A RECAP

The evidence suggests:

1. Our profession lacks diversity in key dimensions

2. Broadening the pool from which we draw economists is necessary to ensure the profession produces robust and relevant knowledge

3. Promising directions for future initiatives include
   - supporting supply-side programs
   - addressing implicit bias
   - revising rules and habits
   - creating more inclusive economics departments
“MORE INCLUSIVE ECONOMICS DEPARTMENTS”

Broaden the array of students coming in the door by broadening students’ understanding of economics

+ Level the playing field by creating an environment that allows all individuals to thrive

(focusing on students today)

Examples from STEM:
COMPUTER SCIENCE AT HARVEY MUDD COLLEGE

Components:
• Renamed and revised intro course (fun, relevant, not intimidating)
• Significant exposure to counterstereotypes
• Early research opportunity

Outcomes:
• The number of women computer science graduates quadrupled in six years.

GRINNELL SCIENCE PROJECT

Components:
• Curricular reform
• Community building
• Student-faculty research
• Pre-orientation

Outcomes:
• In early 1990s, 42 women science majors per year and 8 students of color. By 2008, science majors included 90 women and 21 students of color.
• Other students have also benefited from the mentoring and the curricular and pedagogical changes.
• Nearly 70% of the College’s science majors enter graduate programs. Grinnell ranks eighth on a per-capita basis in producing science PhDs.
PRINCETON DIVERSITY PROGRAMS IN MOLECULAR BIOLOGY AND QUANTITATIVE & COMPUTATIONAL BIOLOGY (DOCTORAL)

Components:
• A more holistic approach to evaluation of candidates
• Aggressive recruitment
• Undergraduate summer research program
• Pre-orientation

Outcomes:
• The percentage of underrepresented minority students in each entering class increased from 3% in the period from 2003-07 before the program started to 22% in 2008-12.

BROADENING THE ARRAY OF STUDENTS

Increase department outreach to underrepresented groups.
• Correct students’ misunderstanding of what economics is
• Be proactive to offer encouragement and academic advising
• Offer alternate pathways into the major
  - offer own Math for Economists course
• Offer research and other opportunities
  - to “diamonds in the rough”
• Build community
  - with, say, pizza or study groups
LEVELING THE PLAYING FIELD

The environment in the typical economics classroom supports certain students better than others.

Careful research suggests concrete steps we can take to make our teaching more effective and inclusive.

WHAT ARE OUR PROFESSION’S HABITS IN THE CLASSROOM?

- We love to lecture. (Watts & Schaur The Journal of Economic Education 2011)
- References to “gender, race, and ethnic issues” are rare. (Ibid.)
- Most economists are either not aware of alternative teaching methods or think preparation is too time consuming. (Goffe & Kauper The Journal of Economic Education 2014)
- There is solid evidence that other methods are more effective than lecturing.
DIVERSIFYING ECONOMIC QUALITY (DIVE.Q.)

Dive.Q. is an online resource promoting inclusive, innovative, and evidence-based teaching practices in economics.

DiversifyingEcon.org

DiversifyingEcon.org MSU
1. Introduce your students to Bloom’s Taxonomy.

![Bloom's Taxonomy Diagram]

2. Construct your courses “backwards.”

<table>
<thead>
<tr>
<th>Standard course planning</th>
<th>versus</th>
<th>Backward design</th>
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</thead>
<tbody>
<tr>
<td>Choose textbook</td>
<td></td>
<td>Formulate broad learning goals</td>
</tr>
<tr>
<td>Create syllabus</td>
<td></td>
<td>Set specific learning objectives</td>
</tr>
<tr>
<td>Write/revise lectures, notes, prepare PowerPoint presentations</td>
<td></td>
<td>Design assignments (formative and summative)</td>
</tr>
<tr>
<td>Write homework, exam questions</td>
<td></td>
<td>Prepare learning activities</td>
</tr>
</tbody>
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Instructor-centered | Student-centered

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e.g., Understanding by Design (Wiggins and McTighe, 1998/2005)

Figure from Wood, 2009. Ann Rev Cell Dev Bio
**Designing your course**

- **Uncover** the material.
- Start by identifying desired results. What two (or so) broad learning goals do you have for the students in your course?
- Use these goals to choose course material and activities.
BROAD GOALS FOR THE SUMMER PROGRAM

What do we want students to take away from the experience?

1. Competencies in economics—ability to succeed in advanced economics courses and research
2. Confidence—in their own potential to learn and do advanced economics
3. Knowledge—of the power and potential of economics and the rigor of PhD programs
4. Resources—fortitude/grit, study habits, ability to work in groups, relationships/networks

Bayer, March 2016

Essential competencies in economics
(from Allgood and Bayer 2016)

1. Apply the scientific process to economic phenomena
2. Analyze and evaluate behavior and outcomes using economic concepts and models
3. Use quantitative approaches in economics
4. Think critically about economic methods and their application
5. Communicate economic ideas in diverse collaborations

Bayer, March 2016
3. Employ active learning techniques.

In-class inquiry and problem-solving activities allow students to engage in higher order thinking and to construct understanding.

Active learning produces strong increases in student performance, with disproportionate benefits for students from disadvantaged backgrounds and for female students in male-dominated fields. (Freeman et al. Proceedings of the National Academy of Sciences 2014, Lorenzo, Crouch & Mazur American Journal of Physics 2006)

- Think – Pair – Share [3 minutes each]
- One-minute papers
- Peer instruction

4. Foster a growth mindset.

✓ Intelligence is not a fixed trait.
✓ Intelligence expands through effort, mistakes, and perseverance.
✓ Math ability and economic intuition can be acquired.

Encouraging students to see intelligence as malleable raises academic enjoyment, engagement, and performance. (Aronson, Fried & Good 2002)

Teachers with growth mindsets allow a broader range of students to do well. (Rheinberg, 2000, Dweck, 2008)
5. Understand and limit implicit biases.

<table>
<thead>
<tr>
<th>Implicitly biased</th>
<th>Implicitly unbiased</th>
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</thead>
<tbody>
<tr>
<td>Explicitly biased</td>
<td>A few</td>
</tr>
<tr>
<td>Explicitly unbiased</td>
<td>Most of us</td>
</tr>
<tr>
<td></td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>A few</td>
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</tbody>
</table>

Decades of careful research indicate that race, gender, and other perceived group affiliations operate as heuristics, with powerful, unconscious effects on our judgments and actions. (e.g., Greenwald & Banaji 1995)

We all have biases that operate without our awareness or intent.

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Instructors of MOOCs are more likely to respond to forum posts by ostensibly white male students. (Dee, John, Baker, and Evans 2015)

Faculty are more likely to ignore requests for meetings from women and from Black, Hispanic, Indian, Chinese students. (Milkman, Akinola, and Chugh 2014)

Males enrolled in undergraduate biology classes consistently rank their male classmates as more knowledgeable about course content, even over better-performing female students. (Grunspan et al. 2016)

Students rate “male” instructors of online classes significantly higher than “female” instructors regardless of the instructor’s actual gender. (Moss-Racusin, Crockett, and Hunt 2014)

Gender and/or race disparities exist in training opportunities, in requests to provide department and university service, and in letters of recommendation. (Sheltzer and Smith 2014, Turner and Myers 2000, Trix and Prenka 2003)

Male and female faculty members rate male applicants for a lab manager position as significantly more hirable than identical female applicants and offer higher starting salaries and more mentoring to male applicants. (Moss-Racusin et al. 2012)

When evaluating a CV randomly assigned a male or a female name, both male and female academic psychologists are more likely to hire the male applicant for a tenure-track job and have more positive evaluations of the male applicant’s teaching, research, and service records. (Staiger, Anders, and Pribble 1999)

Female economists are twice as likely to be denied tenure as their male colleagues, even when controlling for quantity and quality of publication, field, etc. Economics boasts the largest gender gaps in tenure rates, salaries, and job satisfaction among math-intensive fields. (Ceci, Ginther, Kahn, and Williams 2014)

An additional coauthored paper for a male economist has the same effect on the likelihood of tenure as a solo-authored paper. When women write with male co-authors, the paper has no impact on the female author’s probability of earning tenure. (Simsors 2015)
Crowd out micro-inequities with micro-affirmations

(see: Rowe 2008) e.g.,

- Open doors to opportunity (offer research assistantships, proactive course selection advice,...)
- Start a conversation
- Write brief notes of encouragement and appreciation
6. Understand and reduce stereotype threat.

“Performance in academic contexts can be harmed by the awareness that one’s behavior might be viewed through the lens of racial stereotypes.” (Steele and Aronson 1995)

- Represent difficulties as both normal and temporary (e.g., have students write to future program participants communicating a growth mindset) (Walton and Cohen 2011)

- Offer “wise feedback” (i.e., give fair and specific feedback, delivered with an invocation of high standards and an assurance of the student’s capacity to reach those standards) (Cohen, Steele, and Ross 1999, Yeager et al. 2014)

- Provide opportunities for “values affirmation” (i.e., have students reflect on the things most important to them, such as family and life goals) (Mlyake et al 2010, Walton and Cohen 2011)

- Reduce time pressure in exams.

7. Improve classroom climate.

- Set a tone of inquiry and collaboration, and promote inclusive communication.

- Add wait time after asking a question.
  - Do not call on the first hand to go up.
  - Counter assumptions that the students most comfortable in speaking to you are those who have the best understanding or most interest.
  - Sometimes give the question in advance and then call on quieter students.

- Build collaboration with pair work and study groups.
8. Offer meaningful content.

- Provide opportunities for students to use economics to examine issues important to them.
  - Present course tools in the context of real problems.
  - Ask students to connect a new concept, such as opportunity cost or marginal benefit, to a setting meaningful to them.
  - Use some class time to present brief summaries of a wide range of empirical studies in economics.

- Be sensitive.
  - Create space, but don’t assume certain topics are, say, women’s issues.
  - Realize that some students have more direct knowledge of certain economic phenomena (e.g., unemployment, poverty) than we do.

In sum, we can diversify economic quality through

- increasing outreach
- understanding and combatting implicit bias
- updating our pedagogy and course content

Help all students connect to the material, to you, and to each other.