



Beyond Lecture: Helping students get and stay on the alternative pedagogy bus

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SLiThEr #53
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<https://www.ionicviper.org/about-ionic-viper>

Outline



Our Context

Where and when we have
taught



Our Experience

What's worked and what hasn't



Our Suggestions

Recommendations,
strategies, ideas

Get to Know Us



Joanne Stewart

Hope College

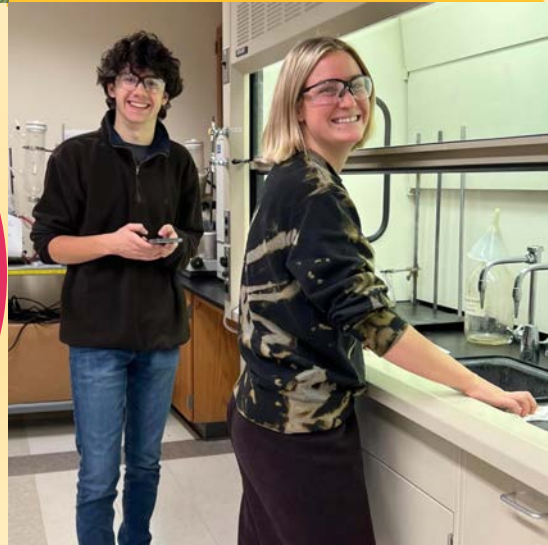
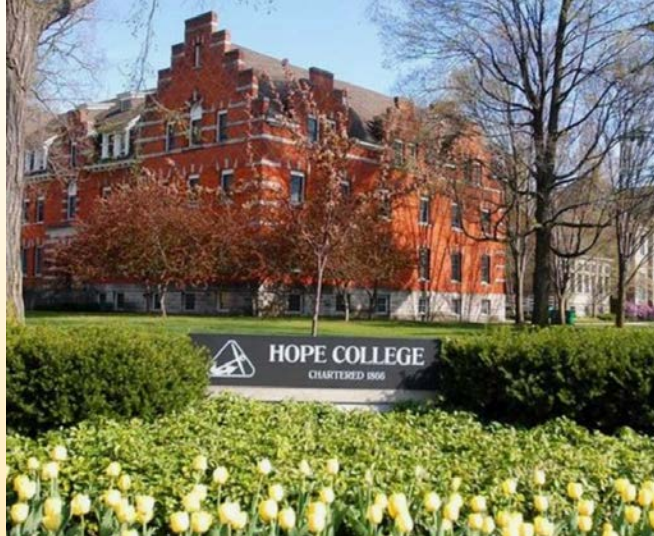


Rebecca Jones

George Mason University

Hope College

- Located in Holland, MI
- Residential, private liberal arts college with 3200 students
- Research-intensive sciences with ~100 chemistry research students in the summer
- Ranked least diverse college in Midwest (kidding not kidding, I'm sure we're not really the *least*)



George Mason University

- Located in Fairfax, Virginia, 15 miles west of from Washington, D.C.
- Largest public research university in Virginia, with 38,000 students from 130 countries and all 50 states
- 82 undergraduate programs, 89 master's, 39 doctoral, law school
- Originally served as a branch college of University of Virginia from 1957-72
- Celebrated 50th birthday as independent university in 2022
- Ranked most diverse university in Virginia, and 35th-most diverse in the country, by U.S. News & World Report



Teaching Experience

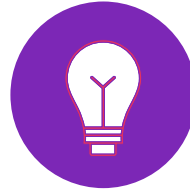
Joanne

- General chemistry and accelerated gen chem
- Inorganic chemistry
- Gen ed science course on abrupt climate change
- First-year seminar on time
- Gen chem is typically 50 students, inorganic is ~20-40

Rebecca

- General Chemistry (19 years)
- Inorganic Chemistry (17 years)
- Interdisciplinary seminars (16+ years)
- Class sizes ranging from 5-200 students
- Traditional lecture, lab, now hybrid, flipped, and active learning modalities

What is the alternative pedagogy bus?



**Learning is a process
(just like traveling)**

And the journey is often more important than the destination



Any teaching or classroom activity rooted in modern education research



Lots of possible routes

e.g. active learning, flipped classroom, POGIL, discussions, guided inquiry

Our Suggestions



for encouraging student engagement beyond lecture

Suggestions

1

Tell them the truth

Share research about learning, concept of effort

Study shows students in 'active learning' classrooms learn more than they think

Deslauriers, L., McCarty, L. S., Miller, K., Callaghan, K., & Kestin, G. (2019). Measuring actual learning versus feeling of learning in response to being actively engaged in the classroom. *Proceedings of the National Academy of Sciences*, 116(39), 19251–19257.

<https://doi.org/10.1073/pnas.1821936116>

[Press release on research study](#)

2

Teach about mindset

Encourage growth, rather than fixed

JLS activity

<https://glcateachlearn.org/responses-to-the-december-7-2017-digital-town-hall-teaching-a-student-body-from-a-variety-of-backgrounds/>

3

Use classroom roles creatively

Like in POGIL, make it fun

SL0 about effective group work

<https://www.ionicviper.org/five-slides-about/developing-effective-student-learning-groups>

Suggestions

4

Recognize learning is hard

Normalize struggle, need to interact with an idea 5-7x before you learn it

5

Facilitate processing

What was familiar, what was new, create space for conversation

The Purpose of Reflection
<https://www.cla.purdue.edu/academic/english/icap/assessment/purpose.html>

6

Be encouraging

Set positive tone in class



Other thoughts

1

Recognize alternative learning outcomes

- Students are learning a lot more from alt pedagogy than just content

2

Resistance is inevitable

- Usually not smooth sailing the first time
- Can lead to incredibly rich interactions with students and energizing time in the classroom

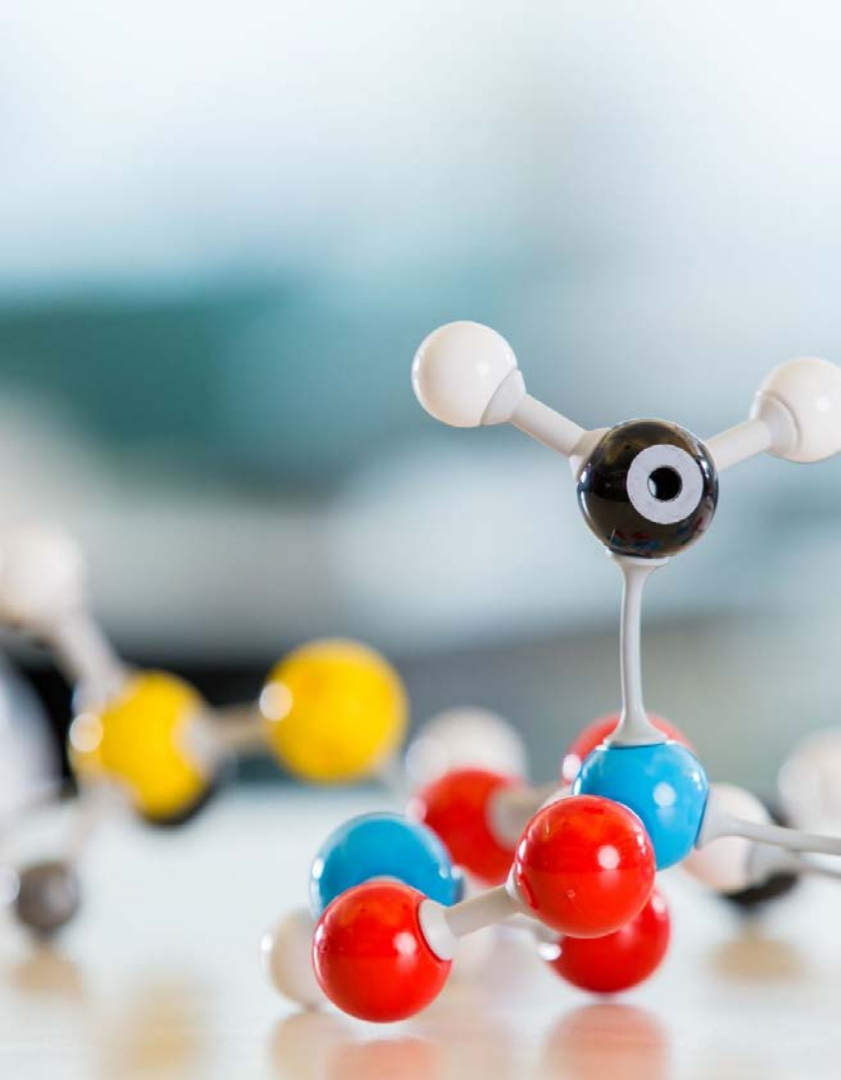
3

Seek community

- You are not an island
- Talk with peers, maybe even outside your department
- Work with staff from a center for teaching and learning

Questions? Discussion?

- ▲ What challenges have you experienced?
- ▲ How do you and your students feel about alternative pedagogies?
- ▲ What is the most productive next step in your personal context?



Thanks!

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