Development of a Faculty Perceptions Survey

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Introduction

Goal 1: Evaluate change in individual faculty perceptions

Goal 2: Inform education researchers about faculty perspectives and knowledge they value about students and teaching.

- 52 statements/questions plus 14 background questions
- Suitably worded for a range of science departments in the US and Canada
  - Physics, Earth and Ocean Sciences, Life Sciences, Chemistry Computer Science, Math
- Currently used in face to face interviews.
  - 1- 2 hours
  - Total of 11 faculty to date
  - Reviewed by 6 experts

Science Education Initiatives

University of British Columbia (UBC) and the University of Colorado (CU)

- Pair faculty with a Science Teaching (and Learning) Fellow (STF/STLF)
  - STF/STLF trained by the SEI in education research.
  - Assist faculty with course reforms of their choice.
  - An STF/STLF works with 4-10 faculty per year.

Sample Statements/Questions

1. *One of the biggest challenges in planning for my courses is figuring out how to fit in all the material I would like.*
2. *Many of the students who come into my class do not have adequate preparation to learn the material.*
3. *Students these days are not as well prepared as students were when I was in college .*
4. *It is best to teach the terminology and procedures students need for a topic before giving them authentic problems to solve.*
5. *It is reasonable for the failure rate in certain courses to be twice as high as in other science courses.*

7. *I feel it was a very good class when most of the class period is spent answering thoughtful questions on the material from many different students.*

8. *I know my lecture was clear when ...*
9. *(True or False) I know my lecture was clear when I am able to proceed smoothly through my entire lecture with the students paying attention and not having to ask questions.*

10. *When students come to me for help, I try to ask them questions until they get the answer, rather than directly providing them with the answer.*
11. *Providing the students with a study guide or list of detailed learning goals (objectives) for each section of the course is "spoon feeding" them too much.*
12. *I believe some teachers may get inflated student grades by teaching to the test.*

13. *It is better to not have homework count towards a student's grade, because ungraded homework encourages students to take on their own responsibility .*

17. *If they are paying attention, students typically learn most of the material when it is covered in lecture.*

21. *How course material is presented has to be tailored to what fits for the teacher.*
22. *It is possible to develop an effective curriculum that any good teacher can use successfully.*
23. *The same principles of scientific investigation apply to creating effective teaching materials.*
24. *I talk to my fellow teachers to get their ideas about how students learn.*
25. *I'm not comfortable testing on any material that hasn't been explicitly presented to students in lecture.*

29. *It is good practice to have students take notes rather than providing the notes to the students.*

42. *What percent of students would be able to learn the material on their own?* _____
43. *An average of 50% or lower on the final exam:* _____
44. *An average of 50% or lower on the final exam means the exam was not a good measure of what was taught*
45. *An average of 50% or lower on the final exam means the students were not provided adequate opportunities to learn the material in my course*
46. *An average of 50% or lower on the final is necessary for certain courses to weed students out*
47. *An average of 50% or lower on the final is an indication that the students did not put in enough effort studying*
48. *An average of 50% or lower on the final exam is reasonable since the exam includes material beyond what I expect students to learn in this course.*

52. *The most important thing I can do as a teacher is:*_____

Sample Background questions:

% time spent on research, administration

Formal teaching preparation

Informal teaching preparation

Rate your interest in teaching compared to research and service.

Final Question:

Are there any important considerations about teaching that I haven't touched on here?

Formal and informal are interpreted very differently by different people.

➢"Takes years to build up confidence and knowledge in a particular area… If a Jr. faculty will not ask bloom's level questions, it's because they don't know the answers themselves."
➢"Complex Human Activity"

Many disagree and say students are very similar but with differences in *what* they know (e.g.. Technology) Others are neutral or say their country was different.

Many faculty like this idea while others say that students won't do it unless it's worth something.

Common concern is getting students to come to class and giving them something to do. Most faculty torn and few realize how poor student notes are.

43. Open ended receives 1st idea that comes to mind. Follow-up statements allow researcher to learn faculty stance on each idea.

➢"…. Chronology is to show things didn't just pop up but cumulative experience of the person."
➢"Get the students excited and curious enough to go & learn & find out more."
➢"Inspire your students to be better."
➢"Motivate my students!"
➢"Inspire students to learn"
➢"Inspire students by showing enthusiasm for the discipline"

23. "Human beings are more complicated than physical systems. I'm not competent to comment but I suspect it can't be done."

9. "Can never tell… probably stunned and don't know where to start."

Faculty A

29 yrs experience

Responses quite similar to an education researcher with a few anomalies. The department "Lore" is that this faculty is "very traditional".

12. "I see it a lot with TAs that know what is on the exam. It's a real problem with some TAs."

Interviewer followed up with, "do the different sections have different grades? "

"No, the grades are not different."

Faculty B

4 yrs experience

Talks more in generalities. Tells you what sounds good but naïve and inconsistent when pressed. Department "Lore" is that this person is a great teacher and will use education research well in their classroom.

Extremely sensitive to framing

No problems when presented as:

"We are creating a survey that would help education researchers learn about faculty perceptions of students, teaching and learning. We are especially interested in learning what is most important to you and what took time to learn."

Faculty tickled that we care what they've learned. Several interviews had to be cut off at 2 hours!

However, when presented as:

"We are developing a survey to assess faculty attitudes about teaching. We are interested in seeing if we can find differences between different faculty members."

Faculty tended to believe there was an expected or "correct" answer. Comments such as "I know what they want me to say here, but I don't agree" were common.

In both cases faculty showed extremely thoughtful responses to most questions.

Faculty Feedback

Would like us to ask…

- *"What's the biggest frustration"* – his guess is it'll be "workload".
- *Department culture? Rewards and repercussions for teaching performance?*
- *How do you get faculty to look seriously at what you're doing if it's teaching?*
- *Questions about team teaching or co teaching?*
- *Sometimes It seems like people are seeking a formula, this might be important to know*

Emerging themes….

➢Found that more experienced faculty members (~20+ yrs) had more sophisticated, clearer, well thought out ideas about survey items. Internal consistency in responses.

➢Many emphasized that the answers vary depending on 1st year versus more advanced students. The division on where the change happens varies by faculty.

Conclusions

- Survey Shows Promise
- Faculty are very receptive to discussing their teaching.
- With many years of experience working in the same department, learned many unexpected things in 1 – 2 hours.
- Faculty felt it was very comprehensive and were all quite appreciative that education researchers care enough to ask them what they've learned.

Future Directions

- Refine questions
- Create version for paper/pencil or online use.

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