



The many facets of diversity

Diverse practices for diverse students

Ken Yasuhara
yasuhara@cs.washington.edu
Computer Science & Engineering
University of Washington, Seattle



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Disclaimers

- research interest in gender gap, esp. at intro undergraduate level
- teaching experience
 - intro (200+) to majors (30)
 - K-12 outreach

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Special treatment cuts both ways

- pros
 - makes up for unequal opportunities
 - builds community among minorities
- cons
 - furthers negative stereotypes
 - enables "imposter syndrome"
 - turns off some potential beneficiaries
 - faces backlash

...and is sometimes illegal (CA, WA)

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Targeted changes in practice

- Design changes for specific underrepresented groups.
- Implement changes without explicit focus on those groups.

How do you do that?

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Gender and ethnicity

- Know the statistical differences.
 - opportunity
 - self-confidence
 - motivation, interest
 - learning styles
- See the individuals, appreciate exceptions.

On to some examples...

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Teaching to a diverse audience

- learning styles (Felder, Kolb...)
- active learning
- frequent, formative assessment (e.g., CATs)
- collaborative learning (e.g., pair programming [McDowell et al.]
- compelling applications, creativity [GA Tech]

all ways to move beyond "sage on the stage"

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Our many roles as teachers

- roles with impact on diversity
 - We mentor. [Cohoon *et al.*]
 - We advise.
 - We encourage.
 - We befriend.
 - We serve as role models.

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Battling low self-confidence

- Your students don't think they're smart enough to major in CS.
 - Reach out to individuals.
 - Talk about who would enjoy CS.
 - Fail openly and often.
 - "Steppingstone" or "chain" mentoring
- Your students think everyone else is doing better in the course.
 - Use group work and facilitate properly.
 - Use frequent summative assessment.

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Working on CS's image problem

- Your students think you have no life.
 - Make your hobby/family/etc. life visible.
- Your students think you work alone all the time.
 - Highlight teamwork, collaborations, collegiality.
- Your students think your work is irrelevant.
 - Talk excitedly (but comprehensibly) about your research, putting it in context.
 - Highlight interdisciplinary collaborations.

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CS diversity must-reads

- *Unlocking the Clubhouse* (CMU)
Margolis & Fisher, see also: Blum *et al.*
- Irani (Stanford)
- Cohoon *et al.*
- Barker, Garvin-Doxas, *et al.*
on defensive climate
- Giguette, Lopez, *et al.*

- *Talking About Leaving*
Seymour & Hewitt
- Goodman Group, *WECE*

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