Comparing forms of student feedback perceived by faculty in undergraduate physics courses Manju Connolly¹, Warren Christensen²

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Faculty perception is selective



All student feedback

Feedback perceived by faculty

Feedback acted on by faculty

Improving student learning

- Faculty need supplemental resources in addition to student evaluations to assess and improve student learning (see Fig. 1).
- Although several resources and teaching methods have been shown effective in Physics Education Research (PER), most physics faculty have not implemented them.¹
- Better communication is needed between physics faculty and the PER community to facilitate implementation of these methods.²
- Knowing which student feedback is important to faculty will help inform the PER community on how to best communicate research-based teaching methods to faculty in

Process

Faculty (n=11) interviews from a previously collected data set were analyzed and coded for faculty perception of student feedback. The following table shows the coding descriptions, which were used for verbal and observational feedback:

the context of their class.



Figure 1: No correlation between student ratings of instruction and conceptual learning!³

Category of Feedback	Description
Attitude	Attitude towards teaching method (inter
Class Activity	Feedback during ILDs, clickers, PI
Format	Feedback regarding materials, equipme
Homework	Using outside class resources: homewo
Motivation	Reasons for taking class, doing well, pa
Participation	Class attention, participation, engagem
Problem Solving	Problem solving methods, issues, conte
Understanding	Feedback revealing student knowledge

Faculty perceive some student feedback, and the most salient was reported by faculty in

> Faculty respond to some feedback, which can affect student learning.



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- ent
- or level of understanding





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Faculty response to feedback

The most common form of student feedback reported by faculty was from their own observations. Despite reporting verbal comments from students *significantly less* often, faculty were *more* likely to make changes in response to students' verbal comments.



did really, ...then there was a group that had very small gains . And so the other part of my thinking is perhaps with that group having another approach might benefit them...so now I will be doing my lecture and... I will stop and have them work on exercises and ...a couple of these tutorial sheets... I think they got like a gain of 33 on the system...So I was really happy with that."

Conclusions

- additional investigations are warranted.

References

¹Dancy, Melissa and Charles Henderson. "Framework for articulating instructional practices and conceptions". Physical Review Special Topics Physics Education Research 010103 (2007): 1-15. ²Henderson, Charles and Melissa Dancy. "Barriers to the use of research-based instructional strategies: The influence of both individual and situational characteristics". Physical Review Special Topics Physics Education Research, 3(2), 020102. (2007). Lee, LaDoris, Warren Christensen, Charles Henderson, and Melissa Dancy. "Do students know when they've been taught well? – A Comparison Study of Student Evaluations of Instruction vs. Students' Conceptual Learning Gains". Unpublished data.





• Overall, the most common form of student feedback reported by faculty was feedback from student evaluations.

Faculty perceive observational feedback most, however, they are most likely to respond to verbal feedback.

Since faculty referenced student evaluations most commonly and it appears that they do not correlate with learning gains,