Inclusion, Diversity and Innovation

American Chemical Society Central Region Meeting
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Inclusion, Diversity and Innovation

Panelists

Professor Cathy Mader
Inclusive Graduate Education Network (IGEN) & Hope College, Physics

Professor Anne McNeil
University of Michigan, Chemistry & Macromolecular Science & Engineering @DiversifyChem

Dr. James Walker
Senior Chemist, Dow

Dr. Alveda Williams
Director of Inclusion, Dow

Moderator

Dr. Cory Valente
Sr. R&D Manager, Dow and LGBTQ+ Advocate
Innovation is Driven by Diverse Leadership Teams

Companies with below-average diversity scores

26%
average innovation revenue reported by companies

Companies with above-average diversity scores

45%
average innovation revenue reported by companies

Source: BCG diversity and innovation survey, 2017 (n=1,681).
Note: Average diversity score calculated using the Blau index, a statistical means of combining individual indices into an overall aggregate index.

A Compelling Business Case

**ROS**
Companies with three or more WBD in four of five years outperformed companies with zero WBD by 84%.

Zero WBD | 3 or more WBD
---|---
7.6% | 14.0%

**ROIC**
Companies with three or more WBD in four of five years outperformed companies with zero WBD by 60%.

Zero WBD | 3 or more WBD
---|---
6.5% | 10.4%

**ROE**
Companies with three or more WBD in four of five years outperformed companies with zero WBD by 46%.

Zero WBD | 3 or more WBD
---|---
10.5% | 15.3%
Gender Wage Gap Globally

Women Earn 77% of What Men Earn


Women in S&P 500 Companies

- CEOS: 5.6%
- Top Earners: 9.5%
- Board Seats: 19.9%
- First/Mid-Level Managers: 36.4%
- Total Employees: 44.3%

Closing The Participation Gap

**Vision**
To achieve equity for underrepresented groups in doctoral degree attainment in the physical sciences
APS Bridge Program

APS Bridge Students

- ~170 to date
- 23% Women
- 90% UREM
  - 64% Hispanic
  - 24% African American
  - 5% Native American
- 87% Retention
- First graduates this year!

All traditionally excluded
IGEN Goals

• **Increase the fraction** of students from underrepresented groups who complete doctoral degrees in the physical sciences to match the levels of undergraduate degrees awarded.

• **Catalyze the adoption of evidence-based inclusive practices**, especially in graduate education, that reduce inequities in doctoral completion for underrepresented groups and benefit all students.

• **Conduct research and propagate results** that distill scalable, effective practices in inclusive graduate education and institutional change within mathematical and physical sciences.

• **Establish sustained partnerships** between and among critical stakeholders that support the advancement of underrepresented students from undergraduate through professional employment.
In addition to primary partners:

- 39 Physics Departments
- 6 Chemistry Departments
- 16 National Laboratories
- 4 Private Sector Corporations
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Google | CORNING | Lawrence Livermore National Laboratory
Argonne | Stanford | ExxonMobil

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Engaged Employees Achieve Greater Results

GALLUP

233% greater customer loyalty
Outperform peers by 147% earnings per share
Drive 200% higher revenue growth
Achieve 80% higher customer satisfaction

Costs US Economy

$450 To $550 Billion Annually

Gallup, Inc (2013) State of the American Workplace
Majority Opinion is Changing

32% More Likely to Focus on RESPECTING IDENTITIES

35% More Likely to Focus on UNIQUE EXPERIENCES

29% More Likely to Focus on IDEAS, OPINIONS, & THOUGHTS

21% More Likely to Focus on REPRESENTATION

19% More Likely to Focus on RELIGION & DEMOGRAPHICS

25% More Likely to Focus on EQUALITY

The Changing Landscape

<table>
<thead>
<tr>
<th>Baby Boomers</th>
<th>Gen X</th>
<th>Gen Y (Millennial)</th>
<th>Gen Z (Centennial)</th>
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By 2025, Millennials will comprise 75% of the Global Workforce.

Number of foreign-born people age 18-34 in US

1980: 1
2013: 2.5X

Millennials Are Now the Largest Living Generation in the United States