

Promoting More Equitable and Inclusive Student Teamwork: Addressing Bias and Stereotyping on Teams



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Session Agenda

1. Review data on bias and stereotyping on teams and discuss associated impacts.
2. Introduce asset-based tools.
3. Workshop the tools through a project simulation.
4. Review data on benefits and limitations of the tools.
5. Share resources of the broader set of tools.

A recent study of 4 universities showed that 85% of students experienced team dynamics issues over a year (Wolfe et al, 2016).

The most common problems experienced on student teams were :

<u>Problem categories</u>	<u>% of students</u>
Slacker Teammate	74%
Domineering Teammate	41%
Limited Learning	45%
Exclusion from work	30%

The study also showed that women & students of color experienced issues at higher rates (Wolfe et al, 2016).

<u>Self-identified categories</u>	<u>% of students</u>
White men	23%
White women	37%
Men of color	41%
Women of color	58%

EXPERIENCES OF WPI STUDENTS

INTELLECTUAL MARGINALIZATION: when student's ideas are ignored, not taken seriously, or voices are silenced (Meadows et al, 2015, ASEE Annual Conference)

I have encountered people who were just stunned that I had education at all. "Isn't [X place] all desert? How can you speak English so well?" I truly do not know how to move past this type of ignorance. It is simply utterly difficult to give out educated ideas in your team when they are already second guessing how you got to 'their' college in the first place. (AMAN, international male student, name changed)

EXPERIENCES OF WPI STUDENTS

TASK ASSIGNMENT BIAS: when student's assign themselves or others tasks based on unconscious biases of who is more or less capable/suited for specific tasks (Meadows et al, 2015, ASEE Annual Conference)

“I can't help but notice...Jack got the more dominant role that requires a lot of extensive research and seems to out do me and Amber in the tasks we had to do”. (TISHA, African American female student, names changed).

“[A] stereotype that people place on me is being a stereotypical lazy Latino. In previous groups, they'd give me the minimum work to do and were surprised when I spoke up and said I could also cover other parts”. (SAM, first generation Latino student, names changed).

EXPERIENCES OF WPI STUDENTS

LACK OF WORK RECOGNITION: when student's contributions are not acknowledged, when credit for work is stolen, or when individual work is subsumed under the work accredited to the whole group (Meadows et al, 2015, ASEE Annual Conference).

I've been a part of teams where I've been the only female on the team, and I very often was assigned the job of organizing people (to the point of being expected to know people's schedules and remind them of meetings and tasks, as though I was Outlook's calendar app), sending emails, and being expected to take notes at every single team meeting. On top of this, I would have very little opportunity to get hands-on experience with the project and during meetings I would be given very little time to talk, and most of my ideas weren't taken seriously. This was especially frustrating when people would later repeat my suggestions and immediately get the support of the group. (JENN, white female, name changed)

EXPERIENCES OF WPI STUDENTS

EXTRA WORK FOR THE SAME RECOGNITION- When a student has to work more than other team members in order to be seen as contributing the same amount.
(Babcock, Recalde, Vesterlund 2018)

“The work we divide tends to have the same degree of work, but it still seems if I always lag behind them. In order to do something meaningful, I have to do twice the amount of work as them” (ASHLEY, African American female student, names changed).

EXPERIENCES OF WPI STUDENTS

LACK OF AWARENESS/IMPLICIT BIAS

“Prior to our discussion about communication, I had assumed that Oona and Maria wouldn’t participate in conversations because they had nothing to say. I was surprised when they told Oliver and I that they feel excluded from our conversations, and often have things to say but don’t say them. I felt awful about this because I never meant to exclude anyone, me and Oliver would just get caught up in our debate over ideas” (JOSH, white male student, names changed).

Asset-Based Approach to Education



- Gloria Ladson-Billings
- Critique of Deficit Model
- Creating counter narratives

STUDENT ASSET MAPPING

Taking an inventory of an individual's strengths & resources.



Three Areas You Want to Grow in:

- 1) Evidence-based writing;
- 2) Research design;
- 3) Being less passive on a team

TEAM ASSET CHARTING

Taking an inventory of a team's strengths & resources, and using these to divide work based on assets and areas for growth.

Project tasks	Student Name & Associated Assets	Student Name & Areas for Growth
Review literature: rainwater catchment & filtration		
Create design matrix: evaluate potential systems		
Digital or hand sketches of potential systems		
Develop asset maps of community strengths		
Create multi-stakeholder presentation		

Your Team's Project & Associated Tasks



Potable Water System for a family in Guachtuq, Guatemala



Review literature: rainwater catchment & filtration

Digital or hand sketches of potential systems

Develop asset maps of community strengths

Review literature: uneven access to clean water

Interviews with experts on rainwater catchment

Create multi-stakeholder presentation

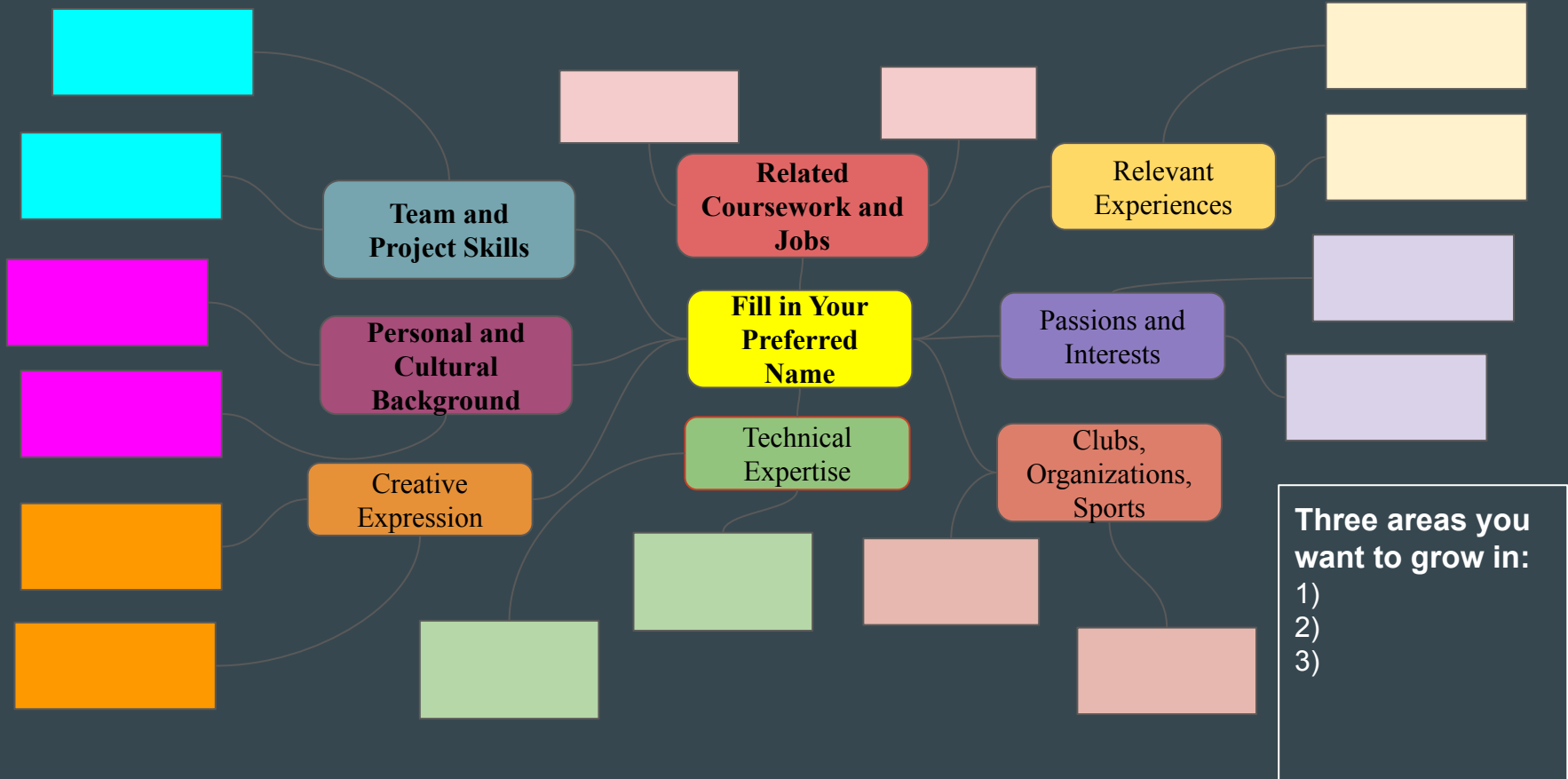
Create design matrix: evaluate potential systems

Informal conversations with community members

Give presentation to multi-stakeholders

CREATE YOUR OWN ASSET MAP LINKED TO THIS PROJECT

Taking an inventory of an individual's strengths & resources.



BREAK OUT INSTRUCTIONS

1. Once in your breakout groups, take 3 minutes each to share your maps.
2. After you are done sharing, we will send you your team's team asset chart via a link. It will be a live edit link for your group to live edit together. As you work together to begin filling out the team asset chart, you should consider:
 - a. Who will take the lead in which areas because they have assets in that area?
 - b. Who will take the lead because they want to grow in that area?

How did it go?

Likes?

Dislikes?

Concerns?

Benefits?

BENEFITS of asset mapping, team asset chart, processing sheet, and suite of tools, for more equitable team dynamics

1. BUILDS STUDENT CONFIDENCE

“...the asset map shows me what I’m capable of....I plan on editing my asset map again because I’m going to need it to remind myself what I’m good at....I feel that my asset map should pages long by the time I’m 40. I will continue to utilize my asset map to help me in the future” (MARTIN, Native American, first generation male student, names changed).

“Through creating my asset map, I surprised myself with what I may be able to offer in a team project, specifically in [this course, focused on challenges of developing] ‘livable cities’...I often feel intimidated by the intelligence of the people around me, as I believe I may not have as much to offer with experience or general knowledge. I may not be the smartest, and I’m not a great writer, but what I lack in these areas I may make up for in creativity, and I have many interests that directly correspond with this course” (ELLA, white female student, names changed).

BENEFITS of asset mapping, team asset chart, processing sheet, and suite of tools, for more equitable team dynamics.

2. STUDENTS GET TO KNOW EACH OTHER - WORKS TOWARDS OVERCOMING STEREOTYPES

“I think stereotyping had some effect on what we all initially thought of each other.... I saw James as a ‘nerdy’ kid, and Miles being completely introverted....everyone on the team saw me as a ‘jock’ type of personality that only came to college to party. The group was able to move past these unspoken stereotypes.... [Working on this team] is different because everyone has a very unique skill set, and they each approach the problem at hand differently....this has allowed me to learn an enormous amount about myself. I now better understand the parts of myself I have to work on when placed in a team so that it functions the most successfully. It has also given me new experience on how everyone else approaches work” (KYLE, white male student, names changed).

BENEFITS of asset mapping, team asset chart, processing sheet, and suite of tools, for more equitable team dynamics.

3. PROCEDURE TO DIVIDE TASKS BASED ON SKILL AND INTEREST → MINIMIZING TASK ASSIGNMENT BIAS

“We try to use our different strengths to an advantage and build on our weaknesses as well. One example is during the interviews. We knew Josh was the best person for the job, but we all got to lead at least one of the interviews so we could gain experience. I also have a lot of experience in technical writing as I wrote up a 70 plus page portfolio for my engineering project last year. Therefore, I will be leading this aspect of the project. However, there will also be times where Josh and Rita get to lead in this area as well. We all want to make sure that our strengths are used appropriately and that we also get experience in other areas that we might not have had before” (STEPHANIE, white female student, names changed).

Processing Sheet (click to access)

Description

- An assessment tool that helps student teams see how they are making decisions, dividing work, and interacting in meetings. It also offers the opportunity to make adjustments to improve in problem areas.

When to Use:

- Midway through their project experience; longer-term project

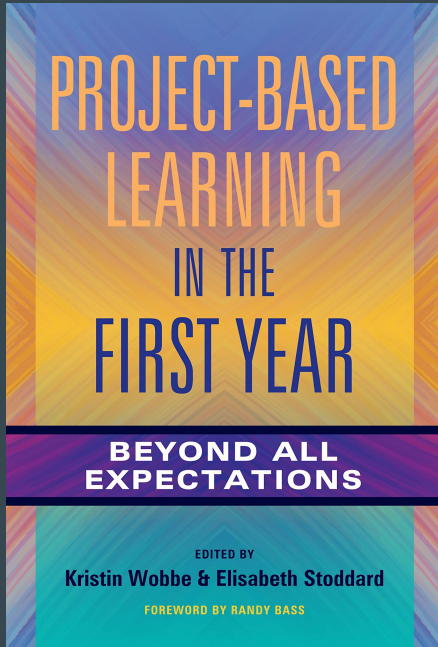
BENEFITS of asset mapping, team asset chart, processing sheet, and suite of tools, for more equitable team dynamics.

4. PROVIDES TOOL TO DOCUMENT, ANALYZE, MEASURE, AND DISCUSS (IN)EQUITY IN TEAM DYNAMICS

“Because of the stereotype that women are better suited for secretarial type roles...considered more feminine, they are often assigned roles that focus on organization. Reflecting on my own experience...this was very accurate for my own group. While John and Arjun focused heavily on finding new technologies, Katie and I conducted other research that was still important, but not so focused on specific technologies...Strategies that my team could use to make the team dynamic more effective is switching up the types of roles we do everyone now and then. That way, Katie and I get more experience with the technologies and John and Arjun get more experience with organizing. Also, I think it would be beneficial for each of us to reflect on the own biases we each have and think about how that is affecting the group”
(NORA, female student of color, names changed).

“I always left group meetings not trusting my peers could accomplish the quantity or quality of work they promised. I often felt like I was on an island...I see that my bias of associating personality type with work ethic...impeded [our] group productivity. [During the workshop], I learned that both Mark and Stacie take a backseat not out of disinterest but more so to appease the loudest group member, me...I am now excited about group work and feel less pressured about turning in the assignment on time and more so turning in a quality assignment where I actually learn something.” (Kay, white female, names changed)

Additional Tools and Resources



Stoddard, Elisabeth A. and Pfeifer, Geoffrey (2020) Diversity, Equity, and Inclusion Tools for Teamwork: Asset Mapping and Team Processing Handbook

Participant Resources

Pfeifer, Geoffrey and Stoddard, Elisabeth A., 2019. Chapter 11: “Equitable and Effective Student Teams: Creating and Managing Team Dynamics for Equitable Learning Outcomes”

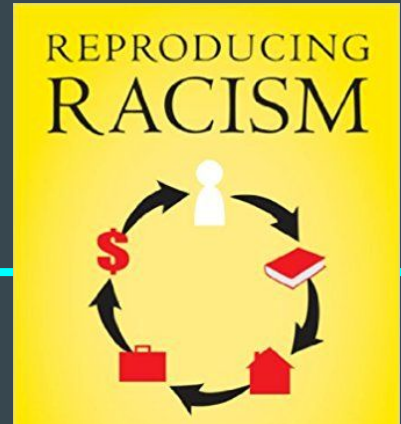


Stoddard, Elisabeth A. and Geoffrey Pfeifer, 2018. "Working Towards More Equitable Team Dynamics: Mapping Student Assets to Minimize Stereotyping and Task Assignment Bias". American Society for Engineering Education - Peer Reviewed.

POTENTIAL LIMITATIONS (Stoddard and Pfeifer, 2018)

1. Potential limitation & opportunity to disrupt reproduction of bias & stereotyping

“In my experience working in groups, it makes me feel as if I shouldn’t speak or contribute anything to the group because I have nothing worthy to bring to the discussion table, which is not true at all. I realized that this has been going on for a long time through my primary and part of my secondary school life that when it got to be times I had to lead my group into finding a solution, I was faced with anxiety” (TONI, female student of color, names changed).



POTENTIAL LIMITATIONS

2. Meeting the unique needs of international and immigrant students

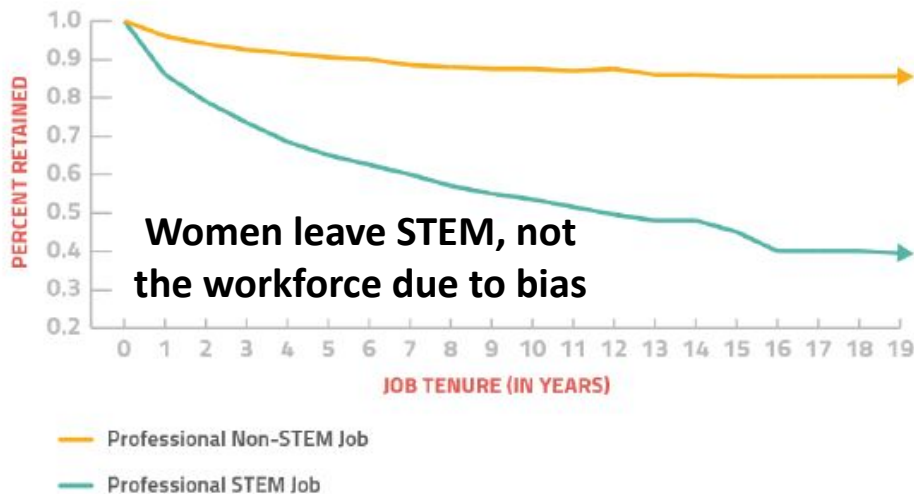
- A. Having a new, imposed racial minoritized identity
- B. Culture shock, where individual work and success is privileged over collaboration and shared success
- C. Navigating differences in cultural and social norms; and language barriers → “slacker”
- D. Experiencing intellectual marginalization based on stereotypes from domestic peers, such as lower level of preparation and education

Most often I am in teams where I am the only international student and non-native English speaker, even though I consider myself a white male [...] Although I am from Brazil, I do not consider myself as [a person of color] as I've been constantly asked about.

The evident identity diversity in my team, in my opinion, was that I was black and everyone else white. Not only am I black, but also I am an immigrant who has been in the U.S. for just 5 years. So, things like having a strong accent, growing up in a culture where long-lasting eye-contact is considered disrespectful or unacceptable, or growing up in a place where English is the least spoken language, made me a little uneasy and thus timid sometimes when I had something to share with the group. [...] Although I had many assets to contribute, I feel I still have to improve on my communication skills. For example, I want to be more assertive in my speech, so I can be taken more seriously or so I can be clearly understood by my peers.

Culture of Bias and Sterotyping Reproduced in the Workplace

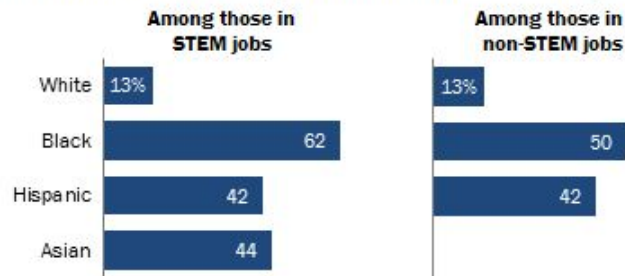
FIG. 1.6 // Percentage of Women Retained in Career Field Over Time



Reproduced from Glass et al., 2013

Black STEM workers are most likely to say they have experienced discrimination at work due to their race

% of employed adults who say they have experienced any of eight forms of discrimination in their workplace due to their race or ethnicity



Note: Whites, blacks and Asians are non-Hispanic only; Hispanics are of any race. There were not enough Asian respondents working in non-STEM jobs in the sample to be broken out into a separate analysis. Respondents who gave other responses or who did not give an answer are not shown. STEM stands for science, technology, engineering and math.

Source: Survey of U.S. adults conducted July 11-Aug. 10, 2017.

"Women and Men in STEM Often at Odds Over Workplace Equity"

PEW RESEARCH CENTER

Black and LGBTQ leave STEM workforce due to discrimination