

Faculty Attitudes toward Plus/Minus Grading

Group G:

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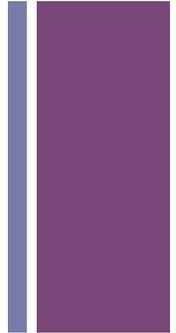


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Introduction

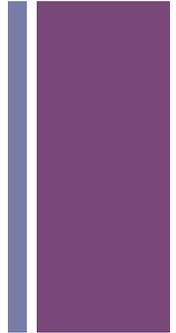
+ Introduction

- Goal
- Motivation
 - GPA is one of the most important factors for getting a job and admission to graduate schools
 - Carnegie Mellon's average GPA is lower than that of other institutions with +/- system
 - Compare results to the previous study on student's perspective on +/- system
- Hypothesis
 - Faculties perception of +/- system will be similar to that of students. Thus oppose the implementation of +/- system



+ Questionnaire

- 10 Demographic/Experience Questions
 - Department, age, teaching experience, TA, whether they attended school with +/- grading
- 12 Questions regarding
 - Whether they have bumped a student's grade up and why
 - Whether +/- grading system may affect student's GPA, effort in class, getting a job
 - Opinion on current grading system at CMU
 - Opinion on the implementation of +/- system



+ Sample Selection

- Sample Frame

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

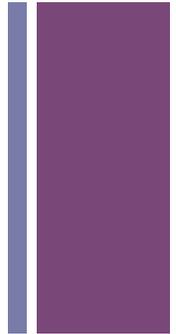
- Sample Size

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

- We assumed $z=1.96$, $ME=0.05$, $SD=0.5$
- $n \geq 270 \Rightarrow$ sample at least 540 faculties

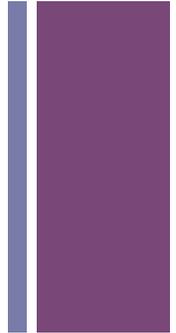
- Simple Random Sampling

- Use R to randomly select 540 professors from the pool of 905 professors



+ Additional Sample Selection and the Respondents

- Sent first email to 540 faculties
 - 140 responses 12 days after the first email
 - Sent reminder email to initial 540 faculties
- Randomly selected additional 104 faculties to increase sample, but not so successful in the response rate
- Total number of 644 faculties contacted
 - Received 201 responses
 - 31% response rate





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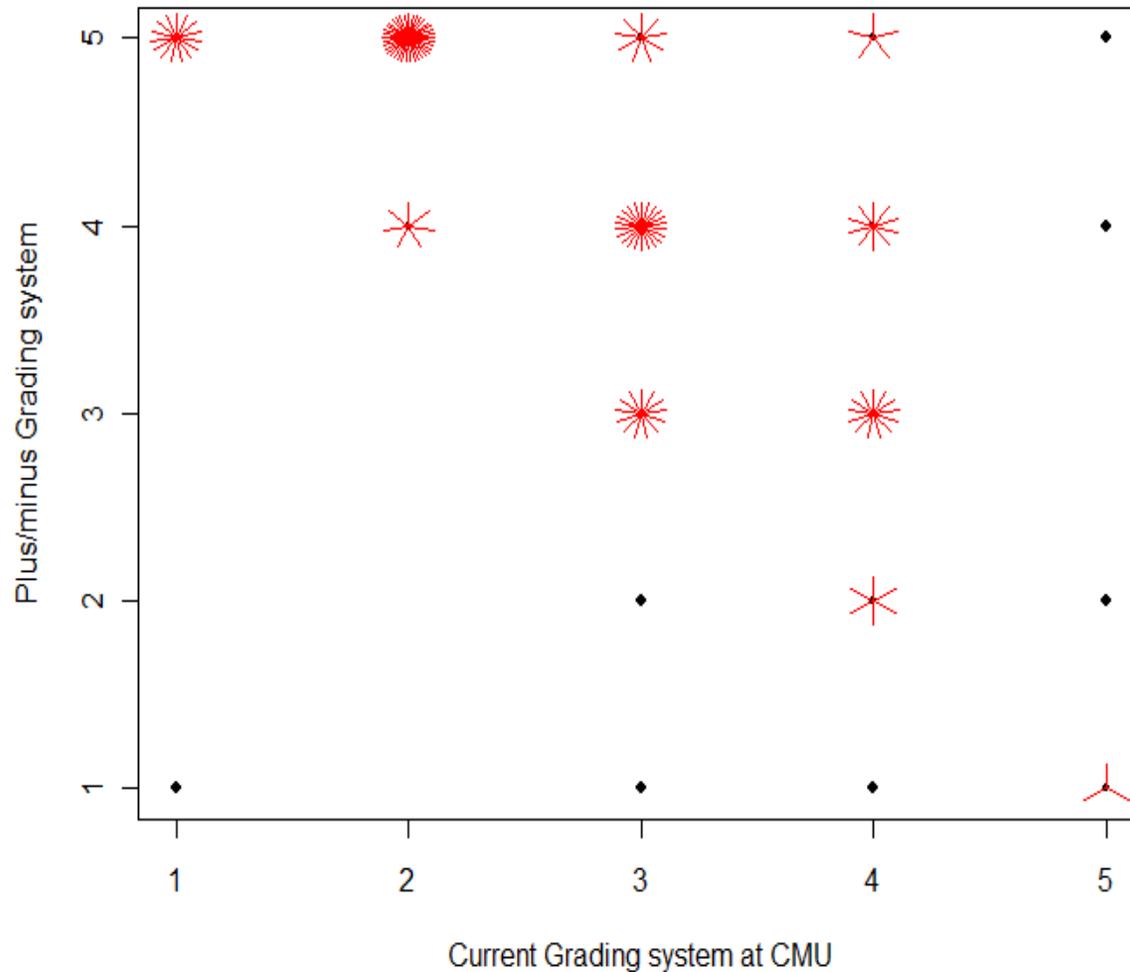
Results & Analysis

+ Demographical data

	Count	Percentage (%)	Total
Department			198
CIT	20	10.1	
CFA	52	26.26	
HSS	64	32.32	
MCS	32	16.16	
SCS	12	6.06	
TSB	16	8.08	
Other	2	1.01	
Gender			198
Male	118	59.59	
Female	80	40.4	
Degree			192
Bachelors	14	7.29	
Masters	59	30.73	
PhD	103	53.65	
Doctorate	11	5.73	
Other	5	2.6	

+ Graphical Display

Sunflower Plot: Current Grading system at CMU vs. Plus/minus Grading system

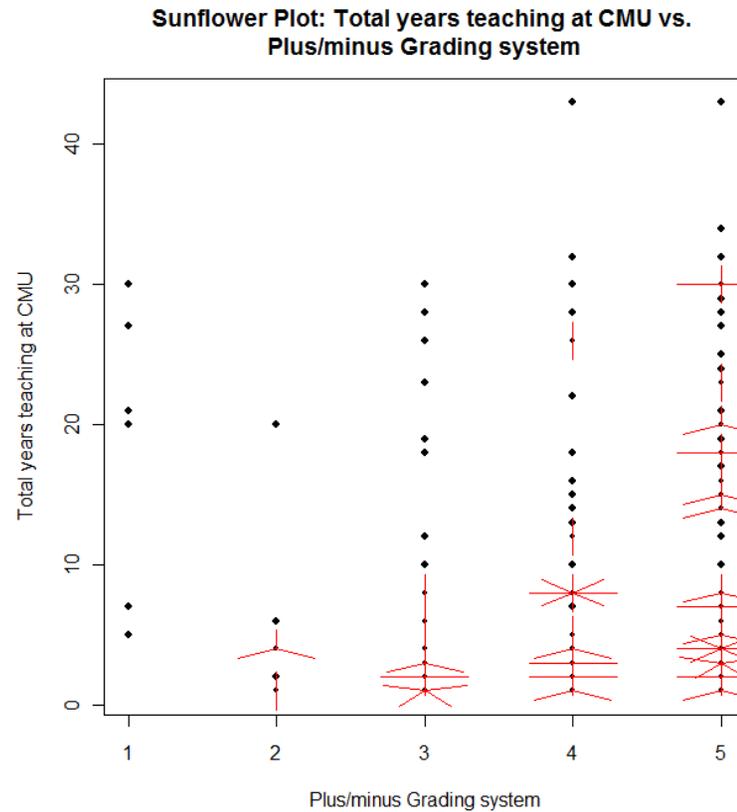
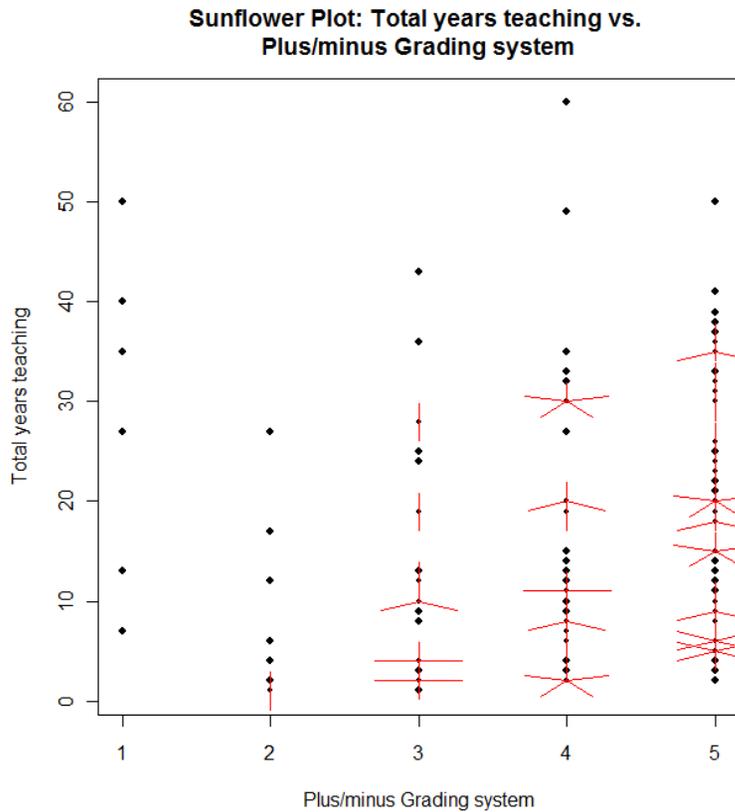


Negative relationship
between Current
Grading system at
CMU and
Plus/ minus Grading
system

Correlation:
 $r = -0.6045294$

Generated using R Software.

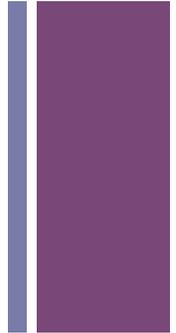
+ Graphical Display



**The more experienced the professor, the more he/
she strongly approves of +/- grading system**

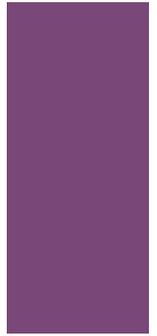
+ Experience Data

- 63.13% attended institutions where +/- grading system was implemented, 36.87% did not
 - Of the 63.13%: 43.7% had positive effect on their GPA, 6.7% had negative effect on their GPA, 49.6% had no effect on their GPA
- Little more than half do not have TA's and the rest do
 - The amount of work TA's do varies
 - 87% state that +/- grading system will not create more work for them
- 76.26% implement +/- grades in their courses, 23.74% do not
- 78.24% have bumped a student's grade up, 21.76% have not
 - Class participation, effort, improvement, round up by tenth digit. (89.5higher)

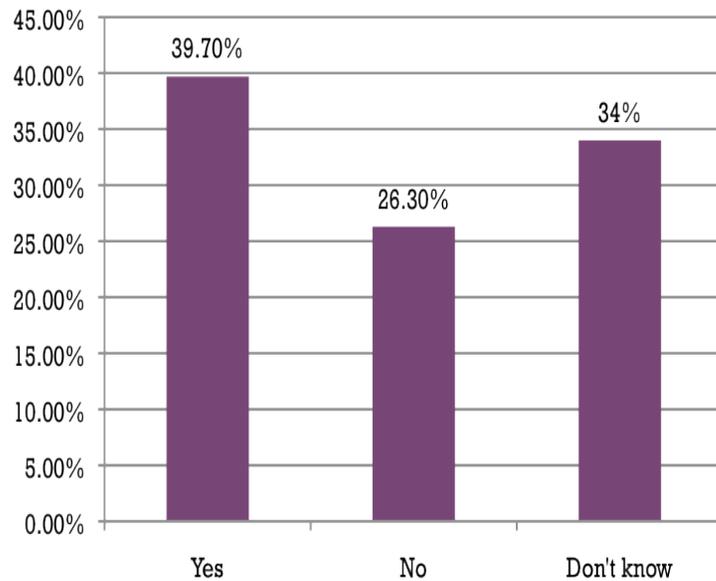




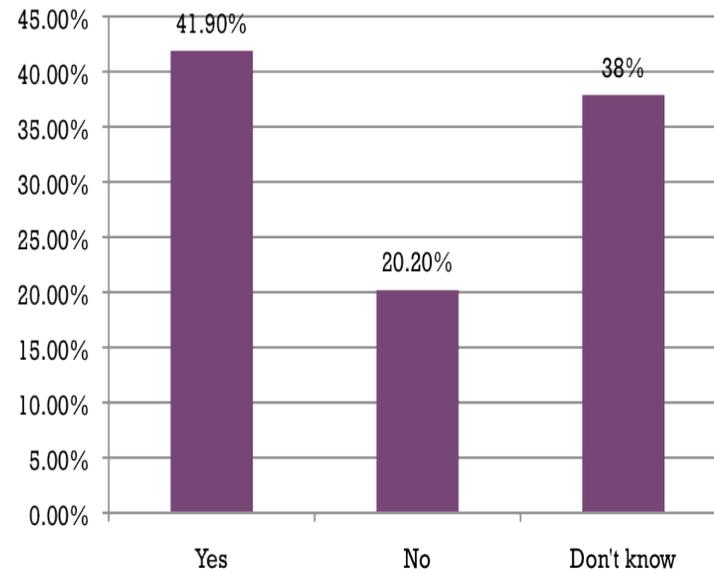
Opinion on the effect of +/- grading system on students



Effort in class

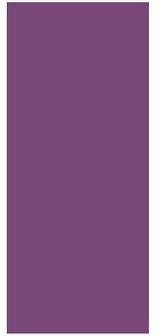


Overall GPA

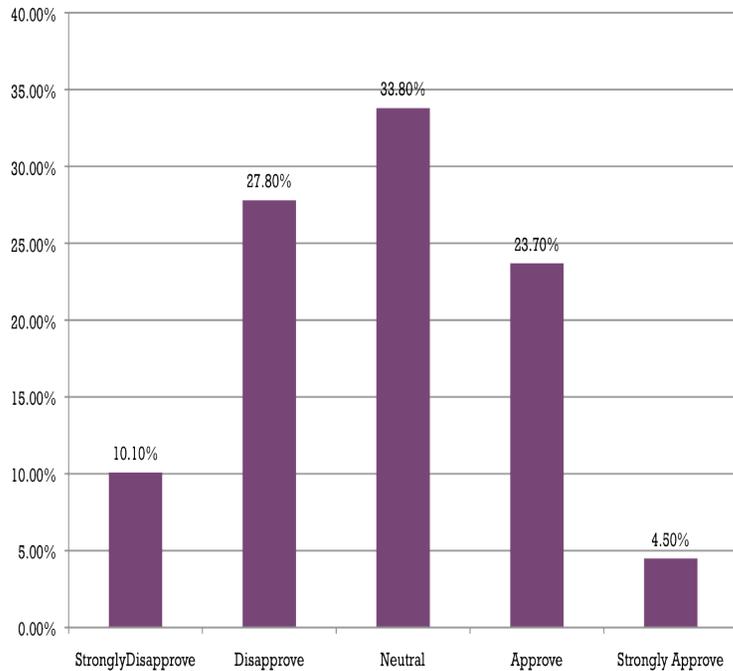




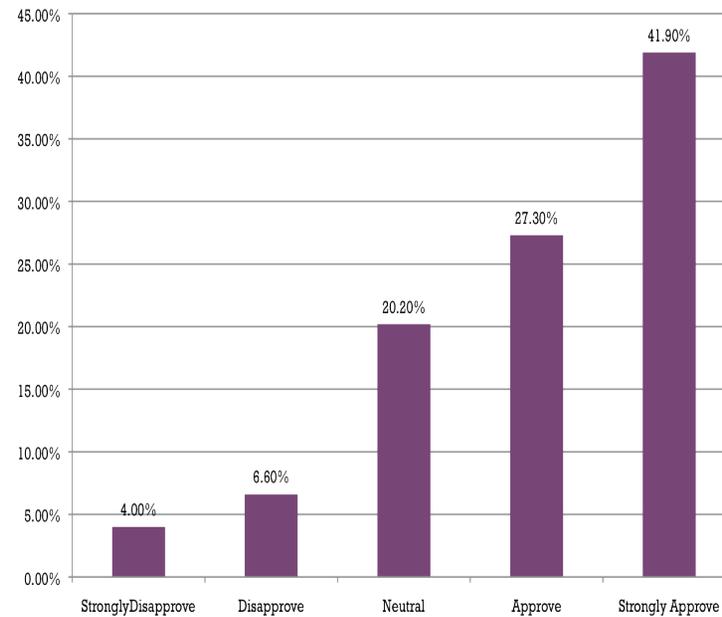
Opinions on Different Grading Systems



Current Grading System



Implementing +/- System





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Conclusion

+ For and Against...

For +/- Grading System

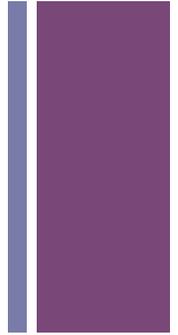
- Consistency
 - Graduate Programs have +/- Grading
 - Mid-Semester grades
- More Accurate
 - Difference between an 80% and an 89% (Both are B's)
- Motivation
 - Student's will strive for grades vs. settle
- Combat Grade Inflation

Against +/- Grading System

- Unnecessary
- More Grade Complaints
- Student Obsession over Grades
 - Focused on learning not grades
- Negatively affect student's QPA

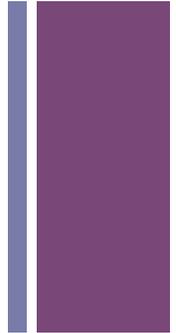
+ Discussion

- Our hypothesis is proven wrong
 - 37.8% disapprove, 33% are neutral, 69.2% approve
 - 69.2% of the faculties approve implementation of +/- system while students in the previous survey disapproved of the new system
- Professors believe that +/- grading system will affect students' Effort in class and their GPA, but not their Jobs



+ More work to do...

- Investigate relationships among variables
 - Is there a relationship between whether or not the faculty member had attended an institution where plus/minus grading system was used and whether or not the the faculty member supports the plus/minus grading system
 - Is Gender a significant variable in faculty members' opinions on +/- grading system
 - Is Department a significant variable in faculty members' opinions on +/- grading system
 - So on...





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Any Questions?