Creating Inclusivity to Improve Retention for Minoritized Students in SESE
Alexa Drew 1st year Geoscience PhD Student
Diversity has increased, inclusion has not

Overall college completion rates based on Race and Gender

Sources: Martinez-Acosta et al. (2018), Killpack (2016), Booker (2020), and Ong (2020)
### Diversity has increased, inclusion has not

**“Diversity”**

#### Overall college completion rates based on Race & Gender

<table>
<thead>
<tr>
<th>Race</th>
<th>Not Enrolled (%)</th>
<th>Still Enrolled (%)</th>
<th>Completed at Different Institution (%)</th>
<th>Completed at Starting Institution (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>20.3</td>
<td>19.8</td>
<td>11.6</td>
<td>48.3</td>
</tr>
<tr>
<td>Black Men</td>
<td>49.9</td>
<td>49.9</td>
<td>16.6</td>
<td>32.8</td>
</tr>
<tr>
<td>Hispanic</td>
<td>38.7</td>
<td>19.6</td>
<td>10.0</td>
<td>52.8</td>
</tr>
<tr>
<td>White</td>
<td>29.7</td>
<td>12.1</td>
<td>12.9</td>
<td>45.3</td>
</tr>
<tr>
<td>Asian</td>
<td>16.2</td>
<td>13.3</td>
<td>10.8</td>
<td>55.6</td>
</tr>
<tr>
<td>Black Women</td>
<td>38.6</td>
<td>19.3</td>
<td>11.3</td>
<td>38.2</td>
</tr>
<tr>
<td>Hispanic</td>
<td>31.3</td>
<td>16.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>23.6</td>
<td></td>
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<td></td>
</tr>
</tbody>
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*Sources: Martinez-Acosta et al. (2018), Killpack (2016), Booker (2020), and Ong (2020)*
We need to move from here to there

“Diversity”
Having a seat at the table; having representation

Inclusion
Being a part of the dialogue; feeling of belonging
Disconnected definitions and other barriers prevent inclusion

Mental Barriers
75% of people have unconscious biases

Academic Barriers
77% of academic leadership are white

STEM Barriers
Only 44% of STEM students graduate

Implicit biases, in-group favoritism, conflict of interest
Classes too large, no timely feedback, can’t connect
STEM must be objective, no room for emotions

Inclusion is the same as diversity
Inclusion is belonging, safety, and equitable access

Dominant Groups
Minoritized Groups

Diverse-city

Diversity is important
How do I talk about this?
This makes me uncomfortable
This doesn’t affect me.
I represent my entire group
My needs are second to white people’s feelings
I don’t feel safe
A real lack of diversity
No resources for me
Microaggressions
I’m treated as a token

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**Dominant Groups**
- Diversity is important
- How do I talk about this?
- This makes me uncomfortable
- This doesn’t affect me

**Minoritized Groups**
- I represent my entire group
- My needs are second to white people’s feelings
- I don’t feel safe
- A real lack of diversity
- No resources for me
- I’m treated as a token

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- Inclusion is the same as diversity

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**Diverse-city**

**SPEED LIMIT 55**

**SPEED LIMIT 35**

**TOLL**
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“Diversity is important”
“How do I talk about this?”
“This makes me uncomfortable”
“This doesn’t affect me.”

“I represent my entire group”
“My needs are second to white people’s feelings”
“I don’t feel safe”
“A real lack of diversity”
“I feel like I don’t belong”
“No resources for me”
“Microaggressions”

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Inclusion is the same as diversity
Inclusivity is achievable through changes to the system.
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Restructure courses
Inclusivity is achievable through changes to the system.

- Restructure courses
- Reduce class sizes
Restructure courses
Reduce class sizes
Timely feedback

Inclusivity is achievable through changes to the system
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- Restructure courses
- Reduce class sizes
- Create summer programs
- Timely feedback
Inclusivity is achievable through changes to the system

Restructure courses

Create summer programs

Invest in research opportunities

Reduce class sizes

Timely feedback
Inclusivity is achievable through changes to the system

- Restructure courses
- Reduce class sizes
- Invest in research opportunities
- Create summer programs
- Timely feedback
- Choose definitions

Inclusion means...
Inclusivity is achievable through changes to the system

- Restructure courses
- Reduce class sizes
- Invest in research opportunities
- Create summer programs
- Timely feedback
- Invest in research opportunities
- Choose definitions
- Provide training

Inclusion means…
Inclusivity is achievable through changes to the system

- Restructure courses
- Create summer programs
- Invest in research opportunities
- Reduce class sizes
- Timely feedback
- Choose definitions
- Provide training
- Set aside funds
- Create summer programs
- Restructure courses
- Invest in research opportunities
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Inclusivity is achievable through changes to the system

- Restructure courses
- Reduce class sizes
- Invest in research opportunities
- Create summer programs
- Timely feedback
- Choose definitions
- Provide training
- Partner with MSP
- Set aside funds
- Create summer programs
- Invest in research opportunities
- Restructure courses
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Inclusivity is achievable through changes to the system

- Restructure courses
- Create summer programs
- Invest in research opportunities
- Reduces class sizes
- Timely feedback
- Choose definitions
- Provide training
- Hire diverse staff & faculty
- Partner with MSP
- Set aside funds

Inclusion means…
<table>
<thead>
<tr>
<th>Survey Categories</th>
<th>Access</th>
<th>Skills</th>
<th>Learning</th>
<th>Compensation</th>
<th>Opportunities</th>
<th>Balance</th>
<th>Recognition</th>
<th>Respect</th>
<th>Interactions</th>
</tr>
</thead>
</table>

### Self-Efficacy Scale
**How confident are you in your STEM skills?**

- 20%
- 40%
- 60%
- 80%
- 100%

### Science Identity Scale
**How much do you feel you belong in STEM?**

- 1
- 2
- 3
- 4
- 5

---

**Benefits of Measuring Inclusivity:**

- Increased happiness
- Increased confidence
- Better teamwork
- More publications
- Higher GPA's
- 2x likely to graduate with BS
- 5x likely to pursue higher ed
- 4.0 GPA
- 3.0 GPA
- 2.0 GPA

---

**Inclusivity City**

- Population: Everyone

- Distance to Inclusivity City: 30 mi

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**Image:**

- Cars driving on a road
- Cityscape with buildings and a bridge
Measuring inclusivity can aid in achieving its benefits

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How much do you feel you belong in STEM?

1. 😞 2. 😞 3. 😞 4. 😊 5. 😊

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