

Building Understanding by Understanding Our Students: Techniques for Teaching Teams

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Content
Skills
Attitudes

Student Understanding

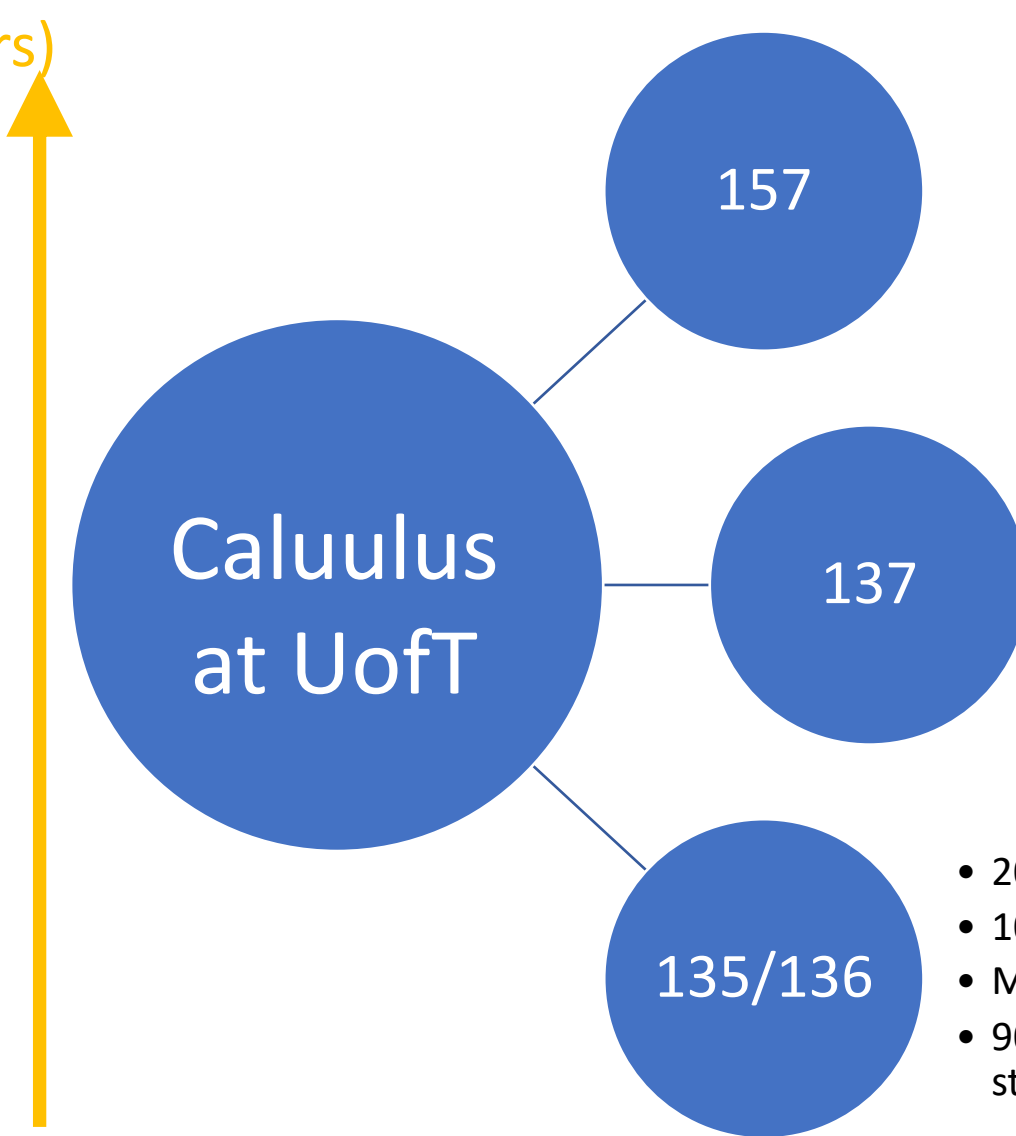
Curriculum
Assessment
Approaches

Teaching Practices

Who are
they now?
Where will
they go?

Our Understanding of Students

More abstract
(math majors)



- 2000+ students
- 10-13 instructors
- Most 1st time instructors
- 90% post-docs/grad students

More applied
(science majors)

My Objectives for Instructor & TA Training

Develop empathy for students

Communicate the message: “this calculus course is different than the one that you took”

Our students
in MAT135
(Instructor
Activity)

Write-Pair-Share:

What words or phrases describe the students in MAT135? Make a list on your own and share with someone else.

Our students
in MAT135 (TA
Activity)

Write-Pair-Share:

How do you expect most MAT135 students to be similar to you in first year? To be different from you in first year?

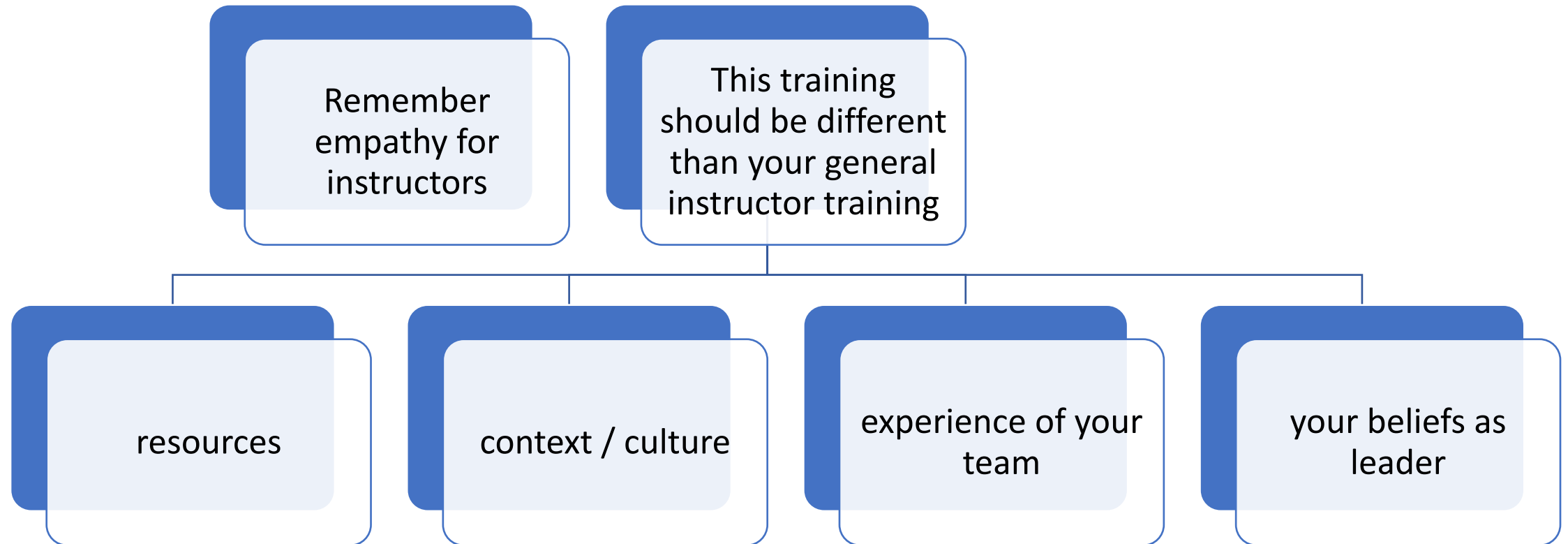
Write characteristics on a sticky note and post them on the wall.

What should
our students
be able to do?

Sequencing:

In pairs, rank importance
of skills or topics for
students in the course.

Considerations for Instructor Training



Teaching the way they were taught? Revisiting the sources of teaching knowledge and the role of prior experience in shaping faculty teaching practices

Amanda Oleson • Matthew T. Hora

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Abstract An oft-cited maxim in higher education is that “faculty teach the way they were taught” because they receive little formal training in teaching before entering the classroom. However, little is known about the origins of faculty knowledge about teaching or the role their prior experiences play in the development of their teaching practices. In this exploratory study, we interviewed and observed 53 science, technology, engineering, and mathematics faculty at three research institutions. Using qualitative analysis methods (i.e., thematic and causal network analysis), we find that faculty do not only model their teaching after previous instructors, but also draw upon a varied repertoire of knowledge and prior experiences. These include knowledge derived from their experiences as instructors (46 respondents), their experiences as students (22 respondents), their experiences as researchers (9 respondents), and from their non-academic roles (10 respondents). In-depth analyses of two faculty

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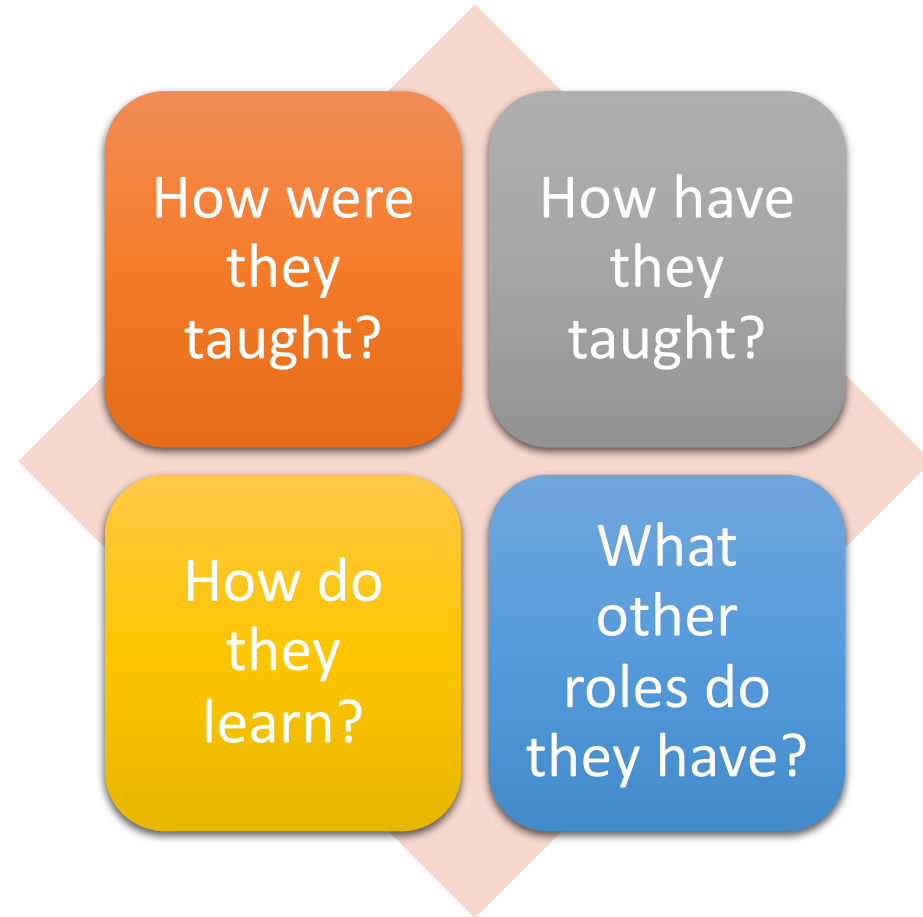
Faculty draw upon:

- Experience as students
- Experience as teachers
- Experience as researchers
- Non-academic roles

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Questions to Ask about Your instructors



Beginning Instructors' Focus

