

We all take learners into account in our teaching decisions: Wait, do we?

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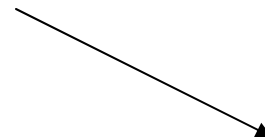


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Situating the talk in the session

Learners

1. Persistence, Engagement, Motivation
3. Engineering skills, Design skills, Concepts
4. Identity, Navigation, Knowledge, Investment
5. Perceptions of diversity
6. School to work issues of socialization, change in conceptions of math



Teaching

- Taken into account?
- If so, how?
- If so, are ideas in alignment..

What do you notice?

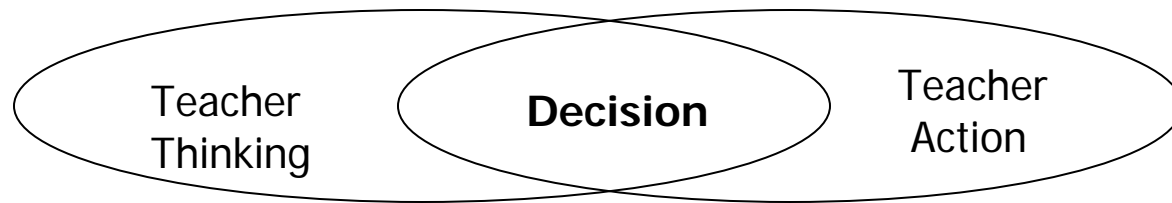
- “I’d like to have the kids—the students know what is expected of them”
- “I know them not just as a student, but as an individual ...and a budding professional”
- “and no matter how many office hours we hold, students won’t come in and it’s mainly because...”
- “If they do two midterms on the same day then they’re going to be less prepared for one than the other” 779-780
- “The drama in the classroom, so I tried two different things...and some students just think ... if I can do something fun, they see it as even more a waste of time.”
- “I found that the lecture notes always got really good ratings, so that’s why I’ve never deviated from that format.”

The SEED Research

- Studies of Engineering Educator Decisions
 - Understand teaching decision making generally
 - Investigate learner-centeredness of decisions
- Approach
 - Critical decision method interview: A planning and an interactive decision; also demographics, teaching history, general process for making decisions
 - 31 participants, all ranks, 9 of 10 depts, volunteer
 - One hour interviews resulted in transcripts ranging from 20 to 47 pgs (1002 pgs)

Teaching decisions

- Where thinking meets action
 - Decisions as commitment to action
 - Decision making process as thinking process



- Linked to change

How do the educators take learners into account in their teaching decisions?

- Why: So much data being created
- Why: Being “learner-centered” is best practice yet has divergent meanings
 - From How People Learn: Effective learning environments are learner-centered ...
 - From research on teaching conceptions: More effective teachers have “learner-centered” rather than “instructor-centered” conceptions

How do the educators take learners into account in their teaching decisions?

	Learner Allusion (A)	Link to Decision (B)	The Decision (C)
1. Data Reduction	Quoted passage	Y/N	Quoted passage
2. Characterization (starts w/inductive process)	Content Form Accuracy ...	Nature of link...	What affected # students longevity ...

How do the educators take learners into account in their teaching decisions?

Emerging themes: Strong, provocative..

- Learners but not “learners”
- Personal practical theories
- Over time

...result, significance, suggestions

How: Learners but not “learners”

- Allusions to learners are pervasive
 - One measure of “pervasive”: Percent of participant turn-taking events that include an allusion to learners
 - Example: Ted=55%, Nathan=57%, Fay=44%
- Allusions use terms **other than** “learner”
 - Terms include: Students and Audience, Budding professionals, Customers, Future colleagues, Kids, Majors, Non-majors, People, and Undergraduates

How: Personal practical theories

Nathan

- “People that come through big research universities like this don’t learn how to do technical writing.” 144-146
- “If they do two midterms on the same day then they’re going to be less prepared for one than the other” 779-780

Fay

- “Some people are not as participatory” 632-633
- “When you’re a student, a test score is a really big deal.” 772-773

Ted

- “and no matter how many office hours we hold, most students won’t come in and it’s mainly because...” 469-470
- “since there are many disgruntled students, ratings can often be very low” 107-108

How: Over time

- Ted: "... so I tried two different things...and some students just think ... if I can do something fun, they see it as even more a waste of time." (504-513)
- Fay: "I found that the lecture notes always got really good ratings, so that's why I've never deviated from that format." (645-646)
- Nathan: "I see that with the graduate students that we get from like research universities, xx, you know, and other places that are somewhat comparable to this, they don't know how to write, even though they come through with really good GPA's." (149-150)

Closing remarks

- We all take learners into account in our teaching decisions
 - Pervasive allusions
 - Range of allusions
 - Personal practical theories
 - Over time
- Wait, do we?
 - We don't call them "Learners"
 - Theories of learners could be inaccurate

Framing the results...

- Beyond the ASEE paper
 - The ASEE paper presents results from case studies based on exploratory analyses
- Today
 - Results from coding of entire dataset
 - Present emerging result and examples, significance, implications...
 - Still illustrate through the case studies