

BACKGROUND

- Have you ever wondered why you did so well on some subjects and poorly on others?
- Looking back my life, I wondered why I enjoyed on those topics that I never ever thought of as interesting but became my core identity of who I am.
- I wondered what factors transpired to make the subject interesting. Clearly, there are many factors such as:
 - Subject itself could be interesting.
 - Friends and classmates.
 - Instructor and quality of instructions.
 - Difficulty level of the subject.
 - Many other factors - what else can you think?
- I reflected upon my life and there was a theme that emerged – can you guess what that might be?
- In some cases, I was interested in the subject. In other case it was always the instructor.
- In most cases, my initial impression of the instructor had a greater impact.
- How could one test this hypothesis? Could this lead to effective way to deliver instructional content at least to a segment of learner?.

YOUR THOUGHTS

- What made some subjects unbelievably interesting for you?
- What subject you thought was not interesting, but it became interesting for some reason. (Don't worry about being absurd – it is a lot of fun to see variation in responses.)
- Was there a topic that you audited, and it was a lot of fun. Why did that happen?

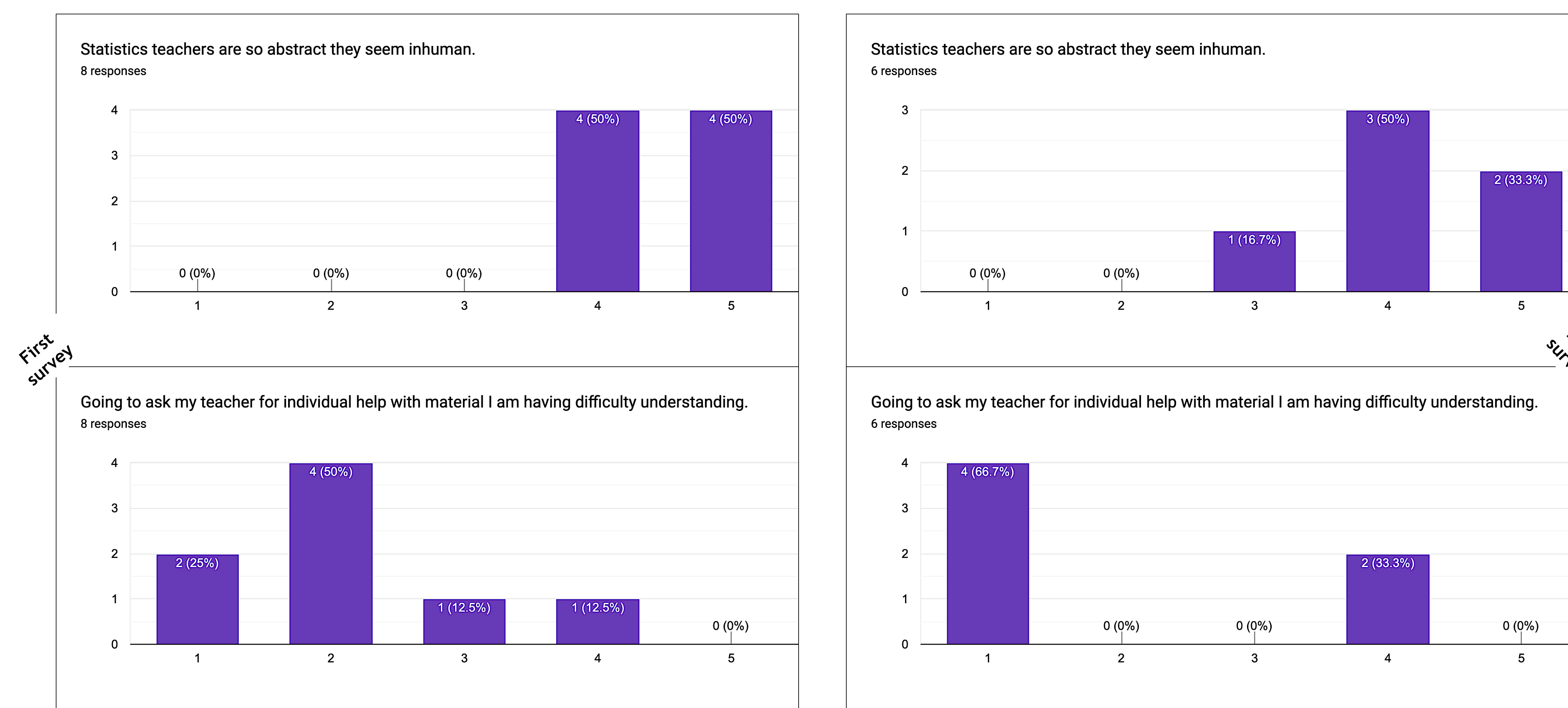
(In my case, I audited a class and enjoyed it because I did not have to take a final exam to study the parts that did not interest me.
- If you are instructor, have you gotten a training on psychology of teaching in your career?

METHODS

- Used survey to collect data.
- Prepared 12 questions derived from STARS questionnaire [1].
 - 12 questions seemed like it can be done in less than 10 minutes.
 - There were two parts:
 - Part I: Assess statistics anxiety associated with situations where students have contacts, including the following factors: (1) Interpretation Anxiety, (2) Test and Class Anxiety, and (3) Fear of Asking for Help. Individuals respond on a 5-point Likert scale that ranges from 1: No anxiety to 5: Strong Anxiety
 - Part II: Measures the level of agreement with various statements about statistics and statistics teachers and it includes the following factors: (4) Worth of Statistics (5) Computation Self-Concept, and (6) Fear of Statistics Teachers. Individuals respond on a 5-point Likert scale that ranges from 1: Strongly Disagree to 5: Strongly Agree.
- The survey was done in three times:
 - (a) First time before the students attended the first class.
 - (b) During midterm
 - (c) Before the final exam
- Google forms was used to send out the survey to students. (Recommend to use university provided survey method instead in future)
- Rationale for three surveys was:
 - Initial response before the class is expected to be different from the final response weights.
 - Compare the initial response to second survey and the last survey.
 - Expected a significant difference between the first and second; and not much of the difference between second and final survey
- Anticipated challenges:
 - Online class students may not see the survey - therefore an email was sent out before the class.
 - Getting the final survey after the final exam may be difficult
 - The side effects of survey itself - therefore assured the class multiple ways that the participation was purely voluntary, and the data is only made available to me after the final grades was posted.
- Survey was conducted in an online class: "C4441-Probability and Statistics" class in Denver University Computer Science department. Conducted two quarters - first time, the class consisted of 22 students and second time it was 12 students.

RESULTS

- The survey results from two quarters were mixed for analysis; partial results are presented below.



CONCLUSIONS

- The research, background and the literature helped to reconstitute my thesis.
- Limitations exist in current data, such as sample size.
- Experiment and statistics did not show statistically significant results, partly due to data collection challenges.
- Experiment is worth while to repeat to collect data for valid conclusions.

FUTURE DIRECTIONS

- Following the limitations from current research, reconstitute the questions and research method.
- Define and construct a survey method that would help facilitate quality response from students.
- Incorporate the survey as a part of the learning material in the course, so that there are reflective benefits to the learners.
- Include qualitative responses from students to collect more detailed responses for analysis.
- Repeat the experiment at least twice to make a valid conclusions.
- Explore the survey and feedback method that suits best the needs of the online course.

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