Inclusive classroom practices to increase success and retention of all students

Angela Hodgson and Jenni Momsen
Department of Biological Sciences

Teaching Inclusively means . . .

“Embracing student diversity in **ALL** forms –

Race, ethnicity, gender, disability, socioeconomic background, ideology, even personality traits like introversion

-as an **asset**.

And designing and teaching courses in ways that foster talent in all students, but especially those who come from groups traditionally underrepresented in higher education.”


“Teaching inclusively is a mindset. You can’t think about it once and be done.”

University of Michigan, Inclusive Teaching Workshop participant
Why should faculty be concerned about inclusivity?

“Besides teaching content and skills in your discipline, your role is to help students learn. And not just some students.”

“. . . it’s a realization that traditional pedagogical methods — traditionally applied — have not served all of our students well.”

Why should faculty be concerned about inclusivity?

“. . . the college-age population is expected to decline by 15 percent after the year 2025.

With a smaller pool of potential students, it won’t be as easy for universities to replace each year’s dropouts with new students. So schools will have a greater incentive to hold onto students.”

Aug. 6, 2019, The Hechinger Report

“If you can’t recruit additional students, you need to make every effort to keep more of the ones you already have.”

May 6, 2018, Kevin Gannon, Chronicle of Higher Education
“Students aren’t like they used to be. . . .”

Percent of population attending college

- % of High School graduates
- % of the 18 - 24 year old population

National Bureau of Educational Statistics
With greater rates of enrollment for traditionally underrepresented groups
Are we being inclusive at NDSU? How do we know?
Who are our students?

A case study in Biological Sciences
Graduation rates at NDSU

1. What percent of students starting at NDSU in Fall 2012 ended up graduating within 4 years?
2. What percent of students starting at NDSU in Fall 2012 ended up graduating within 6 years?

4-yr graduation rate: 32%
6-yr graduation rate: 58%

Graduation rates at NDSU

3. What percent of **women** starting at NDSU in Fall 2012 ended up graduating within 6 years?
4. What percent of **men** starting at NDSU in Fall 2012 ended up graduating within 6 years?

Female graduation rate: 63%
Male graduation rate: 53%

IPEDS Report, [https://nces.ed.gov](https://nces.ed.gov)
Graduation rates at NDSU

5. What percent of Black or African American students starting at NDSU in Fall 2012 ended up graduating within 6 years?

6. What percent of Native American students starting at NDSU in Fall 2012 ended up graduating within 6 years?

Black/African American graduation rate: 35%
Native American graduation rate: 38%

Graduation rates at NDSU

7. What percent of **Pell-eligible** students starting at NDSU in Fall 2010 ended up graduating by 2018?
8. What percent of **non-Pell-eligible** students starting at NDSU in Fall 2010 ended up graduating by 2018?

Pell-eligible graduation rate: 49%
Non-Pell graduation rate: 60%

IPEDS Report, [https://nces.ed.gov](https://nces.ed.gov)
The HERD Project in Biological Sciences

- Spring 2019
- Survey administered in last two weeks of semester
- Paper administration

<table>
<thead>
<tr>
<th></th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introductory Bio (3 sections)</td>
<td>168</td>
</tr>
<tr>
<td>Upper division (4 courses)</td>
<td>139</td>
</tr>
</tbody>
</table>
Our students may be non-traditional

• Delayed enrollment
• Attends college part time
• Works full-time
• Financially independent
• Has dependents
• Single parent
• Does not have a high school diploma

National Center for Education Statistics (2002)
Our students may be non-traditional

- **Delayed enrollment**
- Attends college part time
- Works full-time
- Financially independent
- Has dependents
- Single parent
- Does not have a high school diploma

National Center for Education Statistics (2002)
Our students living situation varies

Where are you living this semester?

- Campus residence hall
- Off-campus in an apartment
- Campus-owned apartment or house (on- or off-campus)
- Off-campus in a house
- Sorority or fraternity housing

Legend:
- Intro
- Upper
Working 9-5?

9. What percent of our introductory biology students report working at least part-time?

10. What percent of our upper division biology students report working at least part-time?
Our students may be non-traditional

- Delayed enrollment
- Attends college part time
- **Works full-time**
- Financially independent
- Has dependents
- Single parent
- Does not have a high school diploma

National Center for Education Statistics (2002)
Our students may be non-traditional

- Delayed enrollment
- Attends college part time
- Works full-time
- Financially independent
- Has dependents
- Single parent
- Does not have a high school diploma

National Center for Education Statistics (2002)
Our students may also face mental, emotional stress.
Many students identify as LGBTQ+
Diversity matters
What we do matters

- Begin active learning push
- Move to SCALE UP classroom
What we do matters

Begin active learning push
Move to SCALE UP classroom
Faculty PD: Summer Institutes, Gateways, etc
What can faculty do to be more inclusive?

• Let’s start a conversation at NDSU!
Teaching Inclusively means . . .

“Embracing student diversity in **ALL** forms –
Race, ethnicity, gender, disability, socioeconomic background, ideology, even personality traits like introversion
-as an **asset**.

It means designing and teaching courses in ways that foster talent in all students, but especially those who come from groups traditionally underrepresented in higher education.”


“Teaching inclusively is a mindset. You can’t think about it once and be done.”

University of Michigan, Inclusive Teaching Workshop participant
Inclusive Teaching Guide

Evidence-Based Teaching Guides

**Group Work**
This guide presents research studies and resources related to group work. Links to key articles are accompanied by condensed summaries organized by teaching challenges, and actionable advice is provided in an instructor checklist.

**Inclusive Teaching**
This guide presents research studies and resources related to inclusive teaching. The guide defines inclusive teaching as teaching practices that make the class environment and interactions welcoming and that provide opportunities for success for all students. The guide focuses primarily on inclusivity across race, ethnicity, and gender, but the ‘deep teaching’ model on which it is based provides a philosophy that can guide inclusion across other differences.

**Peer Instruction**
This guide presents research studies and resources related to peer instruction, a pedagogy commonly associated with personal response devices in which students answer questions, engage in peer discussion, and discuss responses with the whole class. Links to key articles are accompanied by condensed summaries organized by teaching challenges, and actionable advice is provided in an instructor checklist.
Want to Reach All of Your Students? Here’s How to Make Your Teaching More Inclusive

ADVICE GUIDE
Inclusive teaching strategies

1. Develop Self Awareness
2. Develop Empathy
3. Encourage a growth mind-set and counter the imposter syndrome
4. Design high structure courses
5. Connect with students through course content
Inclusive Teaching Strategies

URM and low-income students are disproportionately disadvantaged by traditional lecture-based teaching methods

“... unique challenges resulting from feelings of social isolation, low confidence, and stereotype threat.”

Ballen, et al, 2017, CBE-Life Sciences Education
Inclusive Teaching Strategies

**Develop Self-Awareness**

- Examine your personal biases using Project Implicit Tests
Inclusive Teaching Strategies

**Developing Empathy:** Connect with students personally

“Like, some professors will be like, ‘Oh, I’ll be in my office,’ but you’re real hesitant to go to them, because of the way they are.”

Student interviewed for “The College Fear Factor”, by Rebecca Cox

- Learn and use their names
  - **Use name tents or** make a seating chart early in the semester (after the first week students almost always sit in the same seat)
Inclusive Teaching Strategies

Developing Empathy: Connect with students personally

Use a questionnaire to provide opportunities for students to share their personal narratives

<table>
<thead>
<tr>
<th>Name/Nickname:</th>
<th>Class: FR SO JR SR Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hometown:</td>
<td>Major:</td>
</tr>
</tbody>
</table>

Career Aspiration /Problem I want to solve with my career:

Extracurricular activities/Interests:

Something unique about you:

What are your goals for this course?

How can the instructor best help you achieve your goals?

What reservations or concerns, if any, do you have about this course?

What relevant resources and past experiences do you bring to this course?

Are there challenges you are facing this semester that might affect your performance in this course?

From Dr. Danielle Condry, Microbiology
Inclusive Teaching Strategies

**Developing Empathy:** Connect with students personally

- Share some of who you are as a person

- Send students notes through Blackboard
  - Everyone who improves their score on Exam 2 by 10 points gets an email saying “Great Job!”
  - Everyone who scores less than 70% on an exam gets an invitation to come in and talk to me about improvement strategies and a copy of my study strategy document
Inclusive Teaching Strategies

Encourage a growth mind-set and counter the imposter syndrome

“A belief that they can succeed was the single most important factor that influenced retention in college among Latino students, university personnel play a significant role in validating this belief.”

(Hernandez, 2000)

• Help students to see that intelligence is not a fixed, predetermined quality but something that can be developed via learning.
• Share in class a task that you found difficult
Inclusive Teaching Strategies

**Design High Structure Courses**

Strategies shown to increase URM and low-income student success:

- Give students explicit daily learning objectives which they can use an exam study guide
- Ensure that all exam questions that align with your daily objectives.
- Provide in-class group activities that provide social interaction with peers.
- Give frequent low-risk assessments (Homework, pre-class assignments)
- Offer guidance on how students ought to allocate time on assignments, prioritize various out-of-class tasks and study
Connect with students through course content

• Does our course design — including assigned readings, assessments, and daily activities — reflect a diverse array of identities and perspectives?

![Bar chart showing the number of students in various fields of study.](chart.png)
So does any of this help?
Scale-up Classroom
Changes in BIOL 150 have led to greater student success

Inclusive teaching/Active Learning Pedagogies implemented

Move to Scale-up Classroom

% DFW Grades


Year

Average Bloom's Level of Test Scores

0 0.5 1 1.5 2 2.5 3
Closing the achievement gap?

- Auditorium: 2010-2015
  - Non-URM or Pell: 2.6
  - URM or Pell: 2.0
  - No statistical difference

- Scale-up Classroom: 2016-2017
  - Non-URM or Pell: 3.0
  - URM or Pell: 3.0
  - No statistical difference
Common Questions

• *Are the tools of inclusive teaching just hand-holding? Shouldn’t students be expected to learn on their own?*
  - Teaching inclusively involves providing a *structure* that makes it easier for all students to learn.

• *My course has a lot of content I need to get through. Can I really adapt these teaching methods to my discipline?*
  - Inclusive teaching is not a total redesign of your course. It can be some small changes that help all students feel they belong, and help you retain a diverse population of students.
Take Home Message

• Inclusive Teaching involves embracing diversity in all its forms
• Traditional pedagogical methods and classroom norms do not serve all students well
• NDSU has demographic groups not achieving at levels equal to their peers
• Inclusive teaching involves embracing a mindset that is aware of biases, is empathetic, encourages a growth mindset and embraces teaching practices that lead to greater learning
• Inclusive teaching can lead to greater retention
Join us

• Would you like to join a faculty learning community (FLC) that meets periodically to discuss relevant literature and support each other in the development of inclusive classrooms?

• Please sign up on the Google Sheet at http://bit.ly/NDSUFacConf2019

• Or email us.

5 BENEFITS OF RUNNING WITH A GROUP

#1 Learn from others.
#2 Accountability.
#3 Motivation. ...
#4 Consistency. ...
#5 Social Facilitation.

https://runningbrina.com › 5-benefits-running-group