Engaging Two-year Geoscience College Faculty to Promote Diversity, Equity, and Inclusion: The SAGE 2YC Project

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National network of 16 teams of 2YC geoscience faculty working to

- Support success of all students
- Broaden participation in geoscience
- Facilitate students’ career pathways in geoscience

Two-year colleges (2YCs) enroll ~40% of undergraduates in the U.S.
2YCs have diverse student populations - 47% students of color, 23% first-generation

AACC Fast Facts, 2018
The framework for how Change Agents learn and share strategies with colleagues employs adult learning theory (Knowles, 1984) and diffusion of innovation theory (Rogers, 2010).
Project support for Change Agents includes:
• National workshops and on-going virtual activities
• SAGE 2YC website and *SAGE Musings*
• Sponsorship by campus administrator
• Leadership development
• Repeated opportunities for reflection & peer exchange
Build capacity for Change Agents to:

- Implement equitable and inclusive practices in their teaching
- Promote use of these practices in their programs/departments
- Share information and practices with their regional communities
- *Use data and research findings to identify inequities and opportunities for growth*
Multiple opportunities for learning about teaching practices that support diversity, equity, and inclusion

Sessions at annual national workshops

_External presenters_

• Successful Models, Best Practices, Benefits, and Outcomes for Broadening Participation: Ashanti Johnson
• Broaden Participation in the Geosciences: Change Mindsets & Close the Achievement Gap: Saundra McGuire
• Addressing Implicit Bias: Exploring Strategies for Promoting Student Success: Don Gillian-Daniel

_SAGE 2YC-led sessions designed for re-use_

• Building students' science identity
• Diversity in action: Broadening participation through strategies for inclusion
• Supporting students' sense of belonging
Multiple opportunities for learning about teaching practices that support diversity, equity, and inclusion

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- Diversity in action: Broadening participation through strategies for inclusion
- Supporting students' sense of belonging

**Virtual activities**

- Book discussion on *Whistling Vivaldi: How Stereotypes Affect Us and What We Can Do* by Claude Steele
- Developing your students’ science identity
- Fostering a sense of belonging
Multiple opportunities for learning about teaching practices that support diversity, equity, and inclusion

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SAGE 2YC website and SAGE Musings
Multiple opportunities for learning about teaching practices that support diversity, equity, and inclusion

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<td>• Implementation of practices in their courses and programs that focus on diversity, equity, and inclusion</td>
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<td>• Supporting students' sense of belonging</td>
<td>• Regional workshops led by Change Agent teams</td>
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Involvement of campus administrators

Team action planning: Teaching, program, region

Develop plans
Give & consider feedback
Report on progress and repeat

Involvement of campus administrators
Course level outcomes measures
Identify opportunities for growth and evaluate progress
Data from Institutional Research

Course level outcomes measures
Identify opportunities for growth and evaluate progress

What is **participation** in geoscience courses, program vs college by demographics?
What is success (C or higher) in different geoscience courses by student subgroups?

What is participation in geoscience courses, program vs college by demographics?
Course level outcomes measures

Identify opportunities for growth and evaluate progress

What is **progression** in the geosciences by student subgroups (majors, transfers)?

What is **success** (C or higher) in different geoscience courses by student subgroups?

What is **participation** in geoscience courses, program vs college by demographics?
An example: Participation (enrollment) for one quarter

Highline College vs. Geoscience Course Demographics

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<tr>
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<th>Geoscience</th>
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<tr>
<td>Students</td>
<td>10,765</td>
<td>213</td>
</tr>
<tr>
<td>Asian</td>
<td>20%</td>
<td>17%</td>
</tr>
<tr>
<td>African American</td>
<td>17%</td>
<td>11%</td>
</tr>
<tr>
<td>Native American</td>
<td>&lt;1%</td>
<td>2%</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>17%</td>
<td>15%</td>
</tr>
<tr>
<td>White</td>
<td>25%</td>
<td>40%</td>
</tr>
<tr>
<td>International</td>
<td>&lt;1%</td>
<td>6%</td>
</tr>
<tr>
<td>Other/Mixed</td>
<td>20%</td>
<td>7%</td>
</tr>
<tr>
<td>Women</td>
<td>59%</td>
<td>59%</td>
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Self-reported use of practices that support equity and inclusion
Summary results from the Departmental Practices Inventory

Awareness or Written Efforts

Program Efforts

Coordinate w/ other groups

- Exemplar
- Accomplished
- Developing
- Beginning
- Absent
Self-reported use of practices that support equity and inclusion
Summary results from the Departmental Practices Inventory

Exemplar
Accomplished
Developing
Beginning
Absent

Awareness or Written Efforts
Program Efforts
Coordinate w/ other groups

- Advertise the geosciences on campus
- Awareness of implicit bias and stereotype
- Cultural backgrounds of students
- Written statement affirms
- Uses geo courses to promote programs
- Identifies culturally relevant pedagogy and invites
- Incorporate culturally diverse examples
- Student organization in geo
- Talk about and show examples of diverse
- Geoscience social events open to family
- Geoscience events for students designed to earn
- Builds alliances with local K-12
- Participates in career fairs
- Coordinate efforts with existing campus
Self-reported use of practices that support equity and inclusion
Summary results from the Departmental Practices Inventory

Awareness or Written Efforts

Program Efforts

Coordinate w/ other groups

Exemplar
Accomplished
Developing
Beginning
Absent
Regional workshops & events

SAGE 2YC-led workshops
• 2016, 2017, 2018

Change Agent-led workshops
• 2016/2017 – 10 workshops
• 2017/2018 – 10 workshops
• 2018/2019 – 16 workshops

SAGE 2YC resources used in regional workshops

In two academic years, 10 CA teams led 20 workshops
• 328 participants
• 98 institutions
• 27% adjunct faculty
Change Agents lead regional workshops and events

Texas Change Agent Team
Bryn Benford and Kristie Bradford
Lone Star College

Spring 2018 Book discussion (virtual) using Zoom
Whistling Vivaldi: How Stereotypes Affect Us and What We Can Do?
Regional Workshop Fall 2018 – 15 attendees including 6 adjuncts

*Unseen Barriers in our Geology Classes and Helping our Students Prepare for Transfer*

- Implicit Bias & How It Impacts Your Students' Success
- The Achievement Gap in Our Classes
- Strategies for building classroom environments that support your students' sense of belonging

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Spring 2018 Book discussion (virtual) using Zoom
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Adapted from SAGE 2YC June 2018 workshop session led by Kristin O’Connell & Carol Ormand, SERC
SAGE 2YC, through its Change Agent approach, is catalyzing equity-minded and inclusive teaching practices in geoscience courses and programs.

Thanks to the faculty Change Agents and their administrators.

https://serc.carleton.edu/sage2yc/index.html