

Inclusive Leadership for Scientists

February 11, 2021

Before we get started

- **What is your current professional status?**
(a) Graduate Student (b) First Academic Post-doc (c) Second Academic Post doc
(d) Third Academic Post doc (e) Industry Post doc Fellow (f) Unemployed (g) Undergraduate
(h) I prefer not to respond (i) Other (please specify)
- **Highest Degree and program of study**
- **I am looking for:**
(a) Academic career (b) Non-Academic career

SCIENCE ALLIANCE



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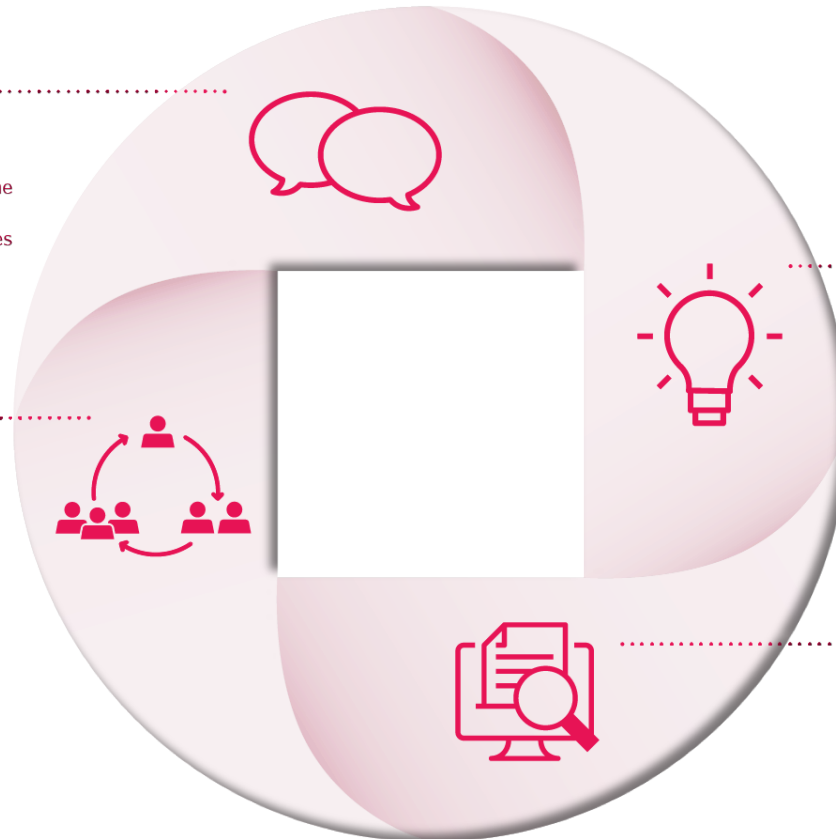
SCIENCE ALLIANCE

COMMUNICATING ACROSS CULTURES

Cultivate an understanding of the challenges and opportunities of communication across audiences and cultures.

BUILDING KNOWLEDGE AND LEARNING COMMUNITIES

Build communities that foster interdisciplinary and transdisciplinary collaborations across diverse societal sectors.



ENTREPRENEURSHIP

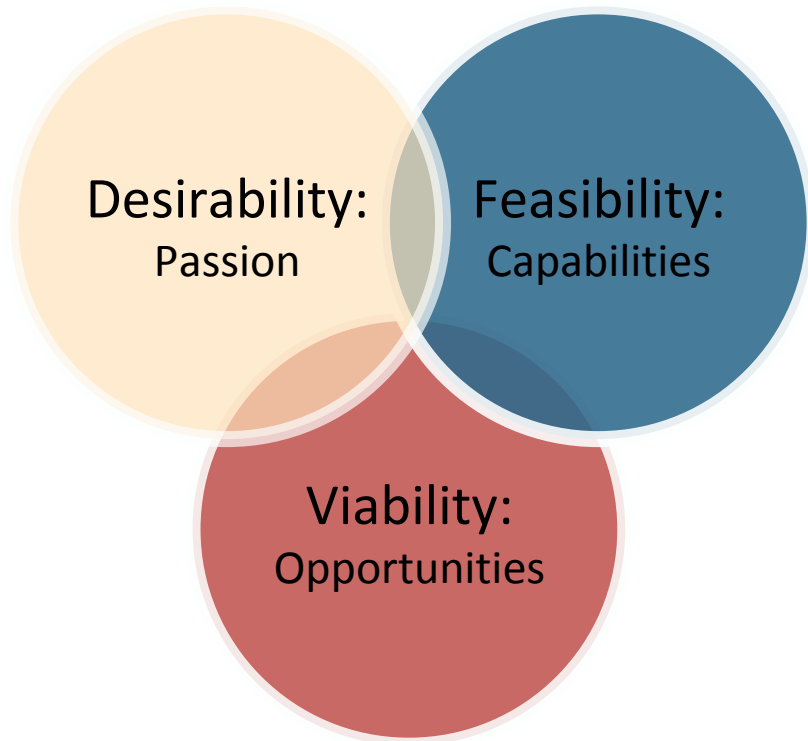
Drive actionable solutions to real-world problems through innovation, technology, education, and social interventions.

EDUCATORS FOR THE 21ST CENTURY

Nurture the minds of future professionals by leveraging diversity, technology, and evidence-based pedagogies.

Decision to go to Graduate School

Intentional directions



- **Passion**: Why did I choose to go graduate school?
- **Skills**: How did I make myself a “good candidate” for graduate school?
- **Opportunity**: What made me decide on Graduate Program at **XYZ**?

EDUCATORS FOR THE 21ST CENTURY

Nurture the minds of future professionals by leveraging diversity, technology, and evidence-based pedagogies.



Compassion
Achievement
Making a Difference
Trustworthy Sincerity
Being the best
Freedom Boldness Loyalty
Inspiration
Balance Challenge Integrity
Belonging Focus Success
Teamwork Assertiveness Credibility Fun Abundance
Family
LEADERSHIP
Harmony Efficiency
Helpfulness
Appreciation Creativity
Optimism Resilience Caring Spiritual
Fairness Passion
Frankness Logic
Collaboration Respect
Power
Learning
Commitment
Security Affluence Diversity
Generosity
Courageous
Economy

Context

- *Does Leadership Matter?*

Base rate for managerial incompetence in America is between 60% - 75%

- *How are Leaders Chosen?*

First line supervisors are chosen based on their technical talent than leadership skills i.e. cognitive ability and normal personality

- *How should Leaders be Evaluated?*

In terms of team, group or organizational effectiveness –get evaluation from subordinates, peers and superiors

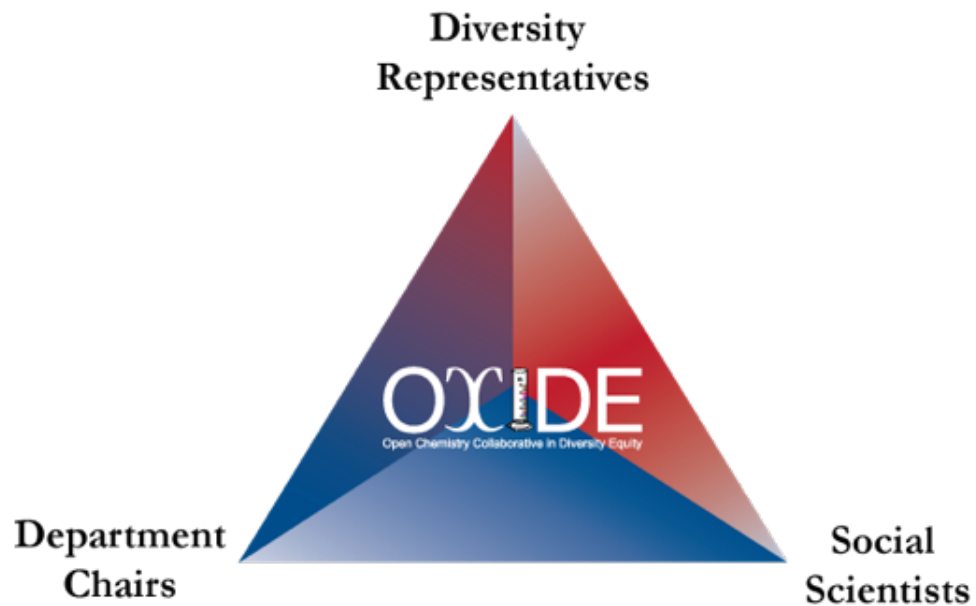
- *Why do Leaders Fail?*

Fail for personal rather than structural or economic reasons

Inclusion is critical to being Equitable

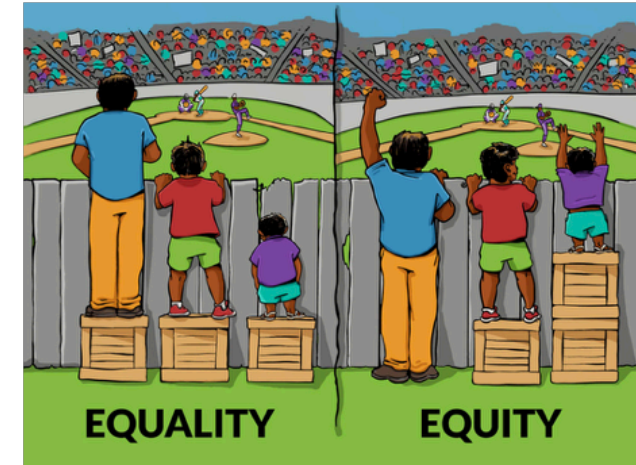
Inclusion of the “other”

- Gender
- Race & Ethnicity
- Disabilities
- LGBTQIA+
 - Lesbian
 - Gay
 - Bisexual
 - Transgender
 - Queer
 - Intersex
 - Questioning
 - Allies
 - Other Identities and orientation
- Socioeconomic
- Culture
- Life experiences
- Ideas
- Political Ideologies
- Religion
- Geography
- University Pedigrees
- Place of Origin
- Etc.



Diversity – Equity - Inclusion

- diversity equity
 - equality (equal resources)
 - equity (equal opportunity)
 - diversity (inclusion of the other)
- ⇒ diversity equity is equal opportunity of the other



<http://interactioninstitute.org>

- inclusive excellence
 - inclusion (no one is excluded)
 - excellence (“the best”)



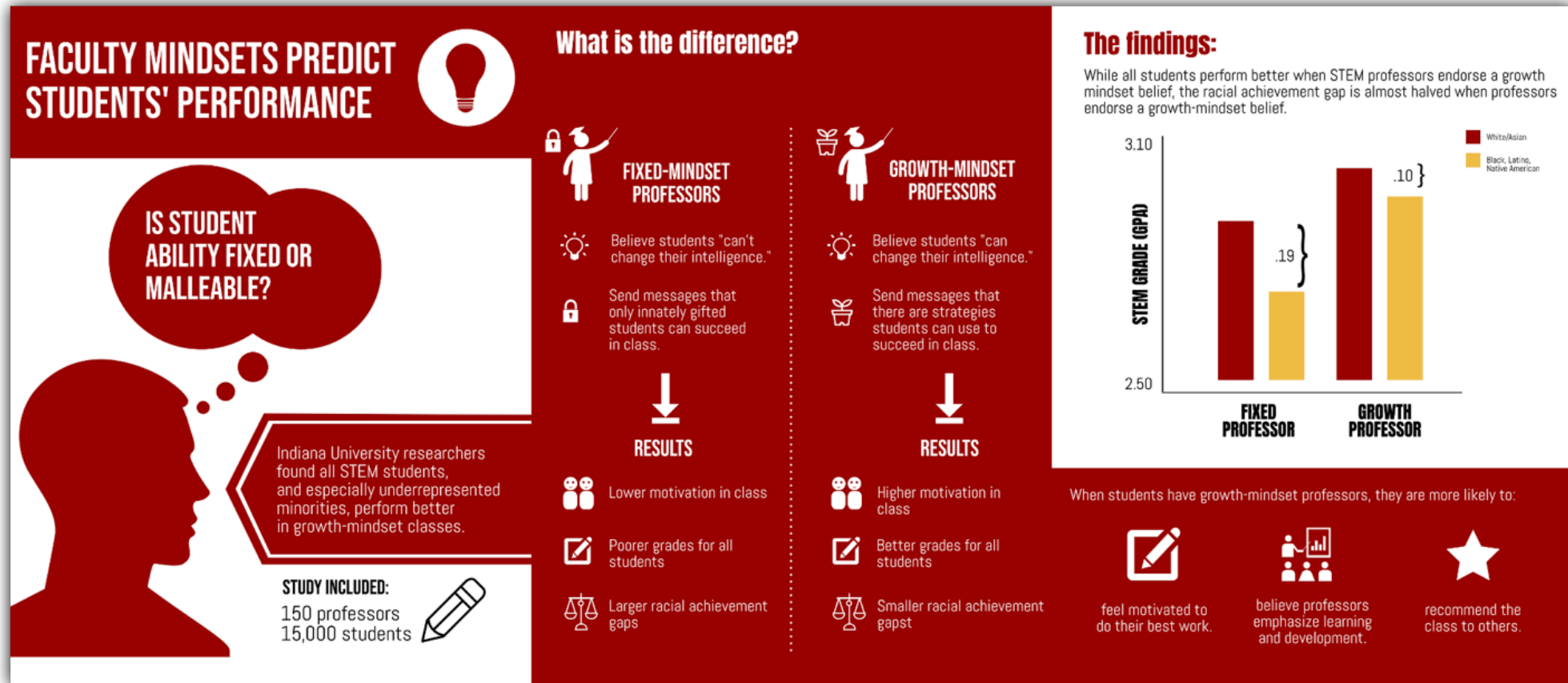
Diversity – Equity - Inclusion

Chief Diversity Officer Robert Sellers often has emphasized the importance of considering all three topics – diversity, equity and inclusion – which he likened to various aspects of attending a dance:

- **Diversity is where everyone is invited to the party**
- **Equity means that everyone gets to contribute to the playlist**
- **Inclusion means that everyone has the opportunity to dance**

Schemas – Growth Mindset vs Fixed Mindset

E.g. Faculty beliefs about intelligence predict racial achievement gaps in STEM classes+
This suggests Growth Mindset vs Fixed Mindset as a better Schema



+E. Canning, K Muenks, D.J. Green, M.C. Murphy "STEM faculty who believe ability is fixed have larger racial achievement gaps and inspire less strident motivation in their lasses", *Science Advances* Vol.5, no. 2 (2019).

Strengths of a Scientist/Graduate STEM Professional/Researcher/ Problem Solver etc...

Barriers faced by URGs

Implicit or Unconscious Bias

Color Blind

Schemas

Accumulation of Bias

Lack of Universal Design

Insufficient Mentoring

Insufficient/Unequal “Family Friendly” Policies

Overburdening the Few

Unwelcoming/Non-Accommodating Climate

Unwelcoming/Non-Accommodating Professional
Cultures

Qualitative vs. Quantitative Assessment

Solo Status

Stereotype Threat

Minimizing Differences/Colorblindness

Depoliticization and Meritocratic Ideology

Barriers Discussed

Solo Status

Being the only representative of a social category present



<http://itooamharvard.tumblr.com>

- “The lack of diversity in this classroom does NOT make me the voice of all black people”
- Being the only representative of a social category present*
 - Impacts performance & outcomes
 - Different than tokenism

*Sekaquaptewa & Thompson, *Pers Soc Psychol Bull*, 28, 5, 694 (2002)

Microaggressions

Remind an out-group member (“them”) that he/she/they is not fully embraced by the in-group member (“us”)



<http://itooamharvard.tumblr.com>

- “I don’t see color”
 - Does that mean you don’t see me
- Microaggressions can be
 - Unconscious
 - Automatic
 - Subtle

Constantine, M. G. (2007). Racial microaggressions against African American clients in cross-racial counseling relationships. *Journal of Counseling Psychology*, 54(1), 1-16.

G. Wong et al. “The what, the why and the how: A review of racial and microaggression research in psychology.” *Race Soc Probl* 4, 2 (2014)

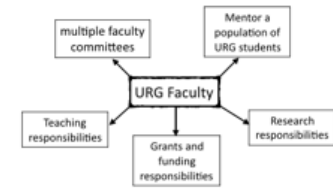
Tokenism & Overburdening

Tokenism

Refers to individuals (usually URGs) who are hired, admitted or appointed to a group because of their difference from other members (majority) as a “proof” that the group does not discriminate.*

Overburdening

Individuals are placed as tokens in multiple committees/groups which adds additional service burden along with professional expectations.**



*Zemke, L. (1998) Tokenism and Women in the Workplace: The Limits of Gender-Neutral Theory. *Social Problems*, 36, 1-44.
 **Jackall, P. R., Dufino, C. L., Nov, A. W. Tokenism in performance evaluation: The effects of work group representation on male-female and White-Black differences in performance ratings. *J Appl Social Psychol*, 7(4), 243-267.

Stereotype Threat

Recommended solutions from past NDEWs addressing barriers



Nearly every department has a wall like this celebrating the past...

What do all these images have in common?

How do we celebrate the past without jeopardizing the future?

Implicit Bias

“Implicit biases come from the culture. I think of them as the thumbprint of the culture on our minds. Human beings have ability to learn to associate two things together very quickly—that is innate.”*

*Dr. Mahzarin R. Banaji, quoted in Hill, Corbett, & Rose, 2010

Schemas

Pedigree v/s Individuals accomplishments

An individuals true merit should be judged based on their accomplishments rather than their pedigree

As the diversity of candidates varies across different PhD producers, such a practice tends to downshift the diversity of the resulting short list *without necessarily being correlated* with the true ranking if one were to look at the individuals rather than their associated university degrees.

Universal Design

- Americans with Disabilities Act (ADA)
 - A physical or mental impairment that substantially limits one or more of the major life activities
- Is a design principle that entails creating products and environments that are usable by all people to the greatest extent possible without the need for accommodation or modification



www.ada.gov
<http://www.hardofhearing.com>
www.hearingaid.com
<http://www.access-board.gov>

Barriers – Personal and Institutional

This Issue

Views **15,497** | Citations **0** | Altmetric **368** | Comments **1**

A Piece of My Mind

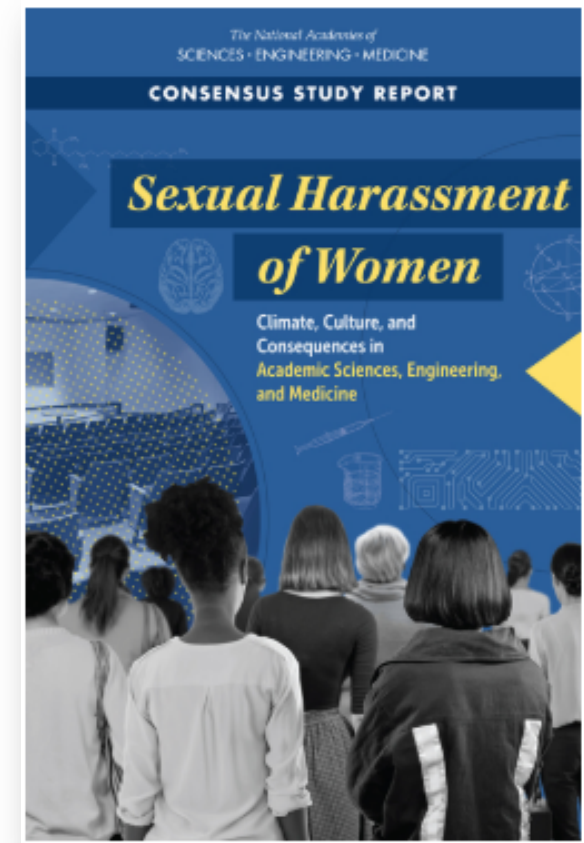
August 6, 2019

Imposter Syndrome Treat the Cause, Not the Symptom

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» [Author Affiliations](#) | [Article Information](#)

JAMA. 2019;322(5):403-404. doi:10.1001/jama.2019.9788



Case Study 1: STEM Identity & Meritocracy

A postdoctoral fellow graduated in your lab graduated as the only woman scientist out of 10 lab mates from a Minority- serving Research Institute. She published multiple first author papers with high impact factor, forged collaborations and guided young graduate and undergraduate students. Often your PI praises her for being very organized and competent. He also adds that her PhD advisor used those words to support her application. She never acknowledges the 'complement' and adds that it her rigorous analytical, methodical experimental planning and deep subject matter expertise is what drove her to have a successful publishing record. One of your fellow graduate colleague adds that he is impressed that she is able to stay afloat in research.

- As a by-stander what is your first take about this conversation?

The postdoctoral fellow is visibly upset. She gets quiet and the PI changes the topic of conversation to the upcoming conference season.

- Was there a better way to address this situation? How do these accumulated microaggressions impact the lab culture?

Performance – based adjectives

Managers Use More Positive Words to Describe Men in Performance Reviews and More Negative Ones to Describe Women

Words used to describe men

Analytical	
Competent	
Athletic	
Dependable	Arrogant
Confident	
Versatile	
Articulate	
Level-headed	
	Irresponsible
Logical	
Practical	

POSITIVE

NEGATIVE

IN DESCENDING ORDER
OF RELATIVE FREQUENCY

Words used to describe women

Compassionate	
	Inept
Enthusiastic	Selfish
Energetic	Frivolous
	Passive
Organized	Scattered
	Opportunistic
	Gossip
	Excitable
	Vain
	Panicky
	Temperamental
	Indecisive

POSITIVE

NEGATIVE

SOURCE AN ANALYSIS OF 81,000 PERFORMANCE EVALUATIONS, DAVID G. SMITH ET AL., 2018

© HBR.ORG

Uncovering Talent – A new model of Inclusion

The Concept of Covering

Covering is a strategy through which an individual downplays a stigmatized identity¹



Appearance-based covering concerns how individuals alter their self-presentation (grooming, attire, and mannerisms) to blend into the mainstream. *A man may color his hair because he does not want to be perceived as too old and unable to “keep up.”*



Affiliation-based covering concerns how individuals avoid behaviors widely associated with their identity, often to negate stereotypes about that identity. *A woman might avoid talking about being a mother because she does not want her colleagues to think she is less committed to work.*



Advocacy-based covering concerns how much individuals “stick up for” their group. *A veteran might refrain from challenging a joke about the military lest she be seen as overly strident.*



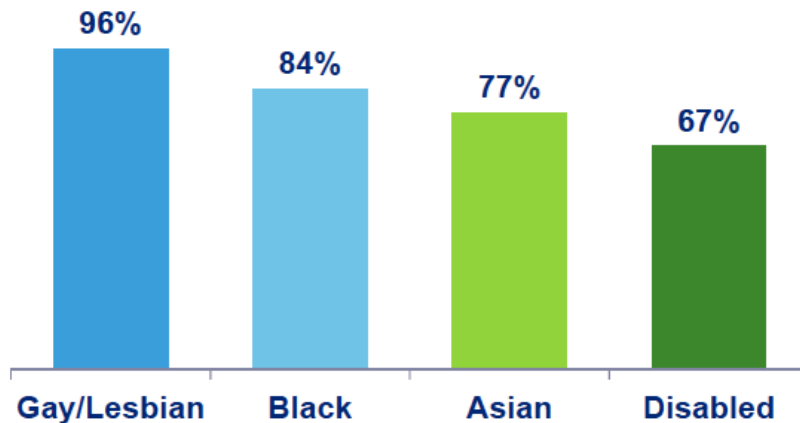
Association-based covering concerns how individuals avoid contact with other group members. *A gay person might refrain from bringing his same-sex partner to a work function so as not to be seen as “too gay.”*

¹ Kenji Yoshino, *Covering* (New York: Random House, 2006).

Personal & Professional consistency

Nearly all **gay/lesbian** respondents who cover report that they cover their sexual orientation at work

Black, **Asian**, and **Disabled** respondents were the next most common groups to cover their respective identities

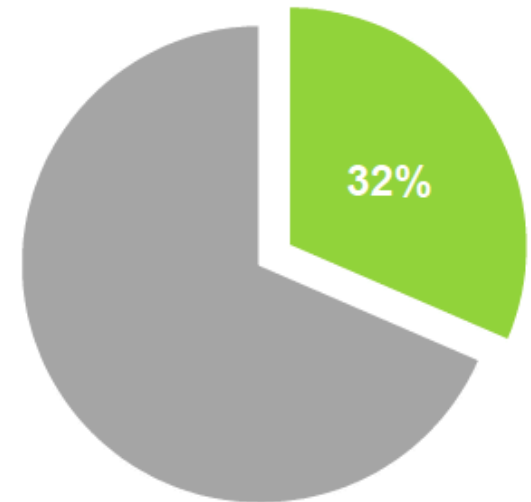


No group is immune to covering, including **straight, White men**

.....
almost
.....

1 out of 3

straight, White men report covering on at least one identity



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Cultivate an understanding of the challenges and opportunities of communication across audiences and cultures.

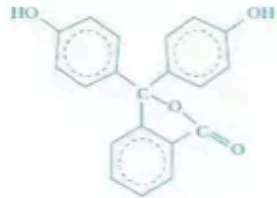


Case Study 2: Accomodation

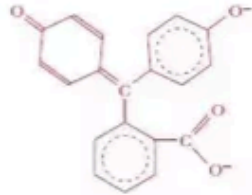
You walk into your teaching lab to conduct a titration lab as part of your TA assignment. One of your students missed the end point of a phenolphthalein based titration by over 10 mL, while constantly asking “is it red yet?”. The constant request and going overboard makes you lose your patience and you yell at the student of not being observant and called the student – “colorblind”. The student broke down in tears and admitted that he does struggle with identifying red color is actually colorblind.

- *Transactional:* How do you manage this situation from here?
- *Institutional:* Is phenolphthalein the only way to understand the acid-base concept? Are there other modes to do a lab that moves away from using color as a mode of detection?

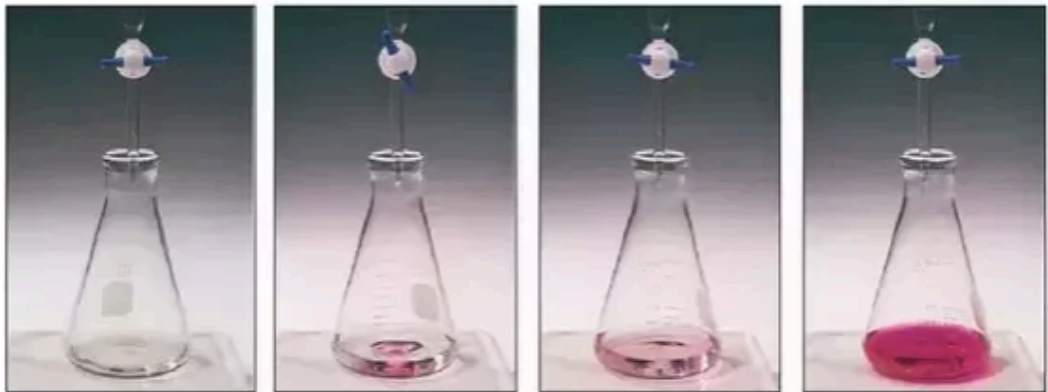
Inclusive (Universal) Design



Acid form, colorless



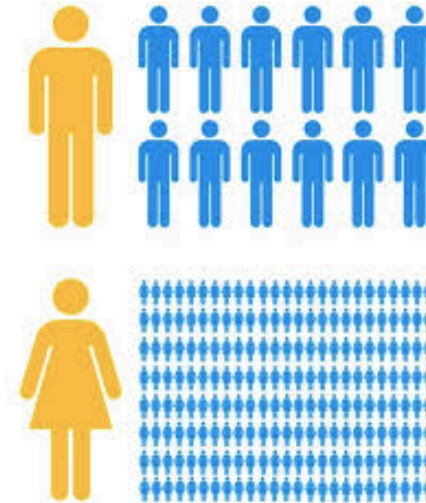
Basic form, pink



© Cengage Learning/Larry Greenko

Phenolphthalein. Drawings show the acid and base forms of phenolphthalein, an indicator commonly used for the titration of an acid with strong base. (a) The acidic solution is initially clear. (b) When base is added, the solution turns pink momentarily but disappears with swirling. (c) The first permanent pink indicates the endpoint. (d) The solution is vividly colored beyond the equivalence point, where base is in excess.

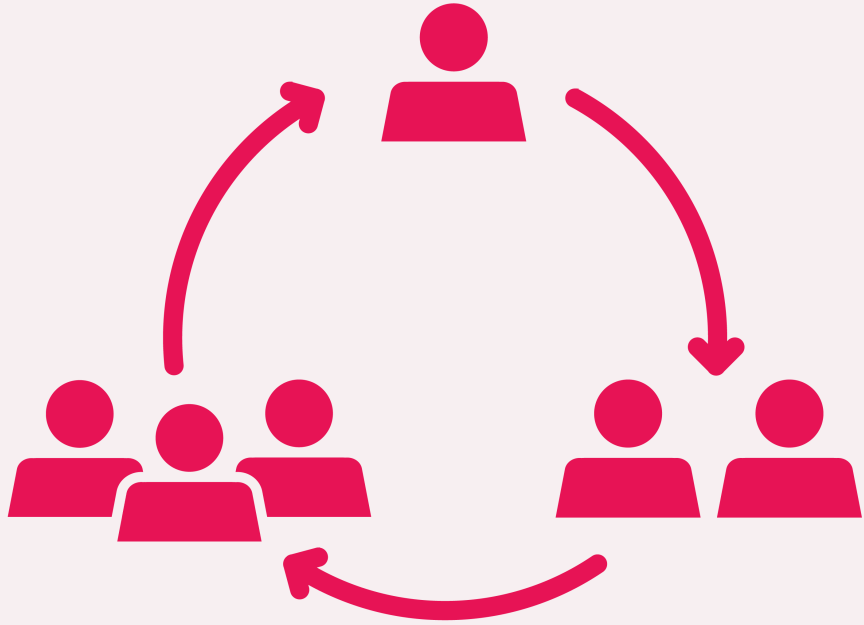
About 8% of all men and about 0.5% of all women suffer from color vision deficiency



Those percentages imply close to 300 M people are colorblind and struggle everyday

<https://iristech.co/statistics/>

**Transitioning to an Independent Career
by being *INTENTIONAL***



BUILDING KNOWLEDGE AND LEARNING COMMUNITIES

Build communities that foster interdisciplinary and transdisciplinary collaborations across diverse societal sectors.

Leadership Development Plan (LDP)

- Vision - Skills, Interest and Leadership Assets
- Career Goals necessary to achieve Vision
- Action steps with achievable timelines
- Evaluation/Progress
- Network of Strategic Advisors, Sponsors and Mentors to Assist

THANK YOU



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