

Context Diversity: A New Paradigm for Equity and Inclusion in Higher Education

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When you think of diversity, what definition comes to mind?

InTeGrate defines **diversity** broadly including ethnic and racial minorities, women, people with disabilities, veterans and active duty military personnel, people of low socioeconomic status, LGBTQ individuals, and other groups that are not represented in the geosciences in proportion to their abundance in society.

InTeGrate Program Definition (Geoscience Program)



When you think of diversity, what definition comes to mind?

“Diversity today generally refers to variety in race, ethnicity, color, national origin, ancestry, sex, creed, religion, age, genetic information, sexual orientation, gender identity or expression, disability, veteran status, marital status, medical condition, pregnancy, education, class, political affiliation, or parental status.”

Geological Society of America, Diversity Statement, 2016



Why is Diversity Important?

NRC Report: Expanding Underrepresented Minority Participation, 2011

- **Future STEM workforce sources are uncertain.**
 - URM populations represent a large potential workforce to fill growing need for STEM workers.
- **Shifting demographics of our domestic population**
 - Those groups that are most underrepresented in STEM are also the fastest growing in the general population.
- **Diversity is an asset**
 - Expands STEM talent pool, enhances innovation, and improves the nation's global economic leadership.



The National Academies Press, 2011, Expanding underrepresented minority participation: America science and technology talent at the crossroads: <http://nap.edu/12984>.

Why is Diversity Important?

Geological Society of America Statement, 2016:

- A diverse membership (or workforce) is more capable, insightful, responsive, and dynamic than one that offers very little variety.
- One key benefit of diversity is the opportunity posed by a rich cultural mixture, along with the idea that no single “right way” exists to do things. Openness to wide-ranging ideas and pathways to progress is the lifeline of science. Who can know the origin of an idea? What nuances of a person’s upbringing, cultural milieu, education, social interactions, and ethnicity can lead to an advancement of human knowledge?



<https://www.geosociety.org/gsa/positions/position15.aspx>

What is the goal of all of these statements?

Increase numbers of women and URM's in our institutions of higher education!



The Goal: Create a “level” playing field

NM The Unlevel Academic Playing Field

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The Goal: Create a “level” playing field



Targeted scholarship availability
Admissions – Affirmative Action



The Unlevel Academic Playing Field

The Goal: Create a “level” playing field



Targeted scholarship availability
Admissions – Affirmative Action
Academic preparation and remediation



The Unlevel Academic Playing Field

The Goal: Create a “level” playing field



Targeted scholarship availability
Admissions – Affirmative Action
Academic preparation and remediation
Ethnic studies -- multiculturalism



The Unlevel Academic Playing Field

Admissions Numbers Achieved!!!!



The University of New Mexico (a R1 Hispanic Serving Institution) – one might assume playing field is level!





We still have equity issues tipping the playing field

NM **The Unlevel Academic Playing Field**



What new rules are needed to make this field level???

NM **The Unlevel Academic Playing Field**

Most programs are one-sided

So, what is the source of the problem?

- Is it scholarships? Funding?
- Admissions policies?
- Insufficient programs in multiculturalism?
- Are students just not prepared sufficiently to succeed?

**These address symptoms of
the underlying source of the
problem of diversity!**



Most current models are assimilationist

- Implies an “Us-Them” framework.
- Once “They” are accepted into the university, assimilation into the disciplinary culture is expected.
- “We” work to teach “Them” how to think as scientists and engineers
 - Some of this training is needed, but at present it is exclusive!!!
- Additionally, most programs are “saddle-bag” programs not directly tied to daily campus activities.



The Issue of Diversity Today

“Our institution, like many others, has made great strides in increasing diversity. **But when diversity advances without inclusion, when we do not create environments where people feel like they fully belong and thrive**, tensions can follow. More important, we fail to realize the benefits of diversity”



Nitin Nohria, Dean of Harvard Business School
Washington Post, May 19, 2017

“Exclusion” is defined by Nohria as “racial exclusion”, but it is much more!



Let's dig into this unknown arrow...



The Unlevel Academic Playing Field

Leveling the Playing Field

Multicontext theory both explains and predicts the inclusion or exclusion of people within an institutional culture.

Context Diversity is achieved when the norms, values and practices of an organization are inclusive of Multicontexted ways of knowing and doing.

From: Ibarra, RA, 2001, *Beyond Affirmative Action: Reframing the Context of Higher Education*, University of Wisconsin Press, Madison, 323p.



Think about your Institutional Culture

For the following 10 descriptions, answer either A or B and keep track of how many A vs B responses fit your institution best.

Also, think about how you “fit” with that description.



How does your institution act?

A

In my organization, paying attention to the goal is important in getting the job done. Being nice to people is not as important as completing the job.

B

Work relationships and group work in my organization is important in getting the job done. Being nice to people is more important than completing the job.

1



How does your institution act?

A

People in my organization clearly spell things out, quickly get to the point, and may appear blunt.

B

People in my organization often talk around the main point, telling stories to make themselves understood.

2



How does your institution act?

A

Success in my organization means being recognized – I make sure everyone knows what I've accomplished.

B

Success means being low key; my organization values humility; I don't talk about my achievements – they speak for themselves.

3



How does your institution act?

A

Disagreements in my organization are not to be taken personally – they value the “tough-it-out” approach.

B

Disagreements in my organization are personal and must be worked out – they value the “talk-it-out” approach.

4



How does your institution act?

A

Privacy is important, we are concerned with not disturbing others' privacy when working in groups.

B

Privacy is less important; we are more interested in working with groups than in worrying about disturbing others' privacy.

5



How does your institution act?

A

We value speed and efficiency.

B

We value accuracy and completeness.

6



How does your institution act?

A

We prefer to work alone.

B

We prefer to work in
groups.

7



How does your institution act?

A

We take deadlines
seriously.

B

Deadlines are goals to be
achieved.

8



How does your institution act?

A

We learn best by following
directions.

B

We learn best if someone
demonstrates what I need
to learn.

9



How does your institution act?

A

Information is power and
not shared until the work is
complete.

B

Information is shared
freely. Ideas improve if
they openly shared.

10



Reflection:

- Did your institution fall on the left (A) or right (B) more often?
- Is the way you approach these items similar to your institution?
- What do you think it is like if your approach doesn't match your institution?

Neither side is right or wrong, just different!



Background: Multicontext Theory

In 1960's, Edward T. Hall identified national origin cultures exhibiting different learned preferences or Cultural Contexts.

These influence:

- How one **interacts** and **associates** with others
- Uses living **space**;
- Perceives **time**;
- Responds to various teaching and **learning styles**;
- Performs **academically** or **in the workplace**;
- Other cognitive factors imprinted in childhood.



Hall, ET, 1959, The Silent Language, Anchor Books
Hall, ET, 1966, The Hidden Dimension, Anchor Books.
Hall, ET, 1976, Beyond Culture, Anchor Books.

Hall's Binary System

Low Context (LC):

- Require little social and cultural context to communicate, interact, and interpret the world around them.
- Northern European (e.g., English, Swiss, and Scandinavian)

High Context (HC):

- Require more social and cultural context to communicate, interact, and interpret the world around them.
- Asians, Arabs, Middle-Eastern, Mediterranean-based countries, Africans, Latin Americans, Native American



Hall, ET, 1959, *The Silent Language*, Anchor Books
Hall, ET, 1966, *The Hidden Dimension*, Anchor Books.
Hall, ET, 1976, *Beyond Culture*, Anchor Books.

Background: Multicontext Theory

Higher education predominantly a Low Context culture:

- Derived from 19th century German research institute model

The resulting conflict between LC academic culture and HC cultural preferences causes dissonance among underrepresented groups!



Ibarra, RA, 2001, *Beyond Affirmative Action*, Univ of Wisconsin Press

Cultural Legacy

The social inheritance of attitudes and beliefs (and ways of knowing and doing) passed down through generations.

Malcolm Gladwell, *Outliers: The Story of Success* (2008)

We all carry a cultural legacy, and we've been taught our cultural contexts. How can we describe this, and apply this to understanding our students and co-workers (and a different form of diversity) better?



Context Diversity: A new dimension of diversity

- **Cultural context** is both conscious and unconscious behaviors or beliefs that sets why we do what we do and how we perceive the world around us.
- Different cultures will operate under different cultural contexts; individuals within cultures vary greatly and may operate Multicontextually.

Low context, Individuated ↔ **High Context, Integrated**

Tends to be:

- Private
- Compartmentalized and object focused
- Linear
- Scheduled, and
- Have a contextually independent conception of the world

Tends to be:

- Interconnected
- Systems and connections focused
- Cyclical and mosaic
- Less schedule sensitive, and
- Have a contextually dependent conception of the world.



- Hall, ET, 1976, *The Silent Language*
- Ibarra, RA, 2001, *Beyond Affirmative Action: Reframing the Context of Higher Education*, University of Wisconsin Press, Madison.
- Chávez, AF, and Longerbeam, SD, 2016, *Teaching Across Cultural Strengths: A guide to balancing integrated and individuated cultural frameworks in college teaching*, Stylus Press, Sterling VA.

Attributes of Context Diversity

Cultural Context and Context Diversity can be evaluated through 7 attributes:

- **Interaction** – one-on-one interaction
- **Association** – how you work with others and approach tasks
- **Time/temporality** – how do you handle time?
- **Space (territoriality)** – how do you handle space?
- **Information** – how is information shared and handled?
- **Learning** – what is the purpose of learning?
- **Academic Systems** – what does the system of learning look like in your culture?

These are described more completely in the “Context Diversity Matrix”, linked in the Resources section on the Webinar website



Interaction

Low Context, Individuated ←————→ High Context, Integrated

Low use of nonverbal signals.

- Words most important

Communication is direct

- May seem blunt

Messages are literal

- Communication to exchange information and ideas

High use of nonverbal signals.

- Body language and context

Communication is indirect

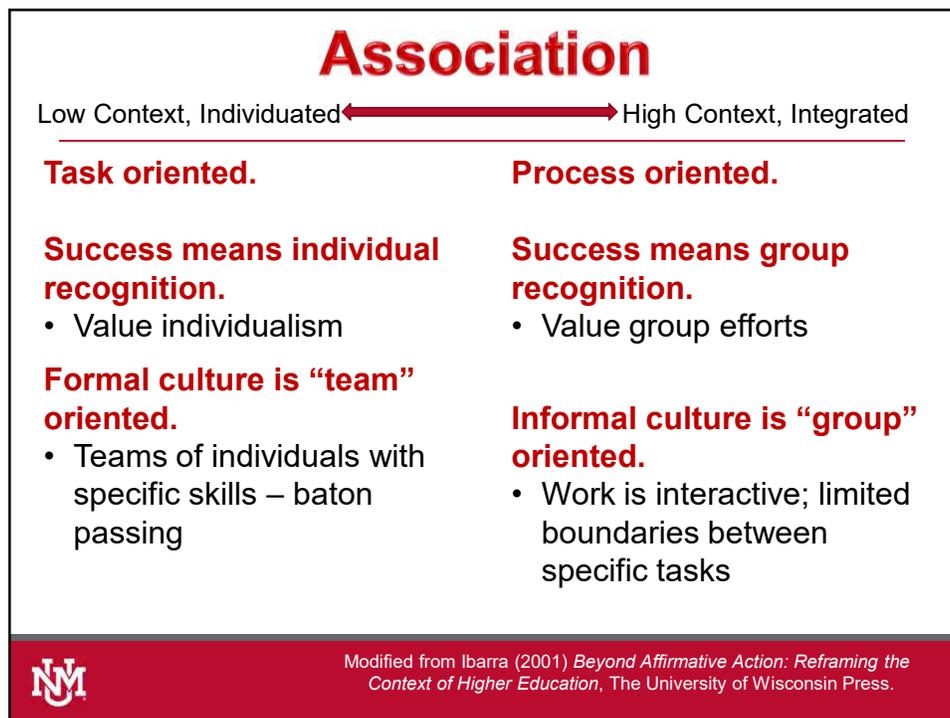
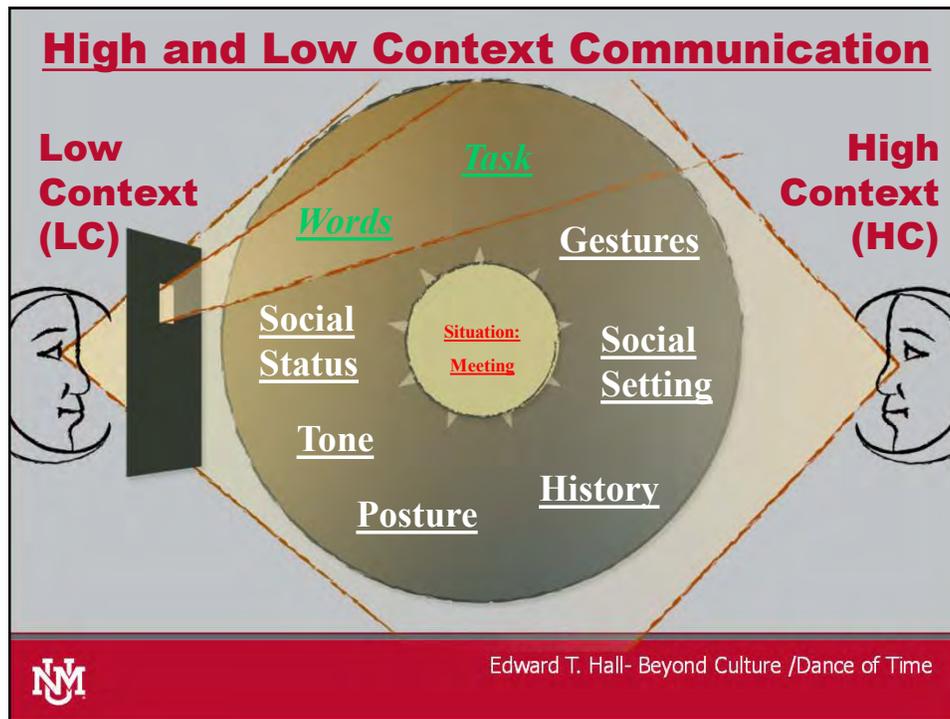
- May talk around points

Messages are an art form

- Communication to connect with others



Modified from Ibarra (2001) *Beyond Affirmative Action: Reframing the Context of Higher Education*, The University of Wisconsin Press.



Temporality (Time)

Low Context, Individuated ←————→ High Context, Integrated

Time is a commodity.

- Time spent, saved, wasted

Time is monochronic

- Scheduled and compartmentalized
- Promptness highly valued
- Value speed and efficiency
- Deadlines critically important

Time is a process.

- Time flows at its own pace

Time is polychronic

- Reluctant to schedule time; multi-task
- Promptness only important if important for relationships
- Value accuracy and completion
- Deadlines and schedules goals to be achieved if possible.



Modified from Ibarra (2001) *Beyond Affirmative Action: Reframing the Context of Higher Education*, The University of Wisconsin Press.

Territoriality (Space)

Low Context, Individuated ←————→ High Context, Integrated

Space has more boundaries.

- Larger social distance common, limited touching.
- Personal space compartmentalized, individualized, and private.

Privacy is important.

- Do not 'disturb' others and follow social rules of privacy

Space is more communal.

- Closer social distance, some non-intimate touching.
- Personal space shared, encourage involvement with others

Privacy is less important.

- Highly involved with closely-related others (family, friends, close associates)



Modified from Ibarra (2001) *Beyond Affirmative Action: Reframing the Context of Higher Education*, The University of Wisconsin Press.

Information

Low Context, Individuated ←————→ High Context, Integrated

<p>Information does not flow freely.</p> <ul style="list-style-type: none"> • Information is power. <p>Information focused and compartmentalized.</p> <p>Information can be separated from context.</p>	<p>Information spreads rapidly.</p> <ul style="list-style-type: none"> • Information belongs to all <p>Information more relational.</p> <p>Information without context is meaningless.</p>
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Modified from Ibarra (2001) *Beyond Affirmative Action: Reframing the Context of Higher Education*, The University of Wisconsin Press.

Learning

Low Context, Individuated ←————→ High Context, Integrated

<p>Knowledge gained through linear, logical reasoning.</p> <ul style="list-style-type: none"> • Rational step-by-step approach. • Reality is elemental, compartmentalized and fragmented <p>Learn best by following directions, theoretical abstract valued.</p> <p>Learning is individual oriented.</p>	<p>Knowledge is obtained through non-linear approaches.</p> <ul style="list-style-type: none"> • Facts perceived as complete units • Things are interconnected, synthesized and global <p>Learn best by demonstration, practical application valued.</p> <p>Learning is group oriented.</p>
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Modified from Ibarra (2001) *Beyond Affirmative Action: Reframing the Context of Higher Education*, The University of Wisconsin Press.

Academic Systems

Low Context, Individuated ←————→ High Context, Integrated

Value examining ideas rather than application.

- Linear thinking is specific and about attributes of broad events

Linear analysis that classifies the world into useable, intelligible patterns.

Topics are compartmentalized and fragmented (disciplinary)

Value application of knowledge in real-world events.

- Strive for broad comprehension of multilayered events.

Systems analysis – doesn't compartmentalize or rely on classification.

Topics are integrated and fully connected (non-disciplinary)



Modified from Ibarra (2001) *Beyond Affirmative Action: Reframing the Context of Higher Education*, The University of Wisconsin Press.

What does this mean for higher education?

1. We need to **ACTIVATE** Context Diversity in all activities of the Institution – systemic change.
 - We use the term “**Activate**” because this is already present
 - Diversity initiatives cannot remain as “saddle-bag” programs.
2. Context Diversity can be realized throughout the academic system
 - [Institution-level directions](#)
 - [Department-level initiatives](#)
 - [Classroom activities](#)



Institution-Level Directions

Guiding principles for Implementing Change:

- Understand the cultural context of what and why people do what they do – awareness is first critical step!
- Academic systems organized according to expressed institution meanings and values.
- Expand Multicontextual experiences of teaching, learning, researching, and administration.
- Consider what is wrong with the system first, not what is wrong with people in the system.
- Build opportunities to put academic theories into practice in comprehensive way, avoid compartmentalized thinking.



Department-Level Initiatives

Guiding principles for Implementing Change:

- Tenure review – Include or prioritize high-context values such as community or professional service
 - Community-based research valued.
- Curriculum content – Expand to include high-context learning modes.
- Hiring – Value high-context research interests and applied research opportunities (e.g., systems and multidisciplinary approaches).
 - Value interview talks that are 'story-telling'

NOTICE: No additional funding is needed for this!!! Just training costs.



Department Example:

U of Wisconsin Psychology – Graduate Curriculum

- **1995 decision – Refocus graduate training mission:**
 - Deliver mental health to increasingly diverse population
- **Developed systemic plan:**
 1. Curriculum change – not enough to add diversity dimension to existing classes.
 2. Department climate – inclusion
 3. Selection of faculty and students
- **Curriculum Review:**
 - How can diversity issues be integrated into all courses, not just an isolated class on multicultural counseling.



Department Example:

U of Wisconsin Psychology – Graduate Curriculum

- **Activated new student research focus directions:**
 - Consider the influence of Western teaching values on results.
 - Surprising to some students (never viewed research this way); validating to others (meshed with their personal perspective).
 - Interaction, Association, Temporality, Academic Systems activated
- **Faculty members had to share details of courses:**
 - Increased faculty interactions
 - Interaction, Association, Information activated
- **Admissions:**
 - All had to demonstrate eagerness to serve and study diverse populations.
 - Not context issue, but increased inclusion and diversity
- **Emphasize and promote department uniqueness.**



Department Example: Results

U of Wisconsin Psychology – Graduate Curriculum

- **US News and World Report ranking:**
 - 1997: Ranked 5 nationally
 - By 1998, ranked 3rd, remained highly ranked thereafter.
- **Department grew in time when other high-ranked programs shrank.**
- **Diversity:**
 - By 1997,
 - 24% of students URM;
 - 5% disabilities; age diversity;
 - Two of nine faculty were African American; 2 were Latino
 - By 2000, 42% of students were URM.
- **2005 Suinn Minority Achievement Award from American Psychological Association.**



Classroom Examples

- **Mix high- and low-context activities:**
 - High-context materials emphasize systems thinking – relationships and connections.
 - Low-context materials emphasize isolated components of a system and attributes of these components.



Classroom Examples

- Mix application first followed by theory with theory followed by application.



Where do most lecture classes fall?

Low context, Individuated

- Tends to be:
- Private
 - Compartmentalized and object focused
 - Linear
 - Scheduled, and
 - Have a contextually independent conception of the world

High Context, Integrated

- Tends to be:
- Interconnected
 - Systems and connections focused
 - Cyclical and mosaic
 - Less schedule sensitive, and
 - Have a contextually dependent conception of the world.



Classroom Examples

- **Activity types:**
 - **Jigsaw activity** – tends toward low-context approach (experts created with baton passing)
 - **Systems diagramming** – tends toward high-context approaches
 - **Multiple choice exams are very low context.** Try to use other evaluation approaches.
 - **Place-based approaches** tap into high-context learning.

Just because your classroom is active doesn't mean it is Multicontextual!!!



Where does scientific writing fall?

Low context, Individuated

Tends to be:

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- Compartmentalized and object focused
- Linear
- Scheduled, and
- Have a contextually independent conception of the world

High Context, Integrated

Tends to be:

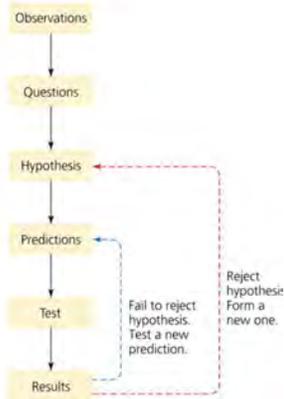
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How we teach Science!

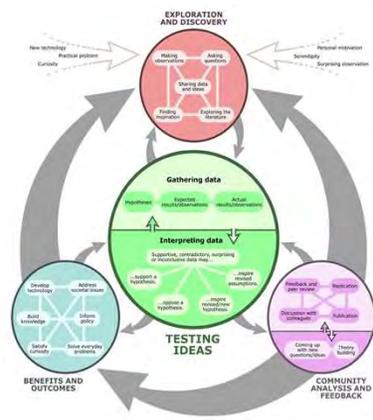
Linear. Low Context Approach

Scientific method



From Withgott and Laposata, 2019

Non-Linear, High Context Approach



Understanding Science, University of Berkeley
Museum of Paleontology



What are the Benefits of Diversity in Geosciences

Common themes: Social Justice or Global Competitiveness






What are the Benefits of (Context) Diversity in Geosciences

- Advancing science!!!!
- **EARTH SYSTEM SCIENCE:**
High and multi-contexted people do this naturally!!

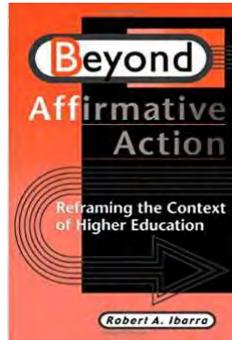


What are the Benefits of Context Diversity

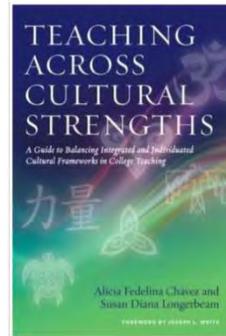
- **Diverse approaches needed for complex scientific questions!**
- Low context:
 - Detailed understandings of components of systems.
- High context:
 - Broad understandings of connections between components
- Multicontext training
 - Allows students (and future researchers) to operate between these effectively.
 - **Inclusive** approach to teaching and academia to help all *thrive!*



For more information on this:



Ibarra, 2001,
University of
Wisconsin
Press



Chávez and
Longerbeam,
2016, Stylus
Press



Questions??



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Thank you!

Acknowledgements:

- InTeGrate for the opportunity to present this material.
- Michael Howland-Davis and Machienvée Lammey for their contributions to this work.
- This material is based upon work supported by the National Science Foundation under Grant No. 1619524. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.



What's missing? Pedro's Story

"I had difficulty with one assistant professor in my area about cultural things. We've had some communication breakdowns ... It is hard for me to try to explain this because he was saying some very rude things like "...you ought to consider dropping out of the program. You need to write in active voice." ... I said, "I know I need to write in active voice, but ... I think in passive voice ..." I tried to explain something like "the bullet fell" rather than "I dropped the bomb..." and he wasn't interested in that. I remember once telling him ... "Maybe my communication hasn't been too direct." I explained about how Mexicans tend to talk around the subject using indirect communication.

.... There's saving face involved in all this, and he says ... "I prefer to be very direct; that way there's no backstabbing"..."



From Ibarra 1996, p. 45-46; Ibarra 2001, p. 47-48

Pedro's Story – Student View

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Pedro's Story – Student View

"[He is] a very competitive type of guy ... I was thinking he probably didn't have too many Mexican Americans or women work for them, because there's a certain amount of relationship building. He's very cold at times. I just haven't been real happy with him. Crazy as it is, I have a comp [exam] about a week from tomorrow, and he is writing the questions.... I know that he had problems with [international] students.... With language abilities and I think ... I brought it up to my department chair and he said, "This is not a cultural problem. What you're talking about is a personality problem." ... And I said ... "I'd like for them to treat me the way I'd like to be treated, because I know that the people that he's worked with are very competitive ... there isn't that emotional tie between people ..." I said, "I'd like some nurturing and this is the way I work," and so on... "Well, [Pedro] you're not going to get that here. It just doesn't work ..." That's what my department chair told me ... I find insensitivity, just the lack of bringing sensitive people in. You see people that are just not sensitive to Mexicans"



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Maria's Story – Faculty View

“...like one of the things in academia that is really important that, I think sometimes we don't say is you know to become, especially in the science, if he was in anything else it's different. I mean because in other fields you could, you could match your passion or your ... civic engagement with your research. **In STEM, no those are two separate things. You know you can be doing outreach and collaborative research and otherwise it's not really science.** Or is, is like the watered down science. Right? People will make all this kind of excuses of why that cannot be science or research. And not only that, you still like to do the more pure science, the more scientific questions that are not really related to the community or to outreach. But you also are passionate about reaching out. So you cannot really match it into, and the **only way you could do it is by doing outreach activities, that are not going to count.** They are not going to be valued by your colleagues and by your ... administrators.”



Maria's Story – Faculty View

Describing discussions with students about the academic career:

“...I feel bad telling them **it's going to be really hard because you're going to have to leave your lab coat at the door before you walk into the lab.** Before you walk into academia. I mean that's one of the things that is in SACNAS, so remember SACNAS and they say you know a place where you don't have to leave your lab coat on the door when you walk in. Or we accept you by who you are and we understand what you bring. And **in academia unfortunately I don't think they understand what you bring or they don't sometimes it's a conflict.** It's at odds”



Maria's Story – Faculty View

“We don't need to talk about this equality or diversity issues because science is science, there's no such issues of diversity within science. That's what scientists will tell you right?”

“No seriously. So when I got out there and talk about both, sometimes people look at me like **I'm not a real scientist right because I'm talking about mentoring**. I'm talking about producing scientists. Not so much for producing science because producing science I think they get told all the time. But producing scientists is different. And sometimes I think people get a little more, even I got invited to give talks and I remember one time I got invited and they said, “Well we just want you to either, or just talk about your research or just talk about mentoring but don't mix the two.” I said, “I want to mix the two.” And they say, “Why?” “Well, because that's who I am, you're asking me to give a talk.”

