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?


• 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.

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?

What is the goal of all of these statements?

Increase numbers of women and URMs in our institutions of higher education!
The Goal: Create a “level” playing field

The Unlevel Academic Playing Field

Targeted scholarship availability

The Unlevel Academic Playing Field
The Goal: Create a “level” playing field

Targeted scholarship availability
Admissions – Affirmative Action

The Unlevel Academic 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!
The Unlevel Academic Playing Field

We still have equity issues tipping the playing field

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

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!
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.


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?

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>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.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>People in my organization clearly spell things out, quickly get to the point, and may appear blunt.</td>
<td>People in my organization often talk around the main point, telling stories to make themselves understood.</td>
</tr>
</tbody>
</table>

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### How does your institution act?

<table>
<thead>
<tr>
<th><strong>A</strong></th>
<th><strong>B</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Success in my organization means being recognized – I make sure everyone knows what I’ve accomplished.</td>
<td>Success means being low key; my organization values humility; I don’t talk about my achievements – they speak for themselves.</td>
</tr>
</tbody>
</table>

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### How does your institution act?

<table>
<thead>
<tr>
<th><strong>A</strong></th>
<th><strong>B</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagreements in my organization are not to be taken personally – they value the “tough-it-out” approach.</td>
<td>Disagreements in my organization are personal and must be worked out – they value the “talk-it-out” approach.</td>
</tr>
</tbody>
</table>
### How does your institution act?

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privacy is important, we are concerned with not disturbing others’ privacy when working in groups.</td>
<td>Privacy is less important; we are more interested in working with groups than in worrying about disturbing others’ privacy.</td>
</tr>
</tbody>
</table>

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### How does your institution act?

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>We value speed and efficiency.</td>
<td>We value accuracy and completeness.</td>
</tr>
</tbody>
</table>
### How does your institution act?

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>We prefer to work alone.</td>
<td>We prefer to work in groups.</td>
</tr>
</tbody>
</table>

### How does your institution act?

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>We take deadlines seriously.</td>
<td>Deadlines are goals to be achieved.</td>
</tr>
</tbody>
</table>
### How does your institution act?

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>We learn best by following directions.</td>
<td>We learn best if someone demonstrates what I need to learn.</td>
</tr>
</tbody>
</table>

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

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

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

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
- 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.

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**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

InTeGrate Webinar: Context Diversity

**High and Low Context Communication**

![Diagram showing High and Low Context Communication](image)

**Task**
- **Words**
- **Gestures**
- **Social Status**
- **Tone**
- **Posture**
- **History**

**Situation**
- **Meeting**

**Low Context (LC)**

**High Context (HC)**

Edward T. Hall - Beyond Culture / Dance of Time

**Low Context, Individuated**

**Task oriented.**
- **Success means individual recognition.**
  - Value individualism
- **Formal culture is “team” oriented.**
  - Teams of individuals with specific skills – baton passing

**High Context, Integrated**

**Process oriented.**
- **Success means group recognition.**
  - Value group efforts
- **Informal culture is “group” oriented.**
  - Work is interactive; limited boundaries between specific tasks

### Temporality (Time)

<table>
<thead>
<tr>
<th>Low Context, Individuated</th>
<th>High Context, Integrated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time is a commodity.</strong></td>
<td><strong>Time is a process.</strong></td>
</tr>
<tr>
<td>Time spent, saved, wasted</td>
<td>Time flows at its own pace</td>
</tr>
<tr>
<td><strong>Time is monochronic</strong></td>
<td><strong>Time is polychronic</strong></td>
</tr>
<tr>
<td>Scheduled and compartmentalized</td>
<td>Reluctant to schedule time; multi-task</td>
</tr>
<tr>
<td>Promptness highly valued</td>
<td>Promptness only important if important for relationships</td>
</tr>
<tr>
<td>Value speed and efficiency</td>
<td>Value accuracy and completion</td>
</tr>
<tr>
<td>Deadlines critically important</td>
<td>Deadlines and schedules goals to be achieved if possible</td>
</tr>
</tbody>
</table>


### Territoriality (Space)

<table>
<thead>
<tr>
<th>Low Context, Individuated</th>
<th>High Context, Integrated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Space has more boundaries.</strong></td>
<td><strong>Space is more communal.</strong></td>
</tr>
<tr>
<td>Larger social distance common, limited touching.</td>
<td>Closer social distance, some non-intimate touching.</td>
</tr>
<tr>
<td>Personal space compartmentalized, individualized, and private.</td>
<td>Personal space shared, encourage involvement with others</td>
</tr>
<tr>
<td><strong>Privacy is important.</strong></td>
<td><strong>Privacy is less important.</strong></td>
</tr>
<tr>
<td>Do not ‘disturb’ others and follow social rules of privacy</td>
<td>Highly involved with closely-related others (family, friends, close associates)</td>
</tr>
</tbody>
</table>

**Information**

Low Context, Individuated  
High Context, Integrated

- Information does not flow freely.  
  - Information is power.

- Information focused and compartmentalized.

- Information can be separated from context.

- Information spreads rapidly.  
  - Information belongs to all

- Information more relational.

- Information without context is meaningless.


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**Learning**

Low Context, Individuated  
High Context, Integrated

- Knowledge gained through linear, logical reasoning.  
  - Reality is elemental, compartmentalized and fragmented

- Learn best by following directions, theoretical abstract valued.

- Learning is individual oriented.

- Knowledge is obtained through non-linear approaches.  
  - Facts perceived as complete units
  - Things are interconnected, synthesized and global

- Learn best by demonstration, practical application valued.

- Learning is group oriented.

Academic Systems

Low Context, Individuated → High Context, Integrated

**Value examining ideas rather than application.**
- Linear thinking is specific and about attributes of broad events

**Value application of knowledge in real-world events.**
- Strive for broad comprehension of multilayered events

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

**Systems analysis – doesn’t compartmentalize or rely on classification.**

**Topics are compartmentalized and fragmented (disciplinary)**

**Topics are integrated and fully connected (non-disciplinary)**


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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.
InTeGrate Webinar: Context Diversity

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.

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Where do most lecture classes fall?
Classroom Examples

- **Activity types:**
  - Jigsaw activity – tends toward low-context approach (experts created with baton passing)
  - Systems diagraming – 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!!!**

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Where does scientific writing fall?

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Diverse Ways of Approaching STEM

Is one way right? Wrong?

From Whitten 1996

Low context

High context
How we teach Science!

Linear, Low Context Approach

Non-Linear, High Context Approach

From Withgott and Laposata, 2019

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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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”…”


Pedro’s Story – Student View

“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”…”

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.”