CREATING A MORE INCLUSIVE CLASSROOM ENVIRONMENT

OPEN WORKSHOP

MICHIGAN STATE UNIVERSITY

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The typical classroom environment supports and inspires certain students better than others.

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

Making Classes More Effective and Inclusive—A Shortlist of Strategies

1. Introduce your students to BLOOM'S TAXONOMY.
2. Construct your courses using BACKWARD DESIGN.
3. Employ ACTIVE LEARNING techniques.
4. Foster a GROWTH MINDSET.
5. Modify and limit the effects of IMPLICIT BIASES.
6. Understand STEREOTYPE THREAT and reduce it with VALUES AFFIRMATION and WISE FEEDBACK.

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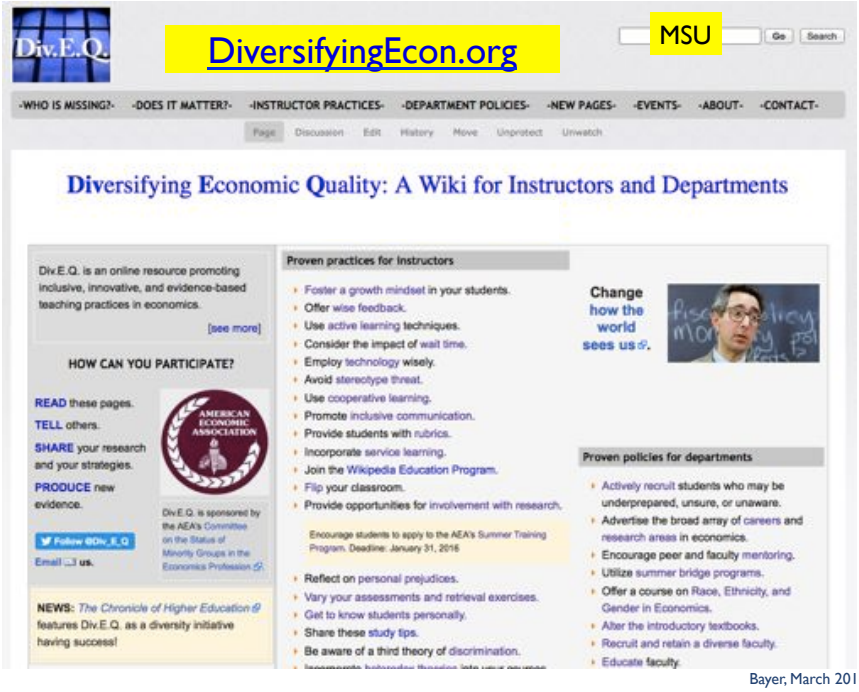

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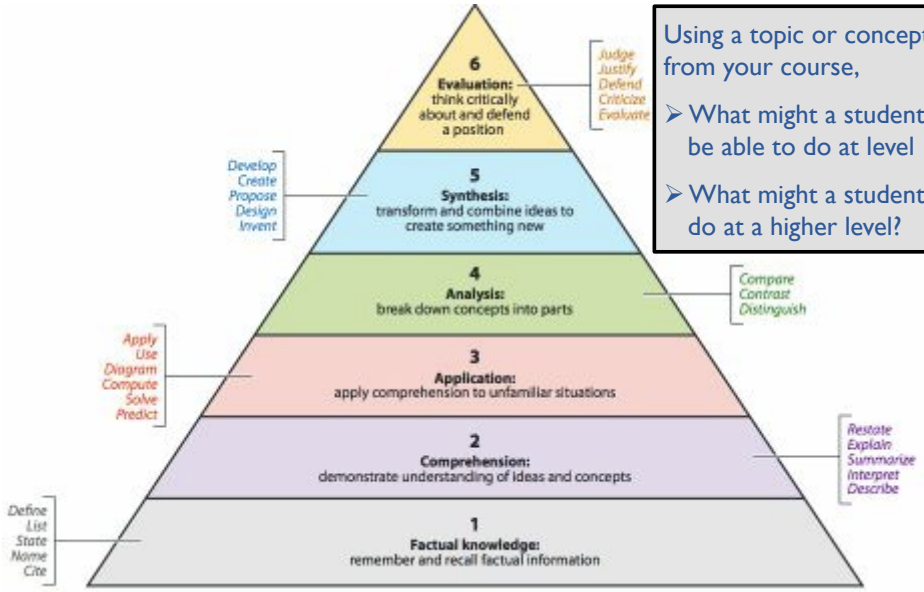
1. Introduce your students to BLOOM'S TAXONOMY.



Using a topic or concept from your course,

- What might a student be able to do at level 1?
- What might a student do at a higher level?

Figure from Wood, 2009. Ann Rev Cell Dev Bio

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2. Construct your courses using BACKWARD DESIGN.

Standard course planning	versus	Backward design
Choose textbook ↓ **Create syllabus** ↓ **Write/revise lectures, notes, prepare PowerPoint presentations** ↓ **Write homework, exam questions**		**Formulate broad learning goals** ↓ **Set specific learning objectives** ↓ **Design assignments (formative and summative)** ↓ **Prepare learning activities**
Instructor-centered		**Student-centered**

e.g., Understanding by Design (Wiggins and McTighe, 1998/2005)
Figure from Wood, 2009. Ann Rev Cell Dev Bio

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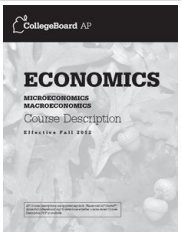
EXISTING AP MICROECONOMICS COURSE



Content Area — *Percentage Goals of Exam (multiple-choice section)*

I. Basic Economic Concepts ..... (8–14%)
- A. Scarcity, choice, and opportunity cost
- B. Production possibilities curve
- C. Comparative advantage, absolute advantage, specialization, and trade
- D. Economic systems
- E. Property rights and the role of incentives
- F. Marginal analysis

II. The Nature and Functions of Product Markets ..... (55–70%)
- A. Supply and demand (15–20%)
  1. Market equilibrium
  2. Determinants of supply and demand
  3. Price and quantity controls
  4. Elasticity
     a. Price, income, and cross-price elasticities of demand
     b. Price elasticity of supply
  5. Consumer surplus, producer surplus, and allocative efficiency
  6. Tax incidence and deadweight loss
- B. Theory of consumer choice (5–10%)
  1. Total utility and marginal utility
  2. Utility maximization: equalizing marginal utility per dollar
  3. Individual and market demand curves
  4. Income and substitution effects
- C. Production and costs (10–15%)
  1. Production functions: short and long run
  2. Marginal product and diminishing returns
  3. Short-run costs
  4. Long-run costs and economies of scale
  5. Cost minimizing input combination and productive efficiency
- D. Firm behavior and market structure (25–35%)
  1. Profit
     a. Accounting versus economic profits
     b. Normal profit
     c. Profit maximization: MR=MC rule
  2. Perfect competition
     a. Profit maximization
     b. Short-run supply and shutdown decision
     c. Behavior of firms and markets in the short run and in the long run
     d. Efficiency and perfect competition
  3. Monopoly
     a. Sources of market power
     b. Profit maximization
     c. Inefficiency of monopoly
     d. Price discrimination
     e. Natural monopoly
  4. Oligopoly
     a. Interdependence, collusion, and cartels
     b. Game theory and strategic behavior
     c. Dominant strategy
     d. Nash equilibrium
  5. Monopolistic competition
     a. Product differentiation and role of advertising
     b. Profit maximization
     c. Short-run and long-run equilibrium
     d. Excess capacity and inefficiency

III. Factor Markets ..... (10–18%)
- A. Derived factor demand
- B. Marginal revenue product
- C. Hiring decisions in the markets for labor and capital
- D. Market distribution of income

IV. Market Failure and the Role of Government ..... (12–18%)
- A. Externalities
  1. Marginal social benefit and marginal social cost
  2. Positive externalities
  3. Negative externalities
  4. Remedies
- B. Public goods
  1. Public versus private goods
  2. Provision of public goods
- C. Public policy to promote competition
  1. Antitrust policy
  2. Regulation
- D. Income distribution
  1. Equity
  2. Sources and measures of income inequality

Designing your course

* Uncover the material.

* Define and communicate your course objectives, and design your course around them.

Start by identifying desired results. What broad learning goals do you have for the students in your course?

- Write down one or two ideas or competencies you want students to take away from your course. [3 min.]
- Discuss your goals with the person sitting next to you, and refine your response. [3 min.]
- Share your responses with the group. [3 min.]

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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

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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

➢ Write down a prompt you could use for a Think-Pair-Share activity in your class.

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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 developed.

Encouraging students to see intelligence as malleable raises academic enjoyment, engagement, and performance. (Aronson, Fried & Good *Journal of Experimental Social Psychology* 2002)

Teachers with growth mindsets allow a broader range of students to do well. (Rheinberg, 2000, Dweck, 2008)

➢ Write down something you can do to foster a growth mindset in your students.

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5. Understand and address IMPLICIT BIASES.

	Implicitly biased	Implicitly unbiased
Explicitly biased	A few	NA
Explicitly unbiased	Most of us	A few

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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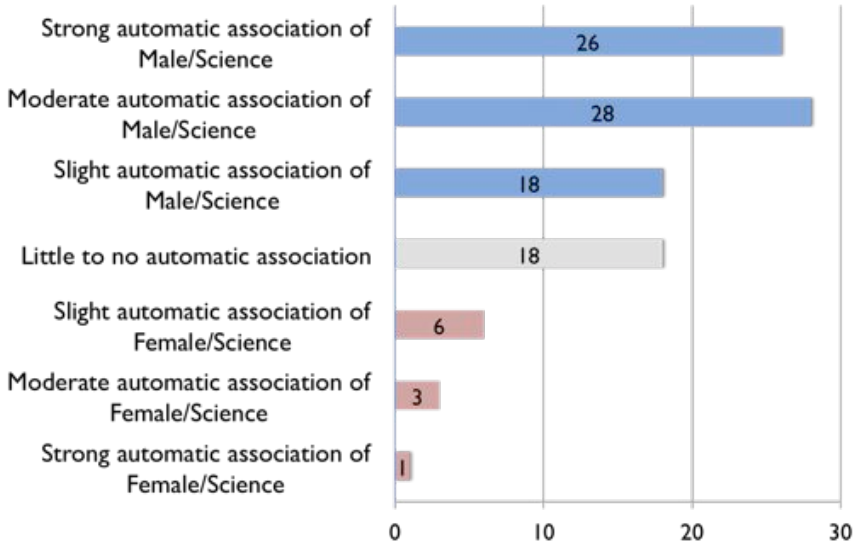
GENDER-SCIENCE IMPLICIT ASSOCIATION



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IMPLICIT ASSOCIATION TESTS

Arab-Muslim IAT	***Arab-Muslim* ('Arab Muslim - Other People' IAT).** This IAT requires the ability to distinguish names that are likely to belong to Arab-Muslims versus people of other nationalities or religions.
Gender-Career IAT	***Gender - Career.*** This IAT often reveals between career and males.
Presidents IAT	***Presidents* ('Presidential Popularity'** of Barack Obama and one or more
Gender-Science IAT	***Gender - Science.*** This IAT often reveals a relative link between liberal arts and females and between science and males.
Skin-tone IAT	***Skin-tone* ('Light Skin - Dark Skin' IAT).** This IAT requires the ability to recognize light and dark-skinned faces. It often reveals an automatic preference for light-skin relative to dark-skin.
Asian IAT	***Asian American* ('Asian - European American' IAT).** This IAT requires the ability to recognize White and Asian-American faces, and images of places that are either American or Foreign in origin.
Age IAT	***Age* ('Young - Old' IAT).** This IAT requires the ability to distinguish old from young faces. This test often indicates that Americans have automatic preference for young over old.
Race IAT	***Race* ('Black - White' IAT).** This IAT requires the ability to distinguish faces of European and African origin. It indicates that most Americans have an automatic preference for white over black.
Weight IAT	***Weight* ('Fat - Thin' IAT).** This IAT requires the ability to distinguish faces of people who are obese and people who are thin. It often reveals an automatic preference for thin people relative to fat people.
Religion IAT	***Religion* ('Religions' IAT).** This IAT requires some familiarity with religious terms from various world religions.
Sexuality IAT	***Sexuality* ('Gay - Straight' IAT).** This IAT requires the ability to distinguish words and symbols representing gay and straight people. It often reveals an automatic preference for straight relative to gay people.
Weapons IAT	***Weapons* ('Weapons - Harmless Objects' IAT).** This IAT requires the ability to recognize White and Black faces, and images of weapons or harmless objects.

implicit.harvard.edu

Greenwald et al. 1998

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IMPLICIT BIAS

- How might implicit bias affect our classes?
- What might we do to reduce the effects of implicit bias in our classes?

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Subject: Prospective Doctoral Student (On Campus *Today/Next Monday*)

Dear Professor,

I am writing you because I am a prospective doctoral student with considerable interest in your research. My plan is to apply to doctoral programs this coming fall, and I am eager to learn as much as I can about research opportunities in the meantime.

I will be on campus [*today/next Monday*], and although I know it is short notice, I was wondering if you might have 10 minutes when you would be willing to meet with me to briefly talk about your work and any possible opportunities for me to get involved in your research. Any time that would be convenient for you would be fine with me, as meeting with you is my first priority during this campus visit.

Thank you in advance for your consideration.

Sincerely,
[*Student's Name*]

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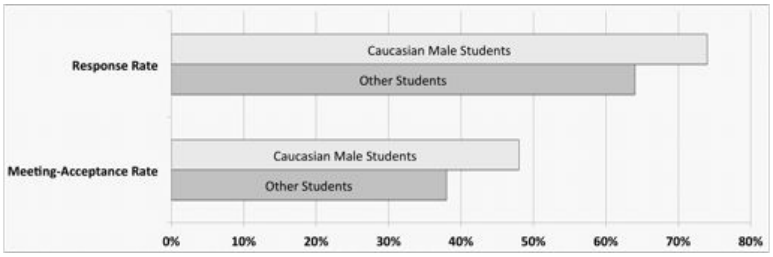
A FIELD EXPERIMENT SET IN ACADEMIA

- Subjects—6,548 faculty in 89 disciplines at 259 universities—received an email from a prospective doctoral student requesting a brief meeting.
- The gender (male, female) and race (Caucasian, Black, Hispanic, Chinese, Indian) of the student, as signaled by the name, was randomly assigned.



Milkman, Akinola, and Chugh, "What Happens Before? A Field Experiment Exploring How Pay and Representation Differentially Shape Bias on the Pathway into Organizations (April 23, 2014). Available at SSRN: abstract=2063742.

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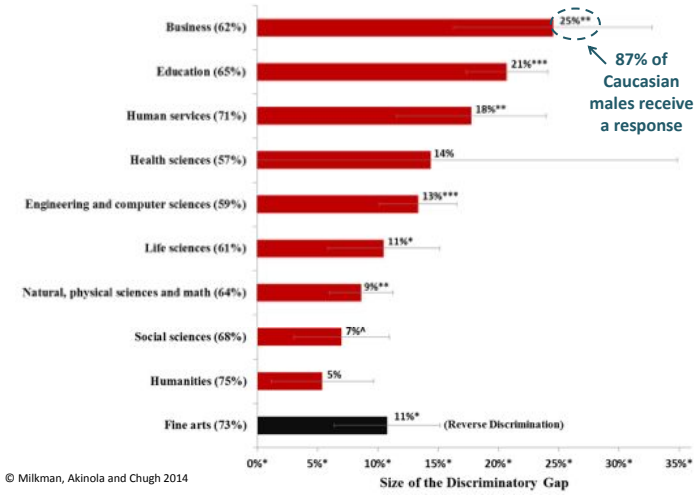
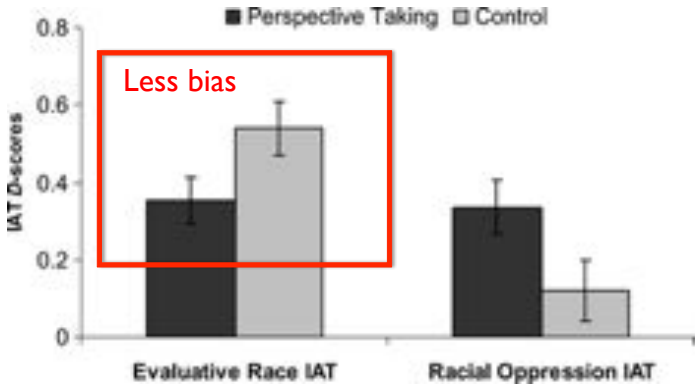


© Milkman, Akinola and Chugh 2014

Response rates to minorities/females are in parentheses.

Milkman, Akinola, and Chugh, "What Happens Before? A Field Experiment Exploring How Pay and Representation Differentially Shape Bias on the Pathway into Organizations (April 23, 2014). Available at SSRN: abstract=2063742.

BIASES CAN BE MODIFIED…



"Perspective taking combats automatic expressions of racial bias"
(Todd, Bodenhausen, Richeson, Galinsky *Journal of Personality and Social Psychology* 2011)

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BIASES CAN BE CONTROLLED…

© Colorado Springs Philharmonic http://blog.csphilharmonic.org/wp-content/uploads/2013/10/PTW_4158.jpg

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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)

- ✓ 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) (Miyake et al 2010, Walton and Cohen 2011)
- ✓ Represent difficulties as both normal and temporary (e.g., have students write to future program participants communicating a growth mindset) (Walton and Cohen 2011)

> ➢ Write an email to someone not here today explaining why you think creating a more inclusive classroom environment is important.

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