Diversity & Inclusion in Engineering:
It’s Everyone’s Job

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Examine the data to illustrate the importance of engaging in diversity conversations in the workplace.

Origins of SWE’s diversity and inclusion programs.

Introduction to unconscious bias and how it affects our decisions.

Introduce ways to engage in conversations about diversity and inclusion issues in a non-confrontational manner.

Diversity: the art of thinking independently together

*Malcolm Forbes*
Reviewing the Research
Degrees Awarded to Women by Field of Education (%)

2010

- Engineering, manufacturing and construction
- Health and welfare

Source: OECD Gender Initiative, 2012
Women as a Percentage of Tertiary Graduates by Country

2008

Share of Women in Higher Education and Research (not discipline-specific), 2013 (%)

Source: UNESCO Institute for Statistics estimates based on data from its database, July 2015
Female Researchers in Engineering & Technology
Selected Countries, 2013 (or closest year data available)

Source: UNESCO Institute for Statistics, August 2015
Earnings for Women vs. Men Full-Time Employees
2001 and 2011*

Source: OECD Gender Initiative, 2012
* Or nearest year
Leadership: Share of Women on Boards

2009

[Bar chart showing the percentage of women on boards in various countries, with Norway having the highest share.

Source: OECD Gender Initiative, 2012]
Leadership: Share of Women in Parliament

1995 and 2011

Source: OECD Gender Initiative, 2012
Origins of SWE’s Diversity and Inclusion Programs
The Society of Women Engineers

Brand Promise

• World’s largest advocate for all women in engineering and technology.

• Champions the value of diversity by being a catalyst for change.

• Will be there for women as they seek to be their authentic selves through all stages of their career and lives.

• Inspires women to achieve their full potential as engineers and leaders.
Diversity Principles

SWE

At SWE, we acknowledge and respect the value of a diverse community.

• Scope of diversity includes race/ethnicity, religion, family status, age, physical abilities, sexual and affectional orientation, actual or perceived gender, gender identity and expression, socio-economic status and occupational focus.

• Our society will maintain an environment that is supportive of these elements, and we will promote inclusion within our organization and the engineering community.
Introduction to Unconscious Bias

SWE’s Goals

Diversity Goal
We want our diversity to reflect the diversity of the communities where we work.

Inclusion Goal
We want people to feel that they belong and are valued, that they bring value and are encouraged to thrive.

- Diversity +  - Inclusion +

Isolation  Target

Unsuccessful Culture  Risk of Groupthink
Talking About Unconscious Bias
What is Unconscious Bias?

What does it mean to you?

Bias is the process by which the brain uses: "mental associations that are so well-established as to operate without awareness, or without intention, or without control."

“Implicit biases come from the culture. I think of them as the thumbprint of the culture on our minds.” (Mahzarin Banaji, Harvard University, Project Implicit – an online test for unconscious bias)

Everyone has unconscious biases, this does not make us bad people.
Introduction to Unconscious Bias

Example

Read What You See

Ca y u rea th s?
You a e not r adi g th s.
W at ar ou rea in ?
Unconscious Bias

Study

• Yale Study: Sept 24, 2012 – 127 Biology, Chemistry, and Physics Science professors at 6 prestigious research institutions rank “Jennifer” vs “John” when given the exact same resume to review for a lab manager position.

• “Jennifer” is systematically ranked
  • less competent
  • less hirable
  • and worth less investment in mentoring
  -trend holds for both male and female professors.

• John’s average offer = $30,328 (USD)
• Jennifer’s average offer = $26,508 (USD) 12.5% less on entry level job
Question for Consideration

In what way does our unconscious bias potentially perpetuate sameness in career development, promotion, and recruitment?
Discussing a Diverse Culture is in the Cards
Many organizations are often afraid to talk about race, gender, ethnicity or sexual orientation because they do not have the skills needed to successfully communicate or start a conversation in a multicultural environment.

INCLUSION SOLUTIONS
Discussing a Diverse Culture is in the Cards

Many organizations are often afraid to talk about race, gender, ethnicity or sexual orientation because they do not have the skills needed to successfully communicate or start a conversation in a multicultural environment.

Inclusion Solutions are training cards designed to create awareness and provide an easy introduction to many fundamental Diversity & Inclusion topics. Each topic is supported by research and thought-provoking questions that can be used as conversation starters for one-on-one coaching, self-reflection activities, as part of formal professional development sessions, or even as a fun way to start your team meetings.

These cards make a potentially difficult topic more approachable and help individuals create open dialogue around diversity within our organization.

SWE is helping you to have these conversations with the Inclusion Solutions cards!
Inclusion Solutions Cards Overview

The cards are divided into the four topics: (1) best practices, (2) demographics, (3) experience, and (4) evidence.

The cards make a potentially difficult topic more approachable and help individuals create open dialogue around diversity.
Inclusion Solutions

How to Use the Cards

• Each topic includes review questions, rich insights and examples are provided to include data that helps support the learning.

• The information + data + questions = a starting place for having a dialogue about diversity and inclusion.
Let’s Try the Cards Out
Small Group Activities
It is important to create a safe environment for discussion to occur. Without a safe environment in which one can talk freely and openly, dialogue can quickly become one-sided or even closed.

Try to open a session with these few questions about the group’s understanding on various topics/definitions below.

• How do you feel when you hear the terms diversity and inclusion?
• How do you define diversity?
• How do you define inclusion?
• How are the two terms similar and different for you?
• Describe the term biases.
Now it is Your Turn

In small groups (3 – 8 people) each person reads one card.

1. Select a scribe for the group to record highlights of the discussion.
2. Each person takes a card to reflect on the content.
3. Review the card one by one, allowing reflection time to gather a perspective.
4. Share with your group what the content says and how you reacted to it.
5. Ask learners to relate it to the current workplace and what a future state might look like.
6. Discuss how the topic may create innovative thoughts, new direction for products and services or ways to address challenges in the workplace.
Group Discussion

1. Sifting through the cards, which one(s) caught your eye, why?

2. Can you think of areas or functions in your role where the cards would be of benefit, how?

3. What additional D&I tools and resources would be helpful to you?
Additional Diversity and Inclusion Resources

www.swe.org

ARUP and SWE D&I – Knowledge Card Deck

D&I Knowledge Card Activities

SWE Advance App – iTunes

eLearning Modules Complement Cards -
Questions