

Reducing Stereotype Threat:

How can we recognize and reduce the
“Threat in the Air”?

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If internet goes out, I'll be right back!

Adapted from work by Drs. Avi Ben-Zeev, Alegra Eroy-Reveles, LaMisha Hill, Gloriana Trujillo, Audrey Parangan-Smith, Yula Paluy, Liz Scharnetzki, Katlyn Milless, & thoughtful comments by Cris Alvaro

You are teaching a class in computer science and on the first day ask the students to find a partner. Janelle is having difficulty identifying a partner. She was a top student in a course you taught last semester, and is the only Black student in this class.

To identify a lab partner for Janelle you talk with a three students who argue that they really want to work together despite the instruction that they must work in pairs. After you reiterate the instruction, one of the three students volunteers to be Janelle's lab partner.

You proceed with the class by giving the pre-planned quiz. On this quiz Janelle performs poorly.

What is going on?

What could you have done differently in generating partners?

How do you address Janelle's poor performance on the quiz?

Underperformance: A **Social Contextual** View



Claude Steele

Stereotype Threat (ST):

A situational phenomenon that occurs when individuals who are targets of negative stereotypes underperform due to a conscious or unconscious fear of being evaluated through the lens of these stereotypes.

Steele (1997)

Examples of Stereotype Threat

- **Stigmatized Subject Matter:** Identities that are stereotyped to have lower performance or not suited in certain academic areas (Steele, 1997)



Examples:

Blacks/Latinos/Women are not good at math or science

Men are not nurturing (can't be good nurses)

Whites are racist

Examples of Stereotype Threat

- **Numerical Underrepresentation:** Groups that are homogenous or composed of mostly similar demographics (Ben-Zeev, *et al.*, 2005)



Example:

There was only 1/500 Black graduates in Biology at UCLA in 2018

Examples of Stereotype Threat

- **Invalidating Surroundings:** Physical spaces that fail to signal diversity/belonging (Cheryan, *et al.*, 2009)



Example:

Grand photos at entry to new National Science Foundation (NSF) Building fails to include equitable representation.

Washington, DC 2018

Examples of Stereotype Threat

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Frances Córdova, PhD



Rita Colwell, PhD

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Grand photos at entry to new National Science Foundation (NSF) Building fails to include equitable representation.

Washington, DC 2018

Examples of Stereotype Threat

- **Collective Threat:** Worry that **my behavior** will confirm, in the minds of outgroup members, that negative stereotypes held of my group are true and that we will be judged or treated badly by outgroup members (Shapiro & Neuberg, 2007)



Example:

As a woman you decide to have a child in graduate school and go on leave from the lab. You are worried about how this will impact the other women in the lab

Examples of Stereotype Threat

- **Microaggressions:** Brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults (Sue *et al.*, 2007)



Example:

A peer says "I don't see color." (i.e., racial experiences are not valid in academia – people of color are rendered invisible)

Subtle, verbal and non-verbal assaults that render folks invisible or invalid.

Examples of Stereotype Threat

- Was Janelle's underperformance a result of stereotype threat (Y/N)?

https://docs.google.com/document/d/1fUqimTrzBUXyJnRQt4CYj98xGslrG06V1oGva2m1F_U/edit?usp=sharing

- If so, how does it map onto these examples?

Stigmatized Subject Matter SSM	Numerical Underrepresentation NU	Invalidating Surroundings IS	Collective Threat CT	Microaggressions MA
<ul style="list-style-type: none">• Identities that are stereotyped to have lower performance or not suited in certain academic areas• Examples: Women/Blacks/Latinos cannot do math	<ul style="list-style-type: none">• Environments that are homogenous or composed of mostly similar demographics• Example: being "the only"...	<ul style="list-style-type: none">• Physical spaces that fail to signal diversity/belonging• Example: walking past pictures of department chairs and they are all older white men	<ul style="list-style-type: none">• Worry that my behavior will confirm, in the minds of outgroup members, that negative stereotypes held of my group are true and that we will therefore be judged or treated badly by outgroup members• Example: A woman deciding to have a child in graduate school and she's worried how her decision affects other women in lab	<ul style="list-style-type: none">• Brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults• Example: A student of color being told by a faculty member that they "don't see color"

Stereotype Threat: How do you overcome/reduce it?

Growth Mindset Strategies



Carol Dweck

- Identify your fixed mindset voice.
- Change it by:
 - Adding “yet” to the end of statements about inability
 - Focus on the effort/process
 - Try new strategies
 - Acknowledge value of failure

Successful folks value failure



"Understand that failure is a process in life, that only in trying can you enrich yourself and have the possibility of moving forward."

Sonia Sotomayor



"You may encounter many defeats, but you must not be defeated. In fact, it may be necessary to encounter the defeats, so you can know who you are, what you can rise from, how you can still come out of it."

Maya Angelou

"Do not judge me by my successes, judge me by how many times I fell down and got back up again."

Nelson Mandela



Characteristics of Teachers with Growth vs. Fixed Mindset

Teacher with Growth mindset

- Gives more encouragement and support
- **Gives concrete strategies** for improvement
- In their classes a broader range of students do well.

Dweck, 2007

Dweck, 2008

Teacher with Fixed mindset

- **More likely to comfort student**, “Not everyone is good in math”
- Favor boys and gives them significantly more concrete strategies for improvement, compared to girls.
- In their classes only students the teacher identifies as “high ability” do well.

Getting rid of “Threat in the Air” In Computer Science Lab

- Stigmatized subject matter in and of itself¹
- Numerical underrepresentation²
- Invalidating surroundings that fail to signal diversity/belonging³
- Collective threat⁴
- Verbal and nonverbal microaggressions⁵

¹Steele (1997), Inzlicht & Ben-Zeev (2003)

²Ben-Zeev et al. (2005)

³Cheryan et al. (2009)

⁴Cohen & Garcia (2005)

⁵Sue et al. (2007)



Microaffirming image that signals inclusion in Computer Science lab



Pinc_Video2019

from Pleuni Pennings

pincsfsu.com



02:54



vimeo



SAN FRANCISCO
STATE UNIVERSITY

SF BUILD

enabling full representation in science

UCSF

Converting microaggressions to microaffirmations

- **Microaggressions:** Brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults (Sue *et al.*, 2007). ***Subtle, verbal and non-verbal assaults that render folks invisible or invalid.***
- **Microaffirmations:** Small acts or behaviors that are often unconscious, which occur wherever people want others to succeed. They can also be ambient signals of inclusion (Estrada *et al.*, 2019). ***Subtle, verbal and non-verbal acclamations that render folks visible and/or valid.***

Combating Microaggressions

Microaggression:

A fellow student says, *“you speak really good English for a ...”*

(Counter) Microaffirmation:

Self-affirmation:

“I also speak really good X. I love that I can speak two languages!”

- Can also be said to yourself as your outside resistant avatar.

Bystander affirmation:

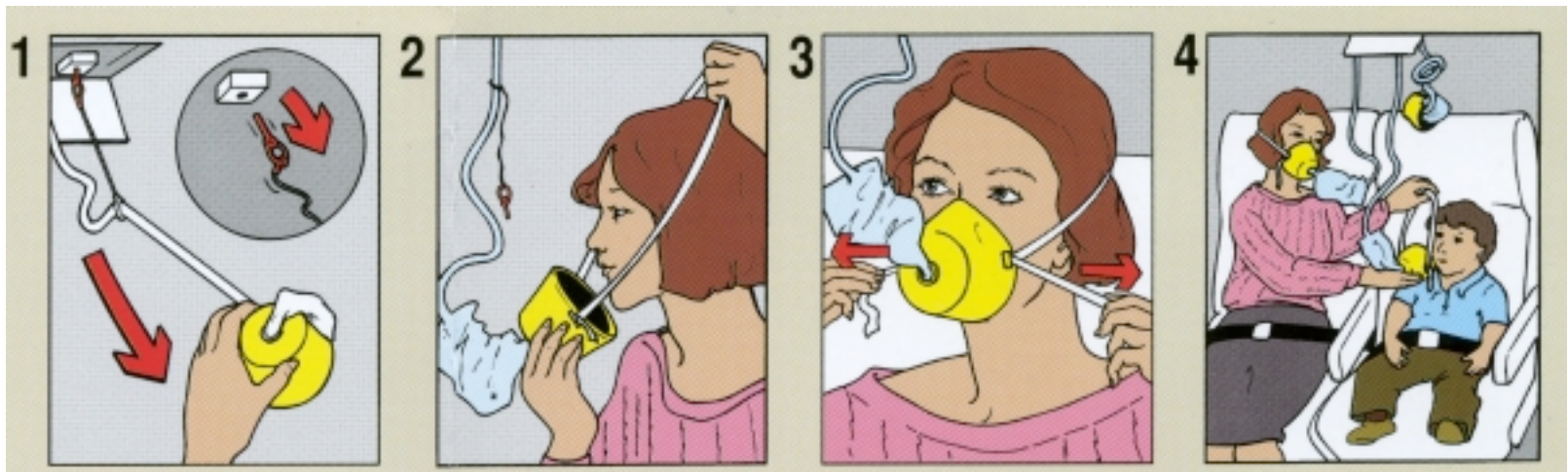
“You’re a great communicator.” “Wow, you speak two languages!”

Institutional affirmation:

- Hiring Criteria: Facility in two languages required

Cultivate your Growth Mindset, and Create Affirming Environments

- Cultivate growth mindset for inclusive teaching and training
- Use self/bystander/institutional microaffirmations



Thank you!

For more information please visit our
website: <http://sfbuild.sfsu.edu>

PDFs of literature used can be found at:

<https://sfbuild.sfsu.edu/content/literature-resources>

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PDFs of all cited literature can be found at: <https://sfbuild.sfsu.edu/content/literature-resources>


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Situation - what happened?	Emotion - how did you feel?	Impact - what was outcome?
Math 441, hard, unapproachable teacher, he, shut and be quiet, middle-eastern (?), mostly men, multi-ethnic Overall grade was poor despite great effort No Y/MA/SSM	Demoralizing Brute force not working any more Sad, angry at teacher behavior	Better connected with peers I passed Stayed on course
O Chem II, Asian accent that was difficult to understand, large class, Asian and Latino students, 50/50 men and women Grade for whole class poor despite hard work Y/SSM	Stupid Unworthy Failure	Shut down and failed class Took again Completed bachelors degree
Numerical Analysis, hard, unapproachable professor, he, African American, 20-30 students, mostly multi-ethnic Poor performance on exams because professor didn't prepare students well. No Y/MA	Frustrated Angry	Passed class, but others did not. During time of pandemic and made things worse

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"If you catch yourself saying, 'I'm not a math person, just add the word 'yet' to the end of the sentence.'"

"The feeling of math being hard is the feeling of your brain growing."

"The point isn't to get it all right. The point is to grow your understanding step by step. What can you try next?"

"That's OK, maybe math is not one of your strengths."

"Don't worry, you'll get it if you keep trying."

"Great effort. You tried your best."

Microaggression:

Your Example (words or drawings):

(Counter) Microaffirmation:

Your Example (words or drawings):

- Self-affirmation
 - Verbally
 - Mentally
- Bystander Affirmation
- Institutional/Systemic Affirmation