

# Strategies for Overcoming Internal Barriers to Learner Success

Kristi Reyes

CALPRO

kreyes@miracosta.edu

- Welcome, Objectives, Introductions
- Student Goal Statements
- Student Collaboration and Cooperation
- Systemic Barriers
- Growth Mindset and Managing Errors
- Stereotype Threat

By the end of **today's session**, participants will be able to



Help students develop student goal statements

Identify ways to increase student engagement

Explain a method for addressing students' systemic barriers

Describe at least one way of building growth mindset in learners

Demonstrate ability to manage errors and reframe feedback

Implement at least one strategy for minimizing stereotype threat

# Participant Introductions

Introduce yourself:

- Name, agency/location, what you teach or your title (if you're an administrator)
- What are two common barriers your students face? What is your strategy for addressing these barriers?



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# Have You Noticed...?



- Is there a particular point in time when attendance drops in your classes?
- Study in England found\*:
  - Attendance steady at 70% **first three weeks**
  - By ninth week – attendance drops to **57%**
- Critical: engage learners in the first three weeks

\*(Chande, R., et. al, Curbing Adult Student Attrition: Evidence from a Field Experiment, Harvard Business School NOM Unit Working Paper No. 15-065, <http://people.hbs.edu/mluca/ALERT.pdf>)

# Helping Students Set Appropriate Goals

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# Setting Appropriate Goals



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## Discuss:

- How does your program have students set personal goals?
- How do you help students in your classes set goals?

# Setting Appropriate Goals

- What are the benefits of goal-setting?
- Why is student goal-setting important?



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# Setting Appropriate Goals

Help learners...

1. Identify goals
2. Identify benefits of and barriers to reaching goals and ways to overcome barriers
3. Create a goal plan
4. Evaluate progress and revise goals, as needed.

Students need help formulating SMART goals



**S** = **Specific**  
**M** = **Measurable**  
**A** = **Achievable**  
**R** = **Realistic**  
**T** = **Time-bound**

### Scenario 1:

- An ABE student says: *I want to be a nurse.*
- Breaking up long-term goals into manageable short-term goals

### Scenario 2:

- An ESL student says: *I want to improve my speaking in English.*
- Articulating bigger picture of a specific goal

SMART Goal:	Steps:	Timeline:
Pass the GED Math exam so that I can attain my high school diploma by the end of the school year.	1.	1.
	2.	2.
	3.	3.
	4.	4.
	5.	5.

# Supporting Appropriate Goals

Know students' goals, needs, backgrounds, interests



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# Collaboration and Cooperation

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## **Collaborative and Cooperative Activity Example:**

Susan wants her students to work in groups to plan, draft, revise, and edit a text as their first writing assignment next week. Before presenting the assignment, she works with learners to generate and agree on a set of norms for engaging in respectful classroom discussions. The instructor asks students to do a shared writing activity to print the norms on a poster board. The poster is displayed prominently in the classroom, which allows the teacher and learners to refer to the norms when needed.

- **Do you do a similar activity in your classes?**
- **How does this activity encourage future collaboration and cooperation among students in the class?**





- What are other typical ways we have students collaborate and cooperate?
- Students need clear direction for working collaboratively and cooperatively. Task requirements need to be explicit and expectations stated. Modeling always helps!
- Why is it important to give students opportunities to collaborate and cooperate? What do students gain?

How to make it more collaborative?

 ASE History Assignment:

Students need to read the first section of chapter 5 on the Great Depression in their U.S. History textbook and write answers to the section questions.

After students answer the questions, they bring their papers to the teacher to check the answers.

# Overcoming Systemic Barriers

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# Overcoming Systemic Barriers

Awareness is the first step:


- For students to overcome barriers, just being aware themselves of what may be holding them back is an important first step.
- Comings et al. (1999) asked 150 students in pre-GED classes to identify forces in their lives that either hindered or supported their persisting in classes.
- The researchers posited that if adult students were aware of these forces they could take action to manage them and increase the chance of attaining their educational goals.

# Overcoming Systemic Barriers

 What are common barriers our adult students face?

Share:

1. An internal barrier that many students face
2. The barrier that is the hardest to overcome

 What can teachers do to encourage students to overcome systemic barriers?

- Look at the list (handout with list) of things teachers can do to encourage students to persist and select those that you have done before and those you would try.
- What is one new thing you will try and/or one other strategy you have heard of or have used before with success?

# Overcoming Systemic Barriers

## Keep in touch!

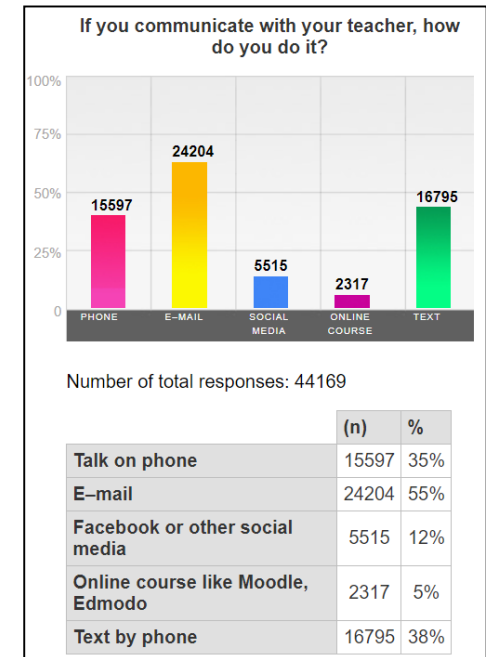
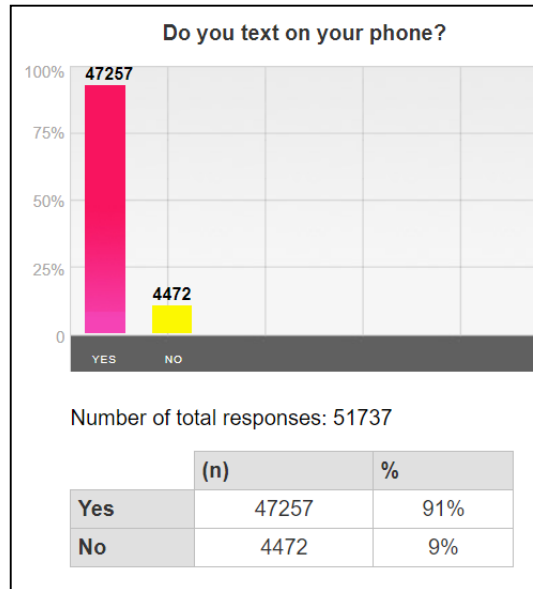
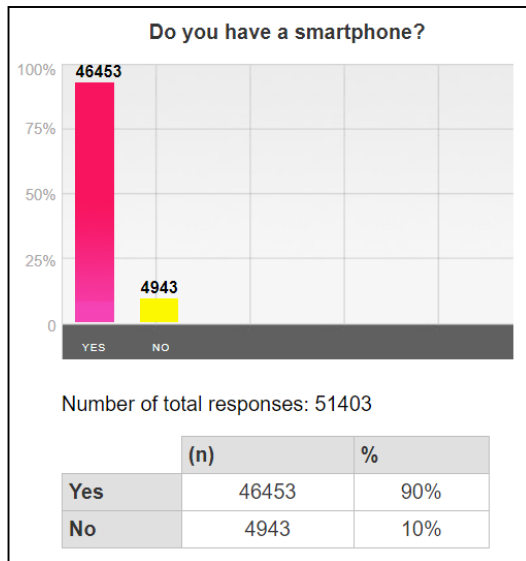


- Multiple texts sent throughout the term
- Barriers targeted: lack of social support networks, lack of positive feedback and encouragement, and planning problems
- Result: 36% fewer students dropped; 7% increase in average attendance

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# Overcoming Systemic Barriers

## OTAN – California Tech and Distance Learning Plan Learner Survey Results 2017-18



Source: <https://caadultedreporting.org/Info/index.cfm?fuseaction=tp>



# Overcoming Systemic Barriers

## Leveraging technology:

- What technology do you use to communicate with students?
- Do you use social media or texting to connect students with you and with each other outside of class time?
- Are there other ways you leverage technology to encourage attendance, persistence, and boost students' motivation?

# Overcoming Systemic Barriers



- Problem solving activity for students – this is my barrier, what can I do to overcome it
- A student's circle of people who support them in their studies is one of the strongest predictors of positive influence on students' motivation

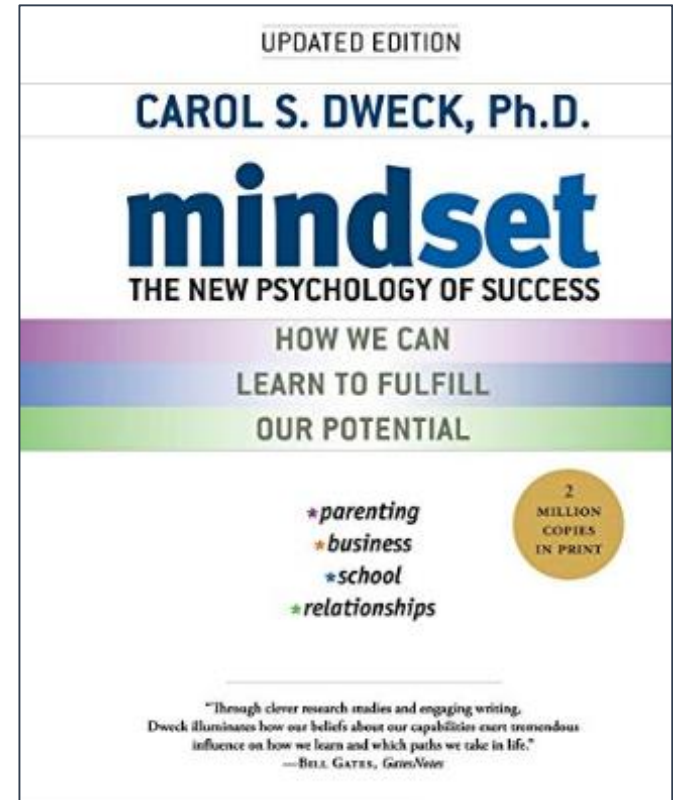
# Foster a Growth Mindset with Feedback and Managing Errors

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# Growth Mindset v. Fixed Mindset

## Growth Mindset:

The belief that one's intelligence, competencies, and abilities can be developed



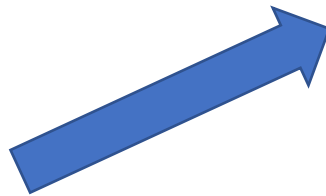
## **Fixed Mindset:**

The belief that we are born with intelligence, competencies, and abilities that cannot be changed



←→ **Fixed Mindset**

**Growth Mindset**



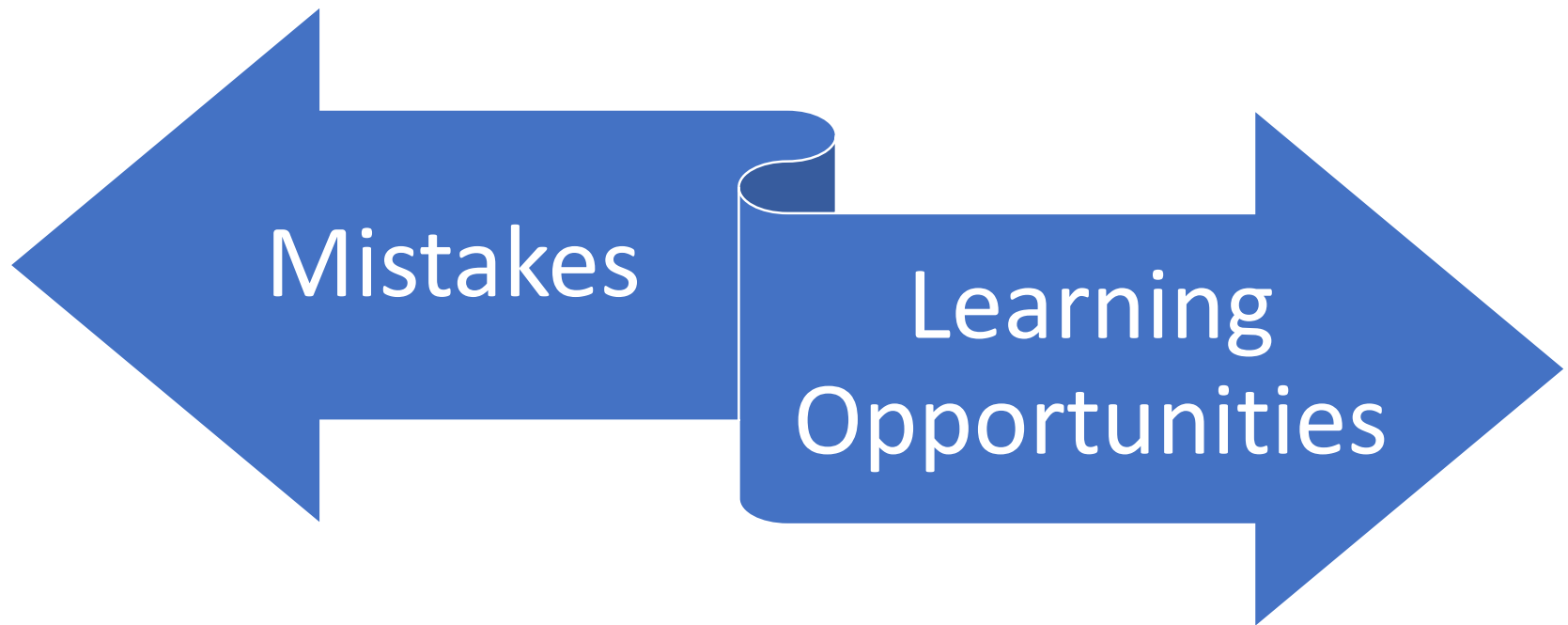
# Fostering a Growth Mindset: Feedback

Our words have power



...yet

# Fostering a Growth Mindset: Feedback





**Student says...**



**Use this language frame...**



- This is too hard for me.
- I'm not good at this.
- I got it all wrong.
- I'll never get better at this.

- If it were easy, you wouldn't learn! We learn when we are challenged.
- Which part was difficult? Let's look at it together.
- Mistakes are expected! That's how we learn!
- Look at the progress you have made! Do you remember when...

# How do we learn new things?

Research tells us

- 21 days to develop a new habit
- 10,000 hours of practice to become excellent at something like playing the piano or playing soccer
- The Beatles played “8 Days A Week!”

# Fostering a Growth Mindset: Constructive Feedback

How we can address errors:

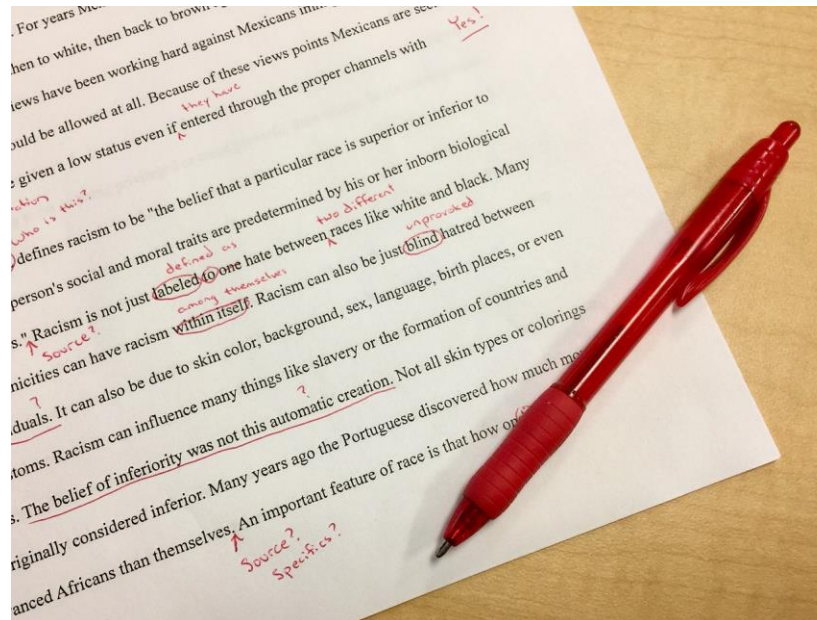


Focus on a certain type of error rather than overwhelm the student with all the different kinds of errors they made

*When you correct an error, your brain is constructing new wiring to lead you to make a better choice next time. Making a mistake can actually benefit you if you persist and figure out what went wrong and learn from it.*

# Fostering a Growth Mindset: Constructive Feedback

- ESL and writing teachers



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# Address the Negative Effects of Stereotypes

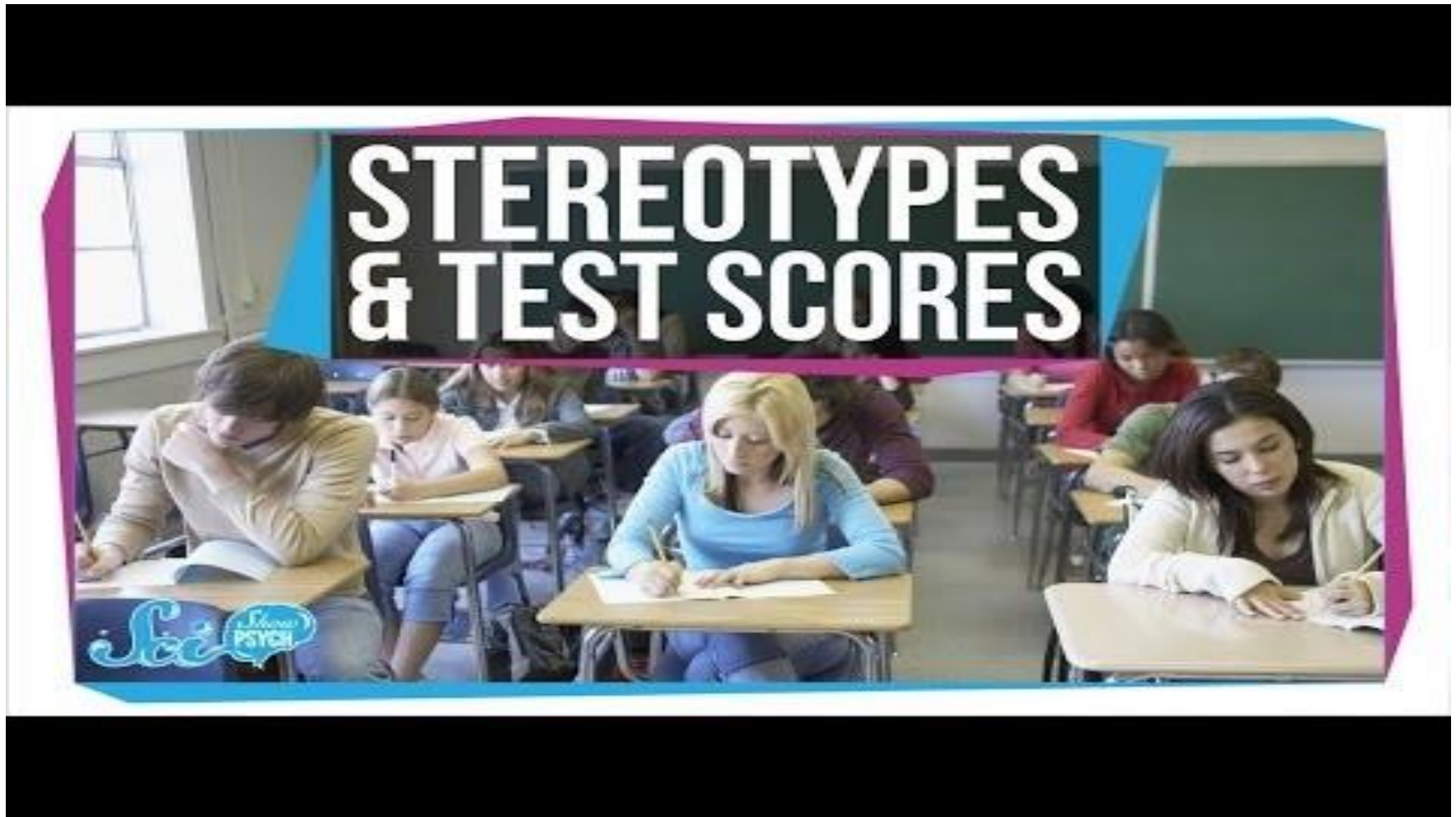
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### Stereotype threat

- An individual's concern that others in the group will judge him/her by a dominant stereotype



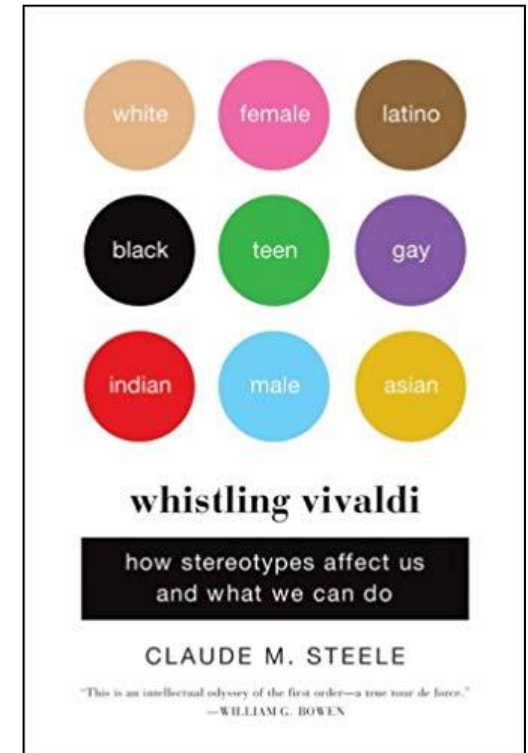
# Addressing the Negative Effects of Stereotypes



# Addressing the Negative Effects of Stereotypes

Stereotype threat can disrupt performance

- Students' working memory for effective retention and use of newly-learned information decreases as students are distracted by these thoughts





# Stereotype Threat Findings

- Women perform worse on math tests when they think the test will produce gender differences
- White men perform worse on math tests when they think they are competing with Asians
- Black American students perform worse than white American students on tests when they think the test is measuring their academic abilities
- However, when black students are told that the test is not measuring their academic abilities, they perform as well as white students
- Black athletes do worse than white athletes when they are led to believe that a game of miniature golf tests “sport strategic intelligence”
- When the test is framed as a measure of “natural athletic ability,” the white athletes do worse than the black athletes

### How to reduce the effects of stereotype threats



- Change the way you frame critical feedback and help students reframe their own explanations

- Examples:

**Student says..**



**Reframe it as...**

- |                            |                                     |
|----------------------------|-------------------------------------|
| • This is too hard for me. | • I like this challenge!            |
| • I'm not good at this.    | • I am going to try it another way. |
| • I got it all wrong.      | • Mistakes help me learn.           |

Modified from Steele, C. (2010). *Whistling Vivaldi: How stereotypes affect us and what we can do*. New York: WW Norton & Company, p. 216.




## How to reduce the effects of stereotype threats

- Foster group conversations between members of different groups
- Example: Strategic grouping in class activities and informal inter-group conversations about the school experience help students realize they have more commonalities than differences

Modified from Steele, C. (2010). *Whistling Vivaldi: How stereotypes affect us and what we can do*. New York: WW Norton & Company, p. 216.

### How to reduce the effects of stereotype threats

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- Allow students to affirm their most valued sense of self
  - Example: Reaffirmation of values

Modified from Steele, C. (2010). *Whistling Vivaldi: How stereotypes affect us and what we can do*. New York: WW Norton & Company, p. 216.

### How to reduce the effects of stereotype threats



- Help students develop a narrative about the setting that explains their frustrations and projects belonging, positive engagement, and success
- Examples: Counter-examples, testimonials of students like those suffering stereotype threat in your classes who have gone on to achieve a sense of belonging and success

Modified from Steele, C. (2010). *Whistling Vivaldi: How stereotypes affect us and what we can do*. New York: WW Norton & Company, p. 216.

- Change the way you frame critical feedback and help students reframe explanations
- Foster group conversations between members of different groups
- Allow students to affirm their most valued sense of self
- Help students develop a narrative about the setting that explains their frustrations and projects positive engagement and success

What would you do?

- Scenario: female student “can’t do” math



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# Addressing the Negative Effects of Stereotypes

**CELEBRATING WOMEN MATHEMATICIANS** RESEARCHERS & ROLE MODELS

**Rosemary Guzman**  
Topology and its applications in other areas of mathematics  
"Form your networks with intent, understanding that the formation of different kinds of networks—research, mentoring, and teaching—serve distinct purposes."

**Fern Y. Hunt**  
Discrete approximation of dynamical systems, and applications in finance  
"Attend as many research conferences as time and money allow, make use of online resources such as the arXiv and MathSciNet, and organize a special session at an annual conference."

**Emily Riehl**  
Category theory, particularly as related to knot theory  
"Ultimately, how you want to spend your time engaging with mathematical ideas is up to you. Give talks and take on extracurricular writing or teaching projects if this makes you happier, even if this means less time for research and other things."

**Eva Tardos**  
Algorithms and algorithmic game theory  
"Be open to exciting new opportunities in research."

**Amie Wilkinson**  
Dynamics of systems  
"Enjoy the process of discovery, there's an infinite zoo of possibilities to explore and that's the joy of mathematics."

**Melody Chan**  
Topological geometry, combinatorial algebraic geometry and combinatorics  
"Do examples! Try to do as much mathematics as you can standing at the board, writing things down, and explaining them to people."

**Tara S. Holm**  
Symplectic geometry and its applications in other areas of mathematics  
"Find collaborators, especially ones who are close enough to your field so that you can talk but far enough that they will teach you some new mathematics."

**Andrea Mahmood**  
Nonlinear PDEs and harmonic analysis and partial differential equations  
"Have a broad mathematical culture, follow your intuition, keep a long view about research, and love what you do."

**Gigliola Staffilani**  
Partial differential equations that model mathematical physics  
"Work with other mathematicians. The model of the lonely researcher in an ivory tower does not match with most of the mathematicians I know. This is a myth that definitely needs to be busted: it is dangerous and not encouraging."

**Chelsea Walton**  
Recommendations algorithms and recommendation systems  
"Find, value, and support your network of people, in math or not, who can selflessly give you words of encouragement, because the happier you are, the more math you will do!"

Notes of the AMS guest editors Margaret A. Readdy and Christine Taylor spotlight women mathematicians past and present in a way to fully commemorate Women's History Month. Read about and share the mathematical research, inspiring stories, and advice of these powerful and successful women at [ams.org/women-18](https://ams.org/women-18)

[ams.org/publicoutreach/posters/posters](https://ams.org/publicoutreach/posters/posters)

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# Questions?



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Respond to any of the following prompts:

- My “Aha” Moment: The most interesting or useful thing I have learned from this session
- A change I will make based on what I have learned
- I am excited about / to

# Evaluation

- How did it go?
- Your feedback is valuable!
- Please complete the evaluation sheet.




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