** 7. How many years have you taught 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?

- Positively affected
- Negatively affected
- Not affected

11. Do you assign letter grades or number grades in each assignment (not the final grade but individual assignments)?

- Yes
- No

*** 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 TA's do?

- Less than 10%
- 10% ~ 30%
- 30% ~ 50%
- 50% ~ 70%
- 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.

Please reformat these references to match the examples in the second half of

http://www.library.cornell.edu/resrch/citmanage/apa

References

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