Rejecting Culture-Blindness

TOWARD CULTURAL COMPETENCE IN STEM UNDERGRADUATE TEACHING

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November 6, 2014
AGENDA

- Why Focus on Cultural Competency in STEM
- The Role of Self-Reflection in Becoming Culturally Competent
- Theories for Understanding the Harmful Effects of Bias and Discrimination for Underrepresented Minorities in STEM fields
- Frameworks for Inclusive Teaching in STEM undergraduate classrooms
1. Think of a few things that might interfere with your work this afternoon.
2. Write those things on a piece of paper.
3. Fold the paper and put your name on it. Set the paper in the middle of the table.
SCIENTIST
ENGINEER
COMPUTER ENGINEER
OBJECTIVES & LEARNER OUTCOMES

- Understand how one’s social identity shapes thoughts about teaching and learning and interactions with culturally diverse learners
- Understand theoretical and conceptual frameworks that explain underrepresentation and underperformance of certain students in STEM fields
- Understand frameworks that support cultural inclusivity and proficiency in teaching and learning
- Discuss strategies for practicing cultural inclusion and proficiency in the classroom
- Begin PLANNING for ACTION
THE BIGGER PICTURE

TOWARD CULTURAL COMPETENCY IN STEM UNDERGRADUATE TEACHING

- Who Am I?
- Who Are My Students?
- Who Are We?
On a piece of paper, write responses to the following questions:

1. I consider my biggest strengths working with culturally diverse students to be . . . .
2. I consider my biggest challenges working with culturally diverse students to be . . .
3. I do/do not consider my current instructional practice to be culturally inclusive, because . . .
On your handout, provide responses to the following two questions:

1. What do you already know about teaching culturally diverse students?
2. What do you want to learn about teaching culturally diverse students?
Minorities make up less than 5 percent of the STEM-based workforce (U.S. Department of Labor 2012 statistics)

While Asians are overrepresented as scientists and engineers, people from historically underrepresented racial and ethnic groups in society (e.g., African Americans, Latinos, American Indians, Alaska Natives) continue to be underrepresented in STEM careers

Women made up only 28% of science and engineering workers in 2010 (National Science Board, 2014)
Senior executives at the nation’s Fortune 1000 (92 percent) and emerging STEM companies (74 percent) believe diversity enhances their companies’ success by:

- Increasing different ideas/perspectives/skills
- Improving ability to compete in U.S. and global markets
- Allowing for greater creativity/more innovation/new ideas
- Resulting in better solutions/decision making/client communication
- Expanding hiring/resource pool
- Enabling company to attract a diverse workforce/shows company is open to minorities and women
- Fostering a healthy work atmosphere/workplace reflects American demographics
- Resulting in better/different products

DEFINING TERMS: WHAT IS CULTURE?

- A shared, learned, symbolic **system** of values, traditions, social and political relationships, and worldviews that shapes and influences one’s perceptions, behaviors and interaction patterns in the world;

- Created, shared, and transformed by a group of people bound together by a **common** history, **geographic location**, **language**, **social class**, **religion**, or **other shared identity** (Nieto & Bode, 2012)
DEFINING TERMS: WHAT IS CULTURE?

- Culture is created and re-created in the contexts of our everyday lives; it’s dynamic, not static; it’s context-specific

- Culture is not synonymous with race
  - Race is often coded as ‘cultural difference’
Competence . . .

- Implies having the capacity to function effectively
- Proficient in something; skilled
Cultural competence is defined as

- a set of values, behaviors, attitudes, and practices within a system, organization, program or among individuals and which enables them to work effectively cross culturally. It refers to the ability to honor and respect the beliefs, language, interpersonal styles and behaviors of individuals and families receiving services, as well as staff who are providing such services.

Striving to achieve cultural competence is a dynamic, ongoing, developmental process that requires a long-term commitment.

(National Center for Cultural Competence)
Cultural competence mandates that organizations, programs and individuals must have the ability to:

1. Value diversity and similarities among people;
2. Understand and effectively respond to cultural differences;
3. Engage in cultural self-assessment at the individual and organizational levels;
4. Make adaptations to the delivery of services and enabling supports; and
5. Institutionalize cultural knowledge.

(National Center for Cultural Competence)
THE ROLE OF CRITICAL SELF-REFLECTION
1. How does my social identity inform/shape my pedagogy and practices?

2. In what areas do I need to learn more about culture, power, privilege and difference?

3. What accountability measures are in place for me to “grow” my cultural competency?

4. How am I planning and implementing strategies for effectively teaching all learners?
“The trouble around diversity isn’t just that people are different from one another. The trouble is that society is organized in ways that encourage people to use difference to include or exclude, reward or punish, credit or discredit, elevate or oppress, value or devalue” -Alan Johnson, 2006
WHAT ARE YOUR LENSES?

Race   Language
Ethnicity  Social Class
Gender   Sexuality
Age     Religion
         Ability
WORKING THROUGH CULTURAL DIFFERENCES

Classroom

Teacher
• Norms
• Values
• Beliefs
• Expectations
• Interaction Styles
• Ways of knowing

Student
• Norms
• Values
• Beliefs
• Expectations
• Interaction Styles
• Ways of Knowing

Biases
Stereotypes
Assumptions
WORKING THROUGH CULTURAL DIFFERENCES

Society

- Community
- School
- Classroom
- Individual
Inequities exist in the educational system and in intergroup relationships, resulting from conscious and unconscious biases and stereotypes

- Racism
- Sexism
- Classism
- Ableism
- Homophobia
- Linguicism
- ...
DEVELOPING CULTURAL COMPETENCE

- Do I harbor unconscious biases and assumptions about my students that influence teacher-student interactions? Where do that biases and assumptions come from?

- What are the implicit assumptions that influence our judgments?
We all carry worlds in our heads, and those worlds are decidedly different. We educators set out to teach, but how can we reach the worlds of others when we don't even know they exist? Indeed, many of us don't even realize that our own worlds exist only in our heads and in the cultural institutions we have built to support them. It is as if we are in the middle of a great computer-generated reality game, but the “realities” displayed in various participants' minds are entirely different terrains.

(Lisa Delpit, *Other People’s Children: Cultural Conflict in the Classroom*, 1995)
# WHY CULTURE MATTERS

<table>
<thead>
<tr>
<th>Identity Marker (Societal Dominant Group)</th>
<th>Your Social Group Membership</th>
<th>Agent (Dominant)</th>
<th>Target (Subordinate)</th>
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</thead>
<tbody>
<tr>
<td>Race</td>
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<td></td>
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<tr>
<td>(White, Black/AfAm, Asian American/Pacific Islander, Latina/o, Native American, etc.)</td>
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<tr>
<td>Social Class</td>
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<tr>
<td>(lower class, working class, middle class, upper middle/upper class)</td>
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<tr>
<td>Gender</td>
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<tr>
<td>(man, woman, transgender, queer)</td>
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<tr>
<td>Sexual Orientation</td>
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<tr>
<td>(heterosexual, homosexual, bisexual, etc.)</td>
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<tr>
<td>Religion</td>
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<tr>
<td>(Christian, Buddhist, Muslim, Jewish, no religion, etc.)</td>
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<tr>
<td>Ability</td>
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<tr>
<td>(able-bodied, differently abled)</td>
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<tr>
<td>Language</td>
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<tr>
<td>(native English speaker, Second Language Learner)</td>
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Perhaps one reason why efforts to diversify science have made little progress is that we've spent too much effort trying to inculcate diverse populations of students into the culture of science as opposed to changing the culture of science itself to be inclusive of them. To even consider this, it would seem that an important shift in perspective is needed, a shift that a conversation about cultural competence could drive. (Tanner & Allen, 2007)
FRAMEWORKS/THEORIES FOR UNDERSTANDING UNDERREPRESENTATION AND UNDERPERFORMANCE OF STUDENTS IN STEM
STEREOTYPE THREAT

- Defined as
  - Being at risk of confirming, as self-characteristic, a negative stereotype about one’s social identity group (Steele & Aronson, 1995)

- Resulting Effects
  - Academic performance can suffer by the awareness that one’s behavior might be viewed through the lens of racial stereotypes
  - Reduced practice time for a task
  - Reduced sense of belonging to the stereotyped domain
  - Reduced valuing of the domain
REDUCING STEREOTYPE THREAT

- Strategies
  1. Reframe the task
  2. Deemphasize threatened social identities
  3. Encourage self-affirmation
  4. Emphasize high standards with assurances of capability
  5. Provide role models
  6. Provide external attributions for difficulty
  7. Emphasize an incremental view of ability
Think about specific students that you have had in class who might have been susceptible to stereotype threat. What were some of the signs? What could you have done differently?

What are 1-2 ways that can plan for eliminating stereotype threat in your classroom in the future?
Focus

- The examination and transformation of the relationship between race, racism, and power.
- Places many of the same issues of conventional civil rights in a broader perspective that includes economics, history, context, group- and self-interest.
HOW IS RACISM DEFINED?

- An action/behavior that is influenced by a racial perspective (individual level)
- A caste system based on color utilized by the dominant group to maintain their power structure (institutional level)
- Racism = a system of advantage based on race (power + privilege) – Beverly Daniel Tatum
Attempts to foreground race and racism in research as well as challenge the traditional paradigms, methods, texts, and separate discourse on race, gender, and class by showing how these social constructs intersect to impact people and communities of color (Solórzano, Ceja, & Yosso, 2000)
CRITICAL RACE THEORY

Tenets

1. Racism is central, endemic, permanent, and a fundamental part of defining and explaining how U.S. society functions

2. Everyone has potentially conflicting, overlapping identities, loyalties, and agencies; anti-essentialism should be a goal

3. The unique voice of people of color should be affirmed and counted as a valid source of knowledge

4. A social justice focus is necessary
FOUR QUESTIONS ASKED BY CRT SCHOLARS

1. How do racism, sexism, classism, and other forms of subordination shape institutions of education?

2. How do educational structures, practices, and discourses maintain race-, gender-, and class-based discrimination?

3. How do students and faculty of color respond to and resist racism, sexism, classism, and other forms of subordination in education?

4. How can education become a tool to help end racism, sexism, classism, and other forms of subordination (Montoya, 2002)?
1. How do educational structures, practices, and discourses in STEM education (your discipline specifically) maintain race-, gender-, and class-based discrimination?

2. How can STEM education become a tool to help end racism, sexism, classism, and other forms of subordination?
Microaggressions

- “Subtle insults (verbal, nonverbal, and/or visual) directed toward people of color, often automatically or unconsciously” (Solórzano, Ceja, & Yosso, 2000, p. 60)

Racial Microaggressions

- “. . . One must not look for the gross and obvious. The subtle, cumulative miniassault is the substance of today’s racism” (Pierce, 1974, p. 516)
- “Subtle, stunning, often automatic, and nonverbal exchanges which are ‘put downs’ of Blacks by offenders” (Pierce et al., 1978, p. 66)
- “In and of itself a microaggression may seem harmless, but the cumulative burden of a lifetime of microaggressions can theoretically contribute to diminished mortality, augmented morbidity, and flattened confidence (Pierce, 1995, p. 281)

Intersectionality - Gendered racism
MICROAGGRESSIONS: EXAMPLES

“Did they say that to me because I’m ______________?"

“‘You aren’t really black though, you act like a white girl.’”

“Yes, so articulate”

“‘When are you going to have some kids? You’re not getting any younger.’”

“It must be that time of the month”

“You sound like my wife”

“Wow, you’re really good at this!”
Often committed unknowingly by well-intentioned people
  • Dismissed as innocent or innocuous

Microlevel manifestations of enduring institutional and systemic imbalances of privilege and power
While women comprise nearly 47% of the total U.S. labor force, they continue to occupy the lower rungs of the occupational ladder, to encounter the glass ceiling when promotions are considered, and to be paid much less than their male counterparts (U.S. Department of Labor, 2009).
## THREE TYPES OF MICROAGGRESSIONS

<table>
<thead>
<tr>
<th>Type</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microassault</td>
<td>An explicit racial derogation characterized primarily by a verbal or nonverbal attack meant to hurt the intended victim through name-calling, avoidant behavior, or purposeful discriminatory actions. The perpetrator is aware of his actions.</td>
</tr>
<tr>
<td>Microinvalidation</td>
<td>Characterized by communications that exclude, negate, or nullify the psychological thoughts, feelings, or experiential reality of a person of color.</td>
</tr>
<tr>
<td>Microinsult</td>
<td>Characterized by communications that convey rudeness and insensitivity and demean a person’s racial heritage or identity. Microinsults represent subtle snubs, frequently unknown to the perpetrator, but clearly convey a hidden insulting message to the recipient of color.</td>
</tr>
<tr>
<td>INCIDENT TYPES</td>
<td>DESCRIPTION</td>
</tr>
<tr>
<td>----------------</td>
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<tr>
<td>Verbal</td>
<td>A verbal slight, insult, or putdown directed towards socially devalued group members</td>
</tr>
<tr>
<td>Nonverbal/Behavioral</td>
<td>Avoiding eye contact or physical contact with a person</td>
</tr>
<tr>
<td>Environmental</td>
<td>Reside in the climate of an institution or even in the broader society; manifest at systemic levels (macro)</td>
</tr>
</tbody>
</table>
# TYPES OF RACIAL MICROAGGRESSIONS

<table>
<thead>
<tr>
<th>Form</th>
<th>Definition</th>
<th>Example(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microassault</td>
<td>❑ An explicit racial derogation characterized primarily by a verbal or nonverbal attack meant to hurt the intended victim through name-calling, avoidant behavior, or purposeful discriminatory actions</td>
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<tr>
<td></td>
<td>❑ Most likely conscious and deliberate, although generally expressed in limited “private” situations (micro) that allow the perpetrator some degree of anonymity</td>
<td>❚ Referring to someone as “colored” or “Oriental”</td>
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<tr>
<td></td>
<td></td>
<td>❚ Using racial epithets</td>
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<td></td>
<td></td>
<td>❚ Discouraging interracial interactions</td>
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## TYPES OF RACIAL MICROAGGRESSIONS

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| Microinsult  | Characterized by communications that convey rudeness and insensitivity and demean a person’s racial heritage or identity  | ➢ White employer tells a prospective candidate of color: “I believe the most qualified person should get the job, regardless of race”  
➢ Student of color is asked, “How did you get your job?”  
➢ A white instructor fails to call on students of color in the classroom (racial ignoring)  
➢ In groupwork, white students mainly talk to one another, avoiding direct eye contact with the student(s) of color in the group |
|              | Subtle snubs, frequently unknown to the perpetrator, but clearly convey a hidden insulting message to the recipient of color |                                                                                                                                             |
|              | Can also occur nonverbally                                                  |                                                                                                                                             |
## TYPES OF RACIAL MICROAGGRESSIONS

<table>
<thead>
<tr>
<th>Form</th>
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<th>Example(s)</th>
</tr>
</thead>
</table>
| Microinvalidation | ☐ Characterized by communications that exclude, negate, or nullify the psychological thoughts, feelings, or experiential reality of a person of color | ➢ When Asian Americans (born and raised in the U.S.) are complimented for speaking “good” English or are repeatedly asked where they are born  
➤ When Whites tell people of color, “I don’t see color” or “we are all human beings”       |
Microaggressions affect individuals and organizations.

**Organizations: Financial Implications**
- Microaggressions diminish and stigmatize people, contributing to a $450 billion to $550 billion per year loss in U.S. workforce productivity, according to Gallop.

**Individuals: Human Implications**
- Microaggressions produce cognitive, physiological, and emotional effects.
Jot down an experience that you have had with microaggressions – either as the victim or potentially as the perpetrator. How would you classify the experience(s) – assaults based on race, gender, sexuality, religion, body type, something else, a combination of factors?

- Note whether the experience was verbal, nonverbal, or environmental
- How did you feel as a result of the incident?
- How did you respond to the incident? What steps did you take?
- In what ways might you have been the perpetrator of microaggressions against students in your classroom? What can you do to combat this in the future?
A TALE OF TWO SCHOOLS.

ARE WE READY TO INCLUDE STUDENTS WITH MORE SEVERE DISABILITIES IN REGULAR CLASS?

AS SOON AS I FINISH READING THESE BOOKS ON INCLUSION AND DRAFT OUR LONG-RANGE PLAN... WE SHOULD BE READY IN 7 OR 8 YEARS.

I’M SURE GLAD WE GOT STARTED INCLUDING AND SUPPORTING ALL OUR STUDENTS IN REGULAR CLASSES.

ME TOO! I KNOW WE’LL LEARN THINGS ALONG THE WAY FROM OUR SUCCESSES AND MISTAKES.
Inclusive Teaching
- Inclusive teaching in higher education refers to the ways in which pedagogy, curricula and assessment are designed and delivered to engage students in learning that is meaningful, relevant and accessible to all.

- Inclusive teaching practices reject the deficit mindsets often associated with students.
  - “They’re lazy and don’t want to work hard”
  - “They don’t have the skills to make it here”
Geneva Gay (2010) defines culturally responsive teaching as using the cultural knowledge, prior experiences, and performance styles of diverse students to make learning more appropriate and effective for them; it teaches to and through the strengths of these students.

Culturally Responsive Teaching:
- Is Validating and Affirming
- Is Comprehensive
- Is Multidimensional
- Is Empowering
- Is Transformative
- Is Emancipatory
Gloria Ladson-Billings (1995)

Three Criteria for CRT

1. Students must experience **academic success**
2. Students must **develop and/or maintain cultural competence**
3. Students must **develop a broader sociopolitical consciousness**
CRITICAL MULTICULTURAL EDUCATION AND TEACHING

Christine Sleeter (2001)

- **Multicultural** - Teaching that actively affirms diversity based on race, ethnicity, language, gender, ability, social class, religion, etc.
- **Critical** - Teaching that examines and challenges injustice, helps people learn to read injustice in their own world, and helps them to become change agents for justice
- **Responsive** - Teaching that connects with and builds on strengths, identities, and ways of being that students bring into the classroom from their home communities
Sleeter (2001) posits that culture, difference, and power are the conceptual underpinnings for critical, multicultural teaching.

- **Culture**: Created in the context of everyday life within power relations
- **Difference**: Understood through socially created categories that are imposed on the rich array of human characteristics and histories
- **Power**: Power relations include global capitalism, racism, sexism, and ableism
Banks & Banks (2013)

- ME is a broad concept with several different and important dimensions

1. Content Integration
2. The Knowledge Construction Process
3. Prejudice Reduction
4. An Equity Pedagogy
5. An Empowering School Culture and Social Structure
DIMENSIONS OF MULTICULTURAL EDUCATION
BANKS & BANKS (2013)

Content Integration
The extent to which instructors use examples and content from a variety of cultures and groups to illustrate concepts and ideas.

Knowledge Construction
Helping students understand and determine how implicit cultural assumptions and biases influence the ways in which knowledge is constructed broadly and in a specific field/discipline.

Empowering School Culture
Re-envision and restructure educational institutions to promote equity in learning and cultivate respect for students’ backgrounds and cultural experiences.

Prejudice Reduction
Create learning environments that foster students’ rejection of negative racial attitudes and values.

Equity Pedagogy
Adopt, integrate, and develop a set of teaching skills and techniques that reflect consideration of the full range of cultural perspectives and practices (e.g., based on race, gender, social class, etc.) that influence student learning.
## INCLUSIVE TEACHING PRACTICES

<table>
<thead>
<tr>
<th>University of Wollongong (Australia)</th>
<th>Center for Teaching (Vanderbilt University)</th>
<th>University of Washington</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Know your students</td>
<td>• <strong>Recognize any biases or stereotypes you may have absorbed</strong></td>
<td>• Communicate Respect, Fairness, and High Expectations</td>
</tr>
<tr>
<td>• Scaffold student learning</td>
<td>• Treat each student as an individual, and respect each student for who s/he is</td>
<td>• Communicate expectations, consider students’ prior knowledge, orient students to ways of teaching in the course, use inclusive language</td>
</tr>
<tr>
<td>• Offer students flexibility, variety and choice</td>
<td>• Aim for an inclusive curriculum that reflects the perspectives and experiences of a pluralistic society</td>
<td>• Support Student Success</td>
</tr>
<tr>
<td>• Be available and approachable to guide student learning</td>
<td>• Do not assume that all students will recognize cultural, literary or historical references familiar to you</td>
<td>• Establish good working relationships in class, help students learn strategies for successful studying in the discipline</td>
</tr>
<tr>
<td>• Make expectations clear using accessible language</td>
<td>• Give assignments and exams that recognize students’ diverse backgrounds and special interests</td>
<td>• Foster Equitable Classroom Participation</td>
</tr>
<tr>
<td>• Be a reflective practitioner</td>
<td></td>
<td>• Plan for Diversity in Teaching</td>
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<tr>
<td></td>
<td></td>
<td>• Consider what and how you teach</td>
</tr>
</tbody>
</table>
## FROM AWARENESS TO ACTION

<table>
<thead>
<tr>
<th>Target Areas</th>
<th>Short-Term Goals (within 30-60 days)</th>
<th>How will I measure these?</th>
<th>Long-Term Goals (beyond 60 days)</th>
<th>How will I measure these?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Background and Identity</td>
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<tr>
<td>Content Integration</td>
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<tr>
<td>Empowering Classroom Culture</td>
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<tr>
<td><strong>Prejudice Reduction</strong></td>
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<tr>
<td>Knowledge Construction</td>
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BARRIERS TO CULTURAL INCLUSIVITY AND COMPETENCE

- What do you foresee are the issues that may impact your ability to implement culturally relevant and responsive instructional practices?

- Does the organizational culture support cultural inclusivity?
As you practice culturally responsive teaching, consider the following questions:

1. What cultural ground do I share with this student?
2. What cultural differences do I acknowledge, respect, and welcome?
3. What cultural differences do I fear, resist, dismiss, or minimize? How do I manage these differences during the advising session?
4. Do I behave or think differently with this student than I do with other students?
5. How comfortable am I, as a person of culture, with this student?
6. Do I view the student as expert of his/her own cultural experiences?
7. Do I attend to the use of language in the advising meeting to make sure terms have a shared understanding?
8. Do I inquire, in a culturally appropriate way, if what I am saying is useful to the student?
9. Do I check to see if I am reading nonverbal cues correctly?
10. Do I check to see if my cultural perceptions are accurate?
WHAT STUCK?

- An ‘Aha’ moment
- A pleasant surprise
- Something that you had to struggle with to understand
- Something that you don’t agree with
- Something that you agree with strongly
- Something you thought was particularly interesting
- Something you didn’t expect
- An insight or solution
- Something you want to know more about or a question that you have
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