

# What then shall I teach?

## *Pedagogy for meaning and purpose*

Bryan M. Dewsbury

Associate Professor of Biology

Associate Director, STEM Transformation Institute

Florida International University



## Active listening

- ◆ Name
- ◆ Where are you from?
- ◆ Describe a moment in your life that caused you to change your mind on a major issue.

- ◇ What does success mean for your course experience?
- ◇ Why?
- ◇ What did you learn the most about your students this semester?  
Do you trust them?
- ◇ What things can you do so that the experience is more successful  
in the future?
- ◇ What support do you need to make it happen?



# What then shall I teach?

## *Pedagogy for meaning and purpose*

Bryan M. Dewsbury

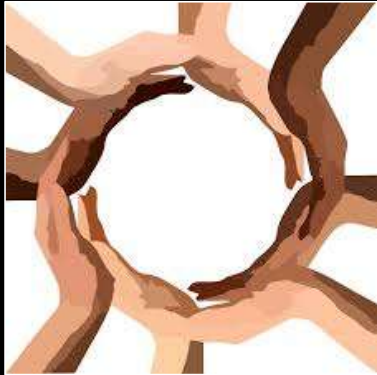
Associate Professor of Biology

Associate Director, STEM Transformation Institute

Florida International University



# Participation means..



Embracing diversity



Engaged dialogue



Civic participation

“Intro Bio is more about the ‘Intro’ than the ‘Bio’”



Embracing diversity

Inclusion from day one....



Engaged dialogue

# On 'group work'

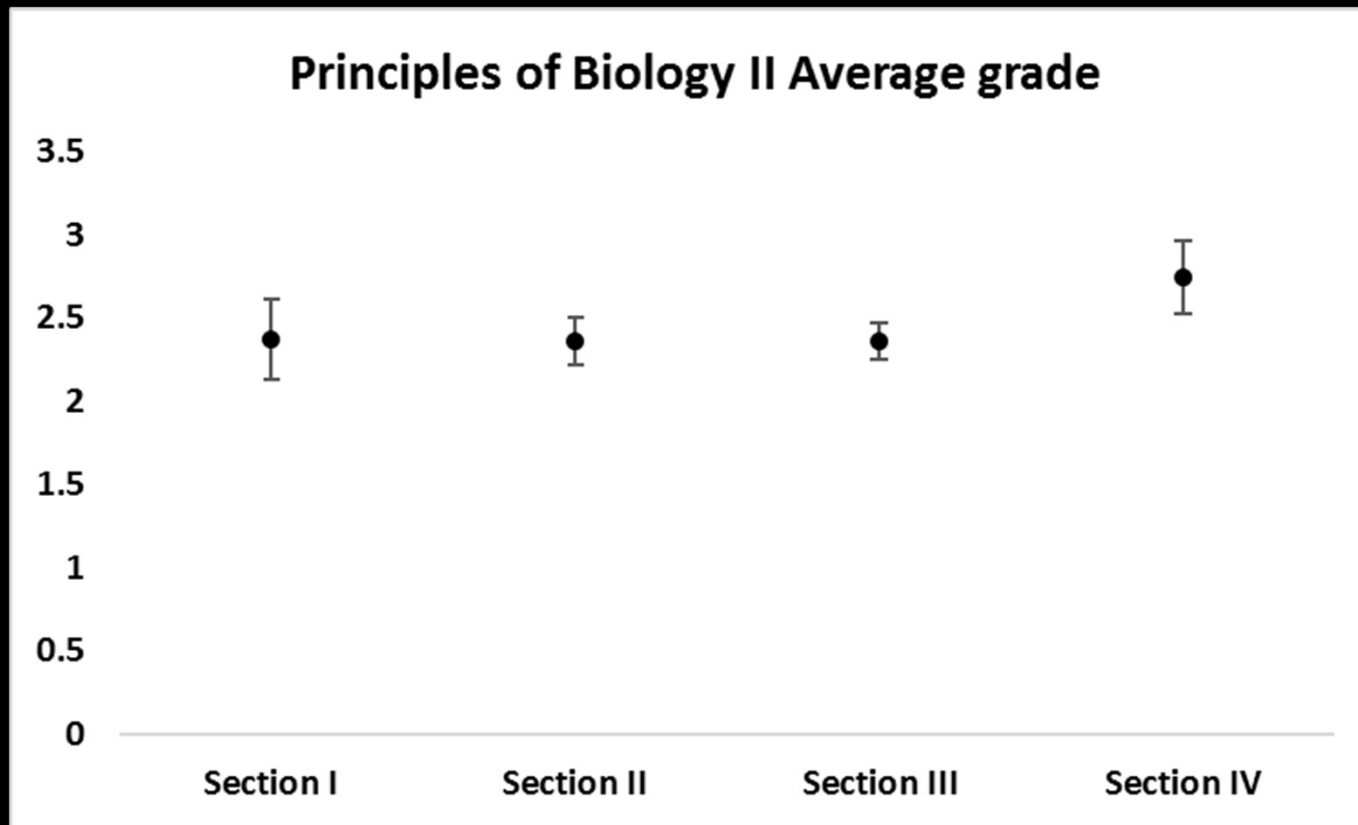


# Civic participation

## “Intervention week”



“You do not know  
something until you can  
explain it to your  
roommate”



RESEARCH ARTICLE

# Inclusive and active pedagogies reduce academic outcome gaps and improve long-term performance

**Bryan M. Dewsbury** <sup>1\*</sup>, **Holly J. Swanson**<sup>2</sup>, **Serena Moseman-Valtierra**<sup>3</sup>, **Joshua Caulkins**<sup>4</sup>


**1** Department of Biological Sciences, Florida International University, Miami, FL, United States of America, **2** Department of Biology, American University, Washington, DC, United States of America, **3** Department of Biological Sciences, University of Rhode Island, Kingston, RI, United States of America, **4** Center for Teaching and Learning Excellence, Prescott, AZ, United States of America

\* [bdewsbur@fiu.edu](mailto:bdewsbur@fiu.edu)

## Abstract

We assessed the impacts of the implementation of inclusive and active pedagogical approaches in an introductory biology sequence at a large, public research university in the northeast United States. We compared academic performance between these sections with other sections of the same course where didactic approaches were used over a five-year period. We also compared this five-year period (2014–2018) with the previous five years of the same courses. Additionally, we also tracked the academic performance of the students



 OPEN ACCESS

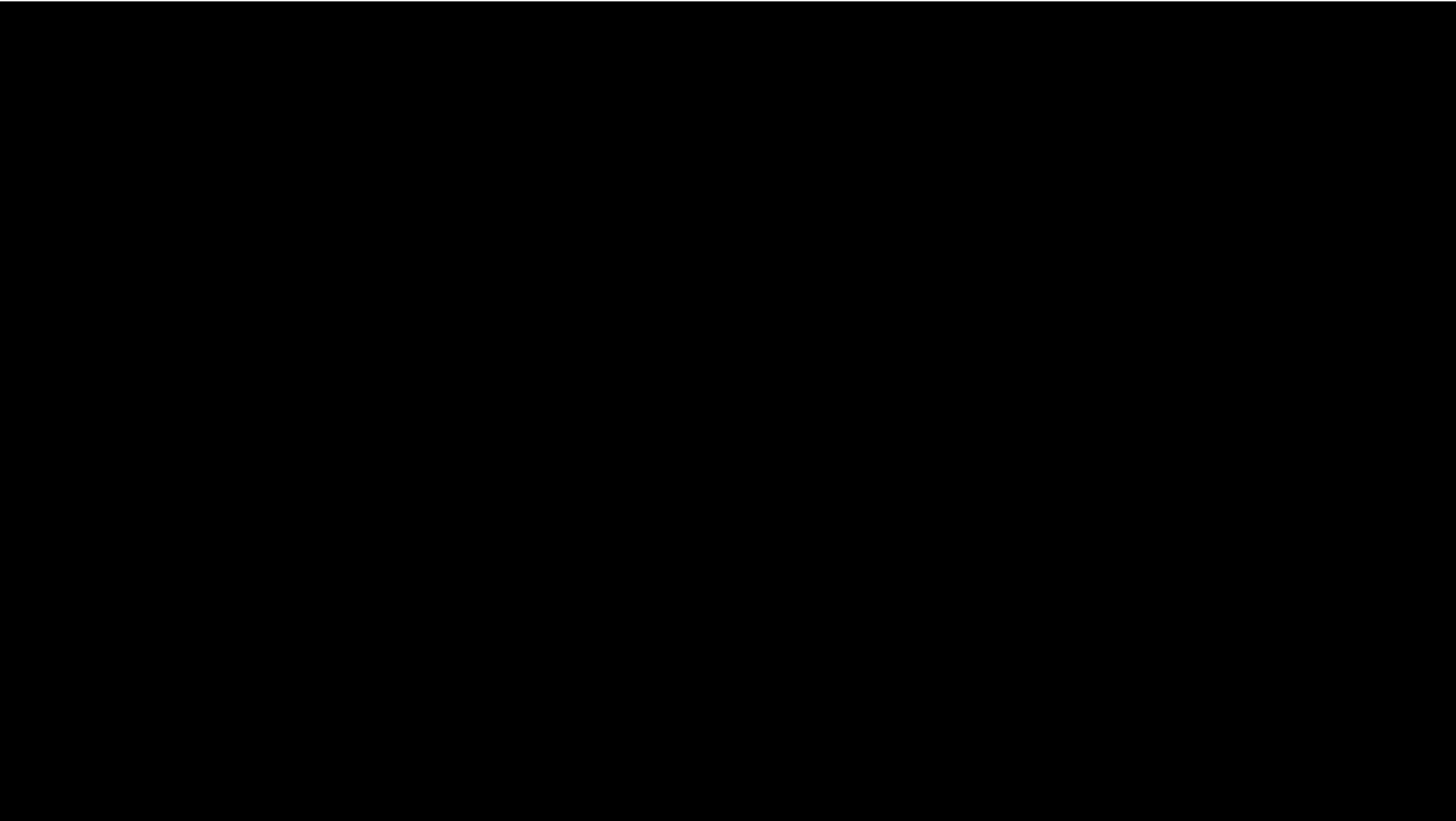
**Citation:** Dewsbury BM, Swanson HJ, Moseman-Valtierra S, Caulkins J (2022) Inclusive and active pedagogies reduce academic outcome gaps and improve long-term performance. *PLoS ONE* 17(6): e0248888. <https://doi.org/10.1371/journal.pone.0248888>

What is the goal of (inclusive) education?

*“...the sharing of social experience so that children become integrated into the democratic community.” – John Dewey  
~ 1930*

Questions

- ◇ What does success mean for your course experience?
- ◇ Why?
- ◇ What did you learn the most about your students this semester?  
Do you trust them?
- ◇ What things can you do so that the experience is more successful  
in the future?
- ◇ What support do you need to make it happen?





# SEAS | Science Education And Society

[bdewsbur@fiu.edu](mailto:bdewsbur@fiu.edu)

Twitter | @bmdewsbury

Instagram | @educationisinclusion

Break [10:00 minutes]

SEAS | Science Education And Society

[bdewsbur@fiu.edu](mailto:bdewsbur@fiu.edu)

Twitter | @bmdewsbury

Instagram | @educationisinclusion

# I teach students

## Inclusive Science

DOI: <https://doi.org/10.1128/jmbe.v21i1.1983>



### First-Day Info Sheets: A Tool to Prompt Semester-Long Inclusive Teaching

Tess L. Killpack<sup>1\*</sup> and Laverne C. Melón<sup>2</sup>

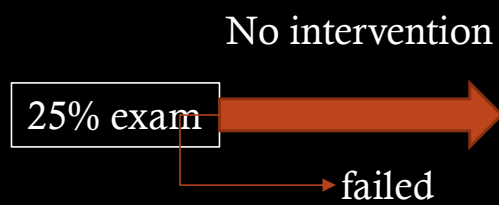
<sup>1</sup>Biology Department, Salem State University, Salem MA, 01970;

<sup>2</sup>Department of Biology, Wesleyan University, Middletown CT, 06459

What faculty do and say on the first day of class is crucial to establishing and maintaining an inclusive learning environment for the duration of the semester. First-day information sheets ("info sheets") are commonly used by instructors. By making simple modifications to this tool, we can gather more information about the goals and experiences of our students, the lives of our students outside of our classroom, and how our students' lives may impact their engagement with the course material and course structure. We can also use this information to actively highlight to students that their full selves (names, pronouns, background) belong in our biology classroom. We provide a set of prompts and suggested steps, rooted in the scholarly literature, to encourage and facilitate faculty use of info-sheets as a valuable tool to inform semester-long inclusive teaching efforts.

This I believe

<http://thisibelieve.org/guidelines>



- 15% exam
- 4 quizzes
- 1 major group HW

## SoTL or Ed Research?

- Climate surveys
- Social belonging instruments (Classroom Community Scale, Rovai 2002, SOBI 1995)
- Institutional Research Office
- Reflection assignments (Letter to a Future First Year Student, Walton and Cohen 2012)
- Focus groups

- ◇ What does success mean for your course experience?
- ◇ Why?
- ◇ How did you assess success? [or plan to]
- ◇ What did you learn the most about your students this semester?
- ◇ What things can you do so that the experience is more successful in the future?
- ◇ What support do you need to make it happen?



World's  
greatest  
poster session