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What Do We Want Principles Students To (Know and) Be Able *To Do*: Learning Outcomes, Content and Competencies

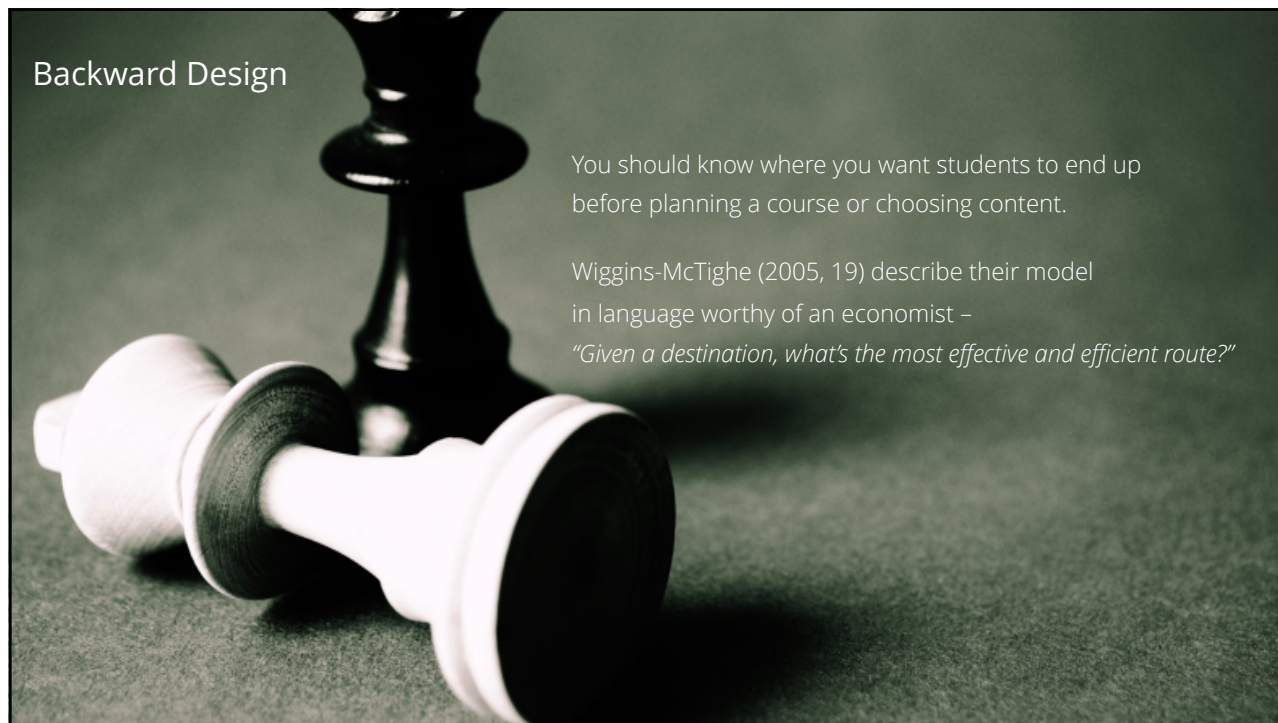
Question

What are the implications when learning objectives shift focus from content (what students should know) to capacities (what students should be able to do with the content)?

Answers

- Use the backward design model to connect major attempts by economists at articulating what we want our students to be able *to do* – after completing a principles course and after majoring in economics.
- Apply the *to do* lens of competencies to the literacy-targeted (LT) principles course and ask – what do we want the vast majority of principles students who never take another economics course, to be able to do.

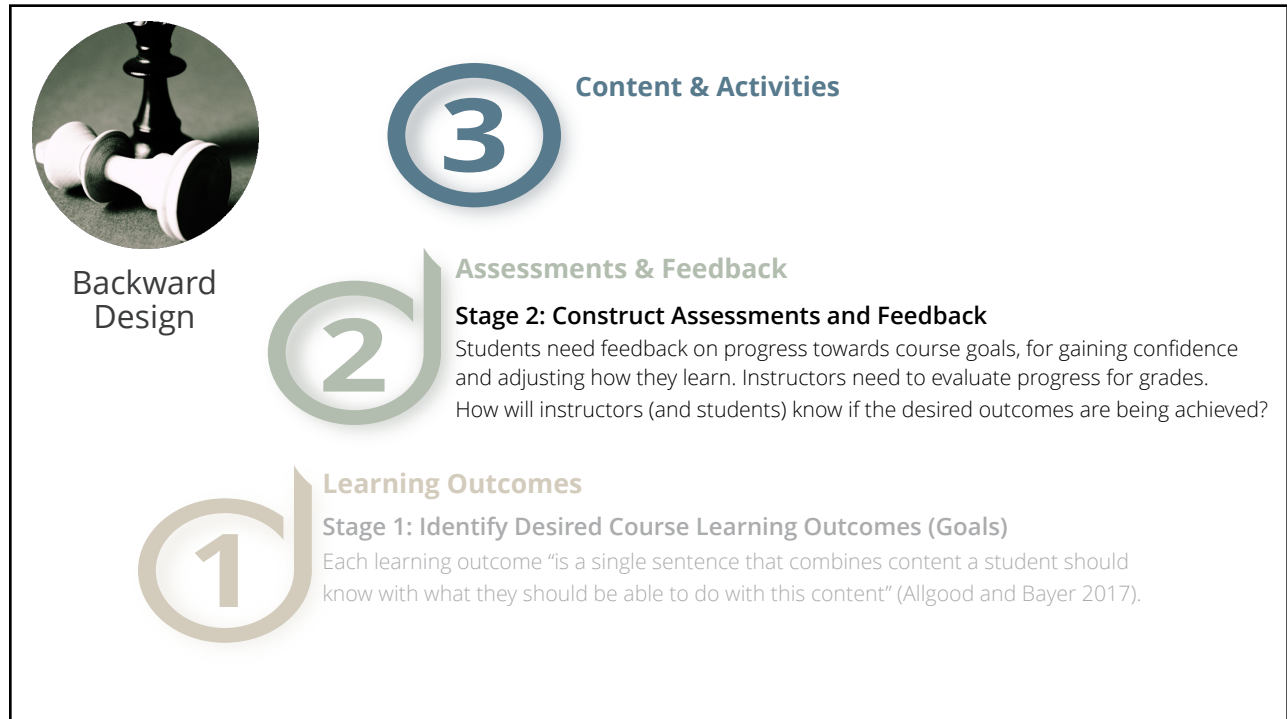
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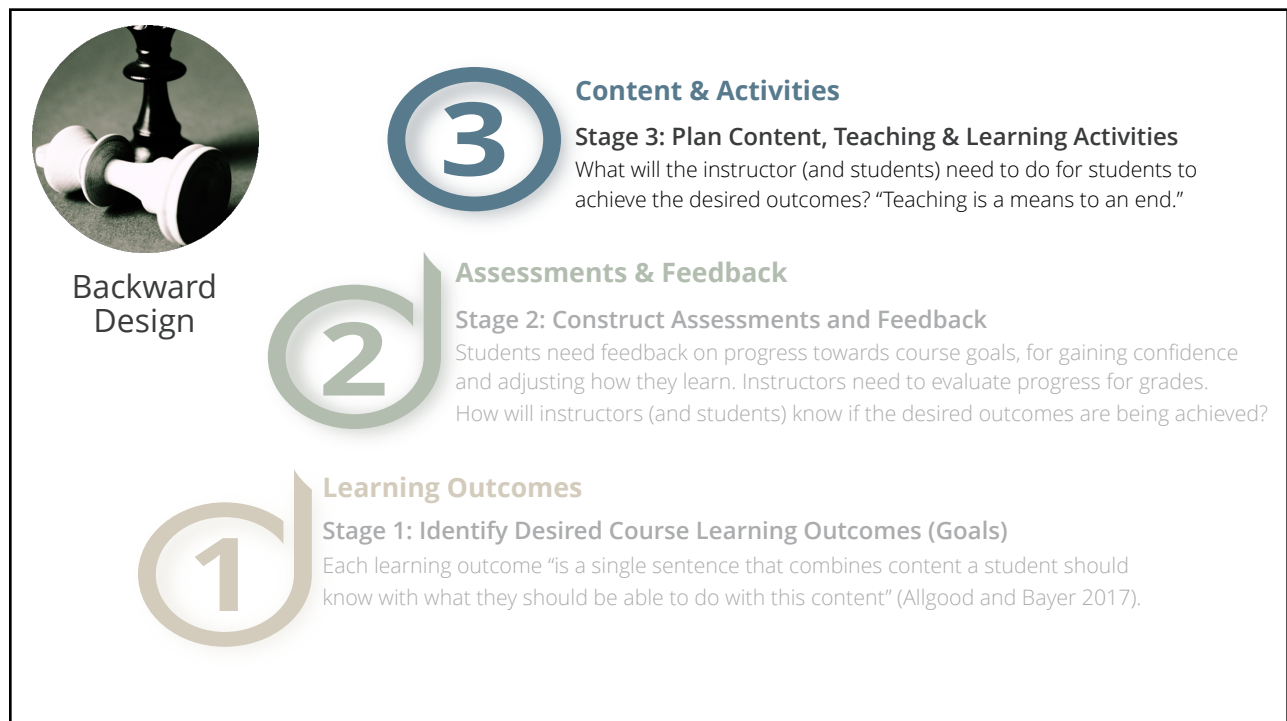
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"If you don't know where you are going,
you'll end up someplace else."



Yogi Berra

Source: <https://yogiberramuseum.org/about-yogi/biography>

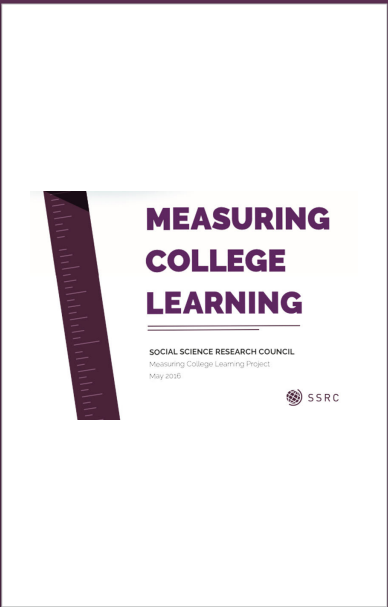
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Terminology Synonyms

To Know	vs	To Do
Explain	vs	Use
Theory	vs	Application
Ideas	vs	Practices
Understanding	vs	Capacities
Knowledge	vs	Proficiencies
Concepts	vs	Competencies

In the economics education literature, synonyms of choice for "to do" are what "proficiencies" or "competencies" we want students to have.

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Essential Competencies – What Should Economics Students Be Able *To Do*?

- Compared to disciplines like physics and biology,
- “Economists ... have a disciplinary association, the American Economic Association (AEA), which as a whole has been less engaged in questions surrounding learning; instead, this conversation has been largely confined to the AEA’s Committee on Economic Education.”

(Roska, Arum, Cook 2016)

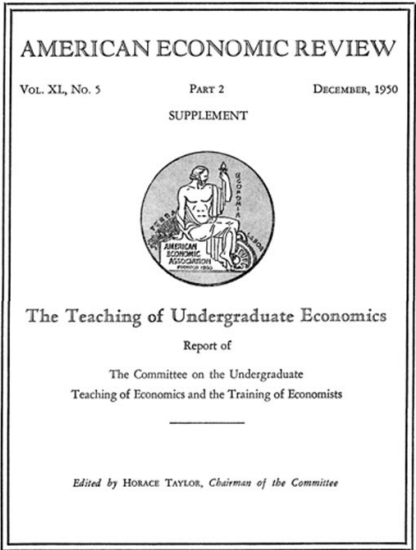
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Elementary Courses in Economics

“The number of objectives and the content of the elementary course should be reduced. ... the content of the elementary course has expanded beyond all possibility of adequate comprehension and assimilation by a student in one year of three class hours a week.

Students should receive more training in the use of analytical tools. ... the typical course in elementary economics tends to concentrate attention on the elucidation of economic principles, rather than on training the student to make effective use of the principles he has learned. Examination questions test the student's ability to explain, rather than his ability to use principles.”

(Taylor 1950)



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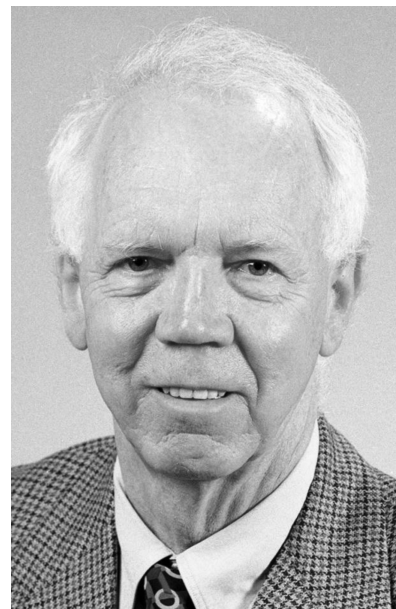
Hansen's Proficiencies Economics Majors Should Be Able To Do

Proficiencies	Assessments (selected)
1. Access existing knowledge	Retrieve information on economic topics/issues. ... Track down economic data, data sources.
2. Display command of existing knowledge	Write precis of a published article. Summarize current condition, outlook of economy in 2-minute monologue or 500-word paper. State dimensions of a current economic policy issue.
3. Interpret existing knowledge	Explain, evaluate economic concepts/principles used in economic analyses published in newspapers, magazines. Describe how the concepts aid in understanding the analyses.
4. Interpret and manipulate economic data	Interpret data such as in <i>Economic Report of President</i> . Construct tables from available data to illustrate an economic issue. Explain how to perform/interpret regression analysis
5. Apply existing knowledge	Prepare 5-page analysis of current economic problem. Assess costs and benefits of an economic policy issue in a 4-page paper. Prepare 2-page memorandum recommending an economic policy.
6. Create new knowledge	Formulate questions illuminating an economic issue that needs research. Prepare 5-page proposal for research project. Conduct research study, presenting results in 20-page paper.

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Proficiencies

1. Access existing knowledge
2. Display command of existing knowledge
3. Interpret existing knowledge
4. Interpret and manipulate economic data
5. Apply existing knowledge
6. Create new knowledge



W. Lee Hansen

Source: <https://www.jamesgmartin.center/author/wleehansen>

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Selected Literature Review of Competencies in Economics

- Taylor (*AER* 1950) – Teaching of Undergraduate Economics
 - Fels (*AER* 1967), Welsh & Fels (*AER* 1969) – TUCE
 - Yates (*JEE* 1978) – Research in Economic Education: Are Our Horizons Too Narrow?
 - Hansen (*AER* 1986, *JEE* 2001) – Expected Proficiencies for Undergraduate Economics Majors
 - Siegfried et al (*JEE* 1991) Status and Prospects of Economics Major
 - Salemi and Siegfried (*AER* 1999) – The State of Economic Education
 - Colander and McGoldrick (2009) – Teagle Discussion Re-evaluating Undergraduate Economics Major
 - Big Think questions, Teaching Questions vs Research Questions, Liberal Education, Capstone Courses
- “The efficacy of a big think question is measured not by its philosophical bigness but by the significance of learning it engenders.” Garnett & McGoldrick (*ROPE* 2014; *JEE* 2013)

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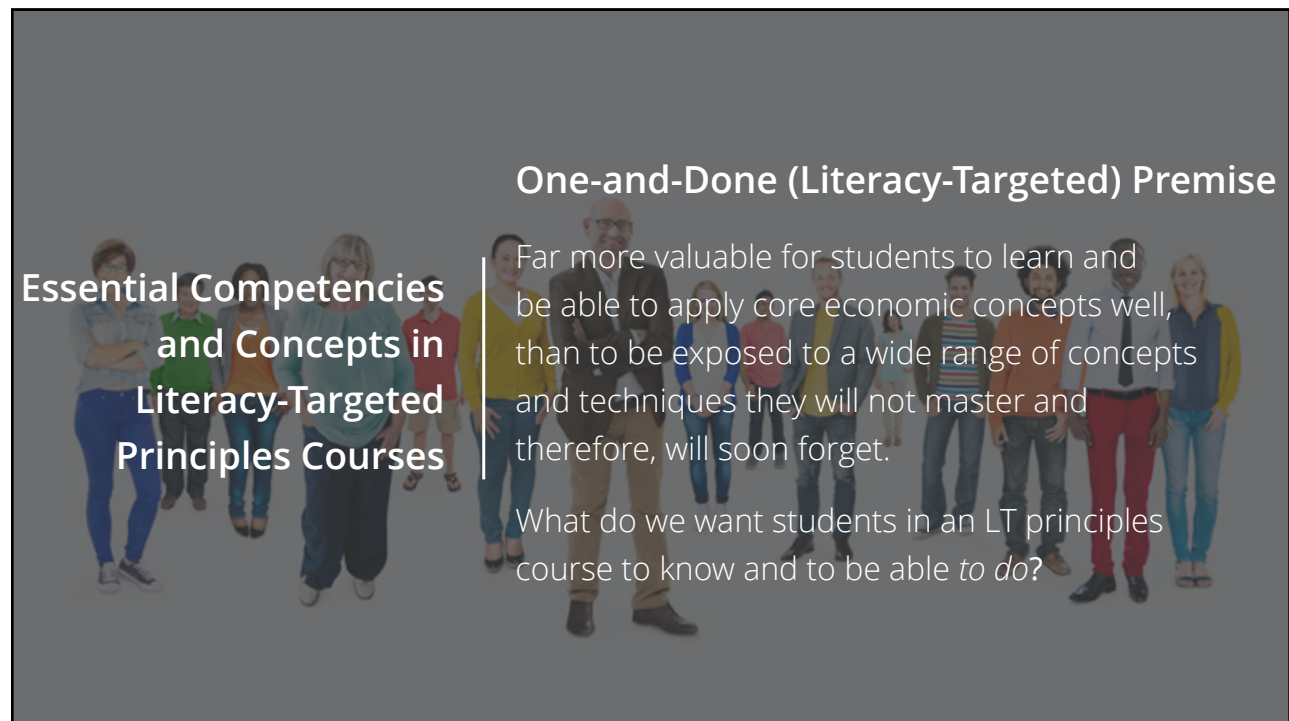
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- UK Quality Assurance Agency (2019 [2015, 2006, 2000] – Subject Benchmark Statement for Economics
 - OECD (2011) – Tuning-AHELO Conceptual Framework of Learning Outcomes in Economics
 - Allgood and Bayer (*MCL* 2016, *AER* 2017) – Learning Outcomes for Economists

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Allgood and Bayer (2017) – Economics Students' Competencies

Competencies at Any Level Ability To:	Learning Objectives – Micro Principles
1. Apply Scientific Process to Economic Phenomena	Explain how economists use scientific processes to understand individual decision-making, market outcomes, government policies; apply process using curiosity, hypothesis testing.
2. Analyze/Evaluate Behavior, Outcomes using Economic Concepts, Models	Choose and use appropriate concepts and models to analyze and evaluate choices, outcomes, and policies in diverse settings.
3. Use Quantitative Approaches in Economics	Develop quantitative reasoning skills with equations, graphs; distinguish causation from correlation.
4. Think Critically about Economic Methods, Applications	Identify assumptions underlying models and connect assumptions to theoretical results and/or observed conditions.
5. Communicate Economic Ideas in Diverse Collaborations	Discuss economic issues to promote understanding, inquiry; demonstrate fluency in economic terminology/tools, explain economic reasoning to non-economists.

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Essential Competencies and Concepts in Literacy-Targeted Principles Courses

One-and-Done (Literacy-Targeted) Premise

Far more valuable for students to learn and be able to apply core economic concepts well, than to be exposed to a wide range of concepts and techniques they will not master and therefore, will soon forget.

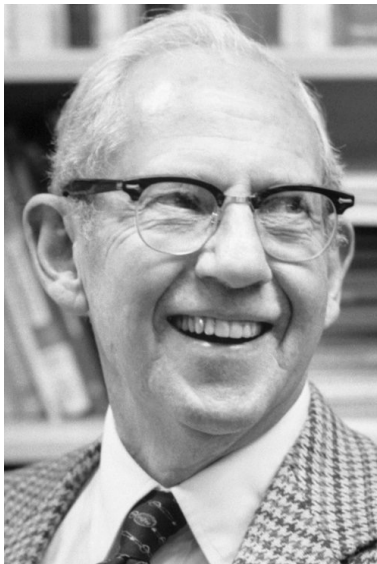
What do we want students in an LT principles course to know and to be able *to do*?

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Selected Literature Review of LT Principles

- Stigler (AER 1963) – Elementary Economic Education
- Hansen (AER 1986, JEE 2001) – Expected Proficiencies for Undergraduate Economics Majors
- Siegfried et al (JEE 1991) Status and Prospects of Economics Major
- Salemi and Siegfried (AER 1999) – The State of Economic Education
- Hansen, Salemi, Siegfried (AER 2002) – Use It or Lose It: Teaching Literacy in the Economics Principles Course
- Frank (1998, 2002, 2006, 2012) – A Less-Is-More Approach to Introductory Economics
- Salemi (JEE 2005) – Teaching Economic Literacy: Why, What, and How
- Colander, McGoldrick (AER 2009) (2009a) – Teagle Discussion Re-evaluating Undergraduate Economics Major
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George J. Stigler
Nobel Laureate 1982

George Stigler (AER 1963) Makes the LT Argument for Principles

“The watered-down encyclopedia which constitutes the present course in beginning college economics does not teach the student how to think on economic questions. The brief exposure to each of a vast array of techniques and problems leaves with the student no basic economic logic with which to analyze the economic questions he will face as a citizen. The student will memorize a few facts, diagrams, and policy recommendations, and ten years later will be as untutored in economics as the day he entered the class.”

“An introductory-terminal course in economics makes its greatest contribution to the education of students **if it concentrates upon a few subjects which are developed in sufficient detail and applied to a sufficient variety of actual economic problems to cause the student to absorb the basic logic of the approach.**”

Source: <https://www.nobelprize.org/prizes/economic-sciences/1982/stigler/biographical>

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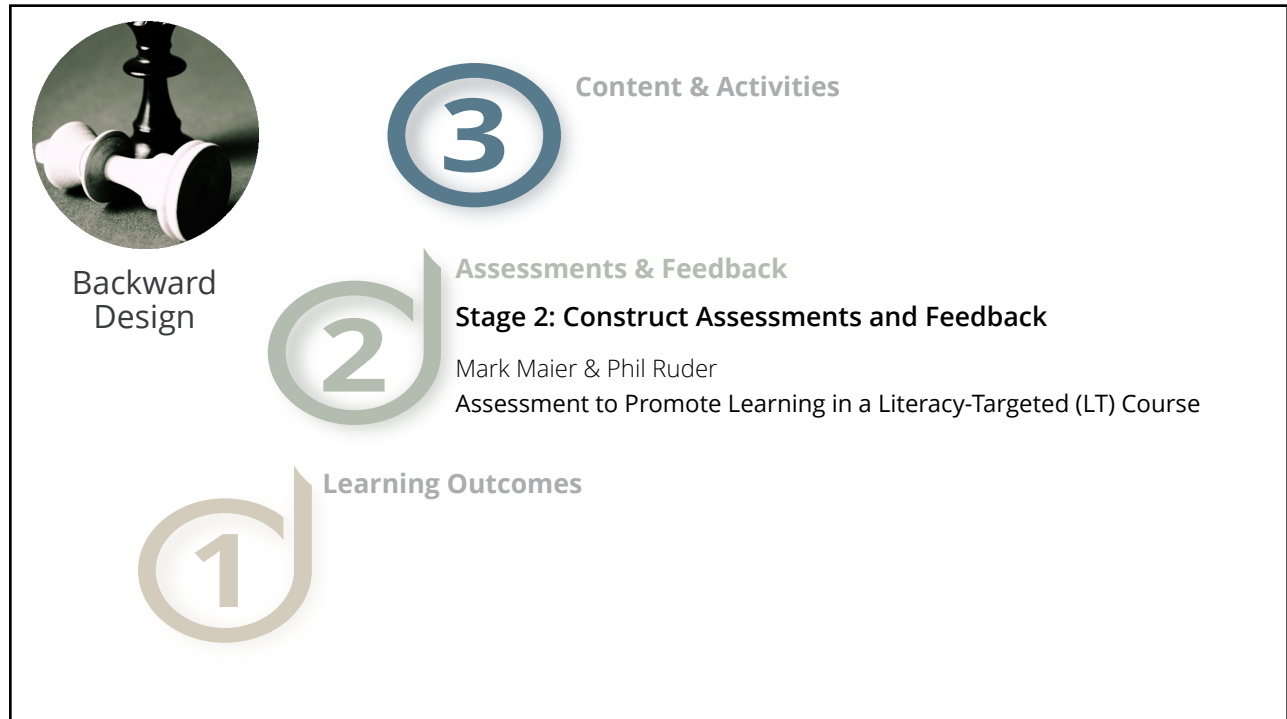


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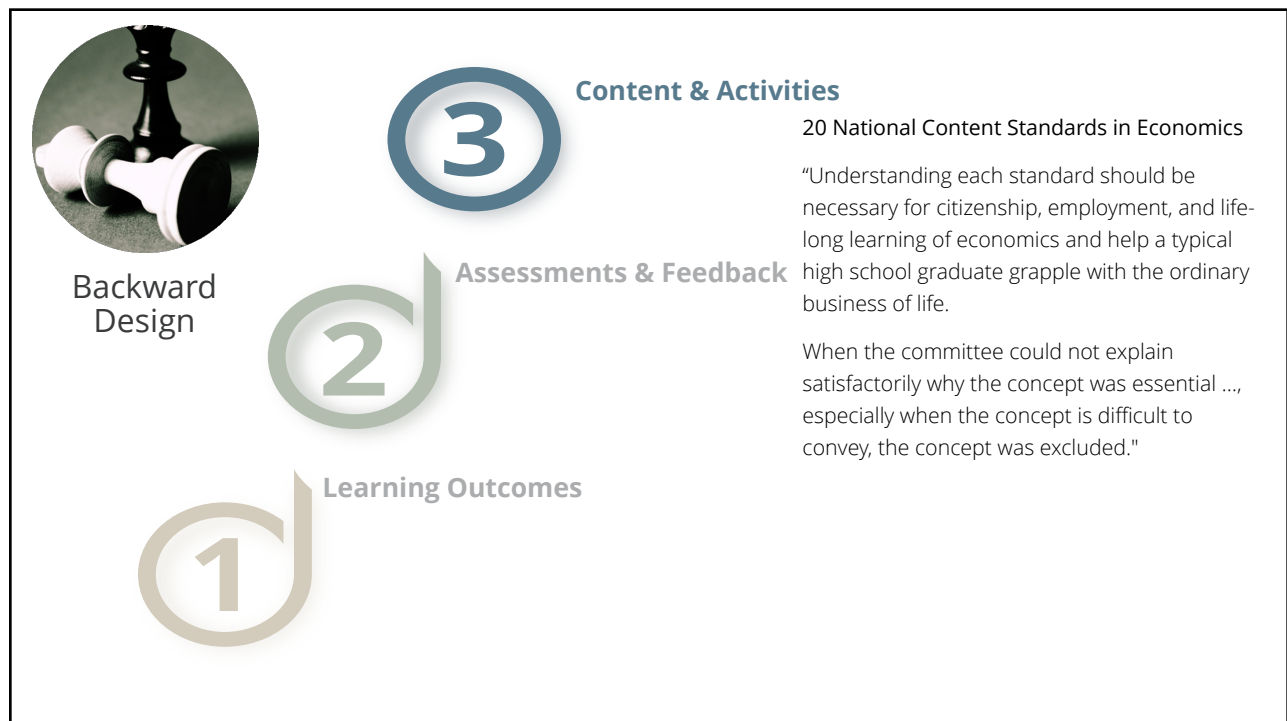
Sample Course Learning Objectives (*To Do*) for Micro/Macro LT Principles

1. Explain the concept of economic equilibrium and its role in economists' use of simple models to approximate controlled experiments in the natural sciences.
2. Apply the economic way of thinking to explain economic and non-economic events using simple models that focus on important variables while setting aside unnecessary complications.
3. Distinguish positive from normative claims about economic events and policies.
4. Evaluate the advantages and limitations of using economic models for explaining economic and non-economic events.
5. Apply cost/benefit analysis to identify the trade-offs, including intended and unintended consequences, of all choices.
6. Explain objectives, successes, and failures of government policies such as minimum wages, rent controls, competition policy, environmental policy, trade policy, and tax and income redistribution policy.
7. Find and Interpret data measuring macroeconomic outcomes including GDP, economic growth, unemployment, inflation, and understand the limitations of each measure.
8. Describe the fundamental macroeconomic question of how quickly markets adjust and explain both the Hands-Off and Hands-On positions as they apply to government fiscal and monetary policy.
9. Analyze fiscal and monetary policies to evaluate the appropriate role of government in macroeconomic policy.
10. Write persuasive, informed opinion pieces about microeconomic and macroeconomic policy issues for a general audience.

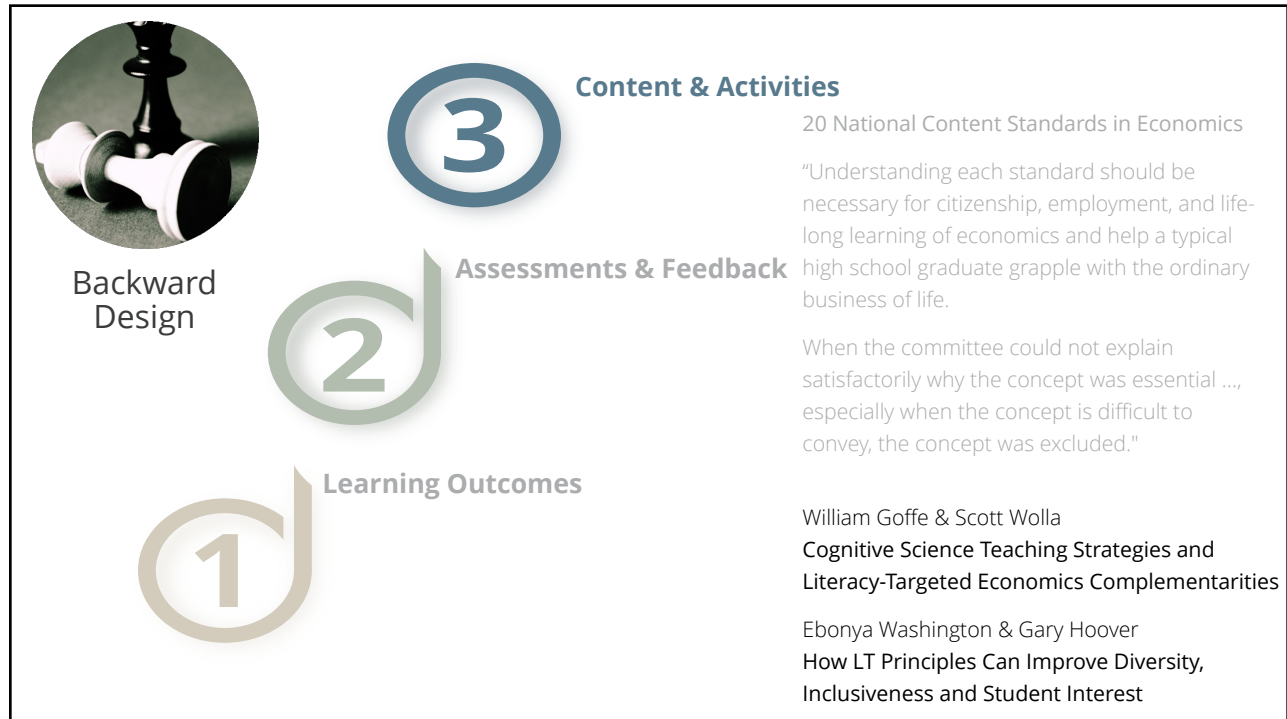
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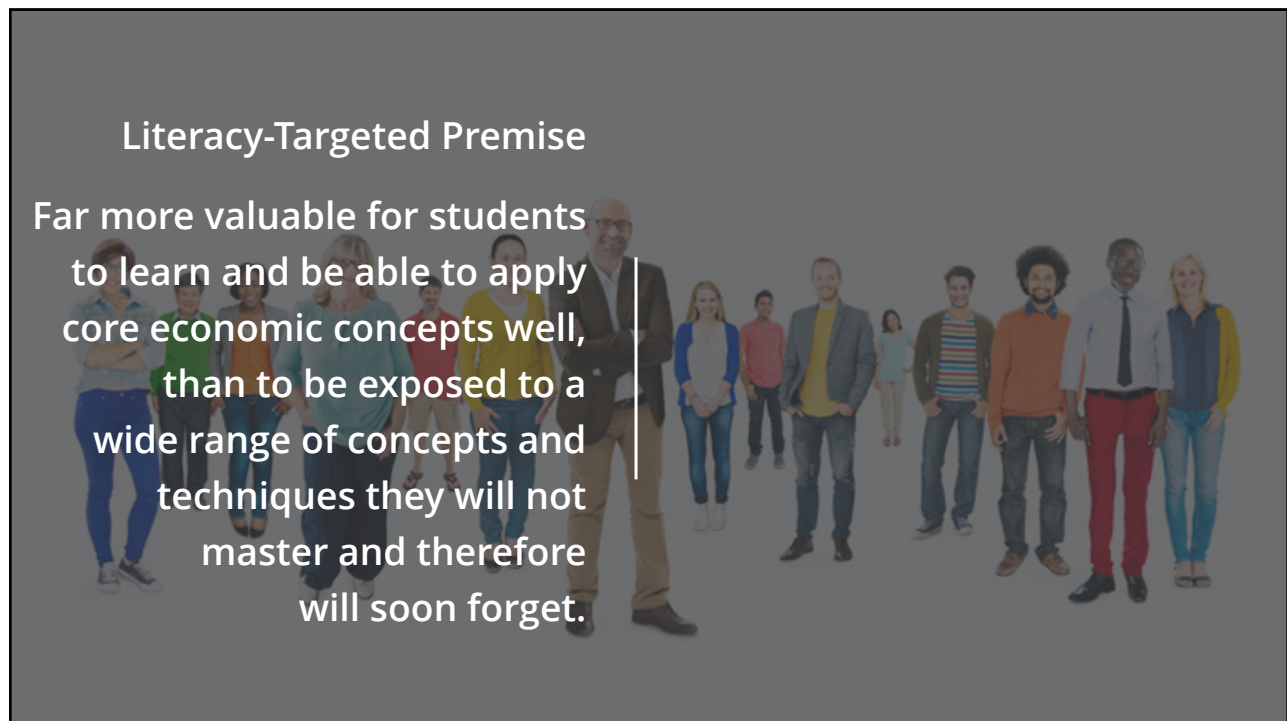
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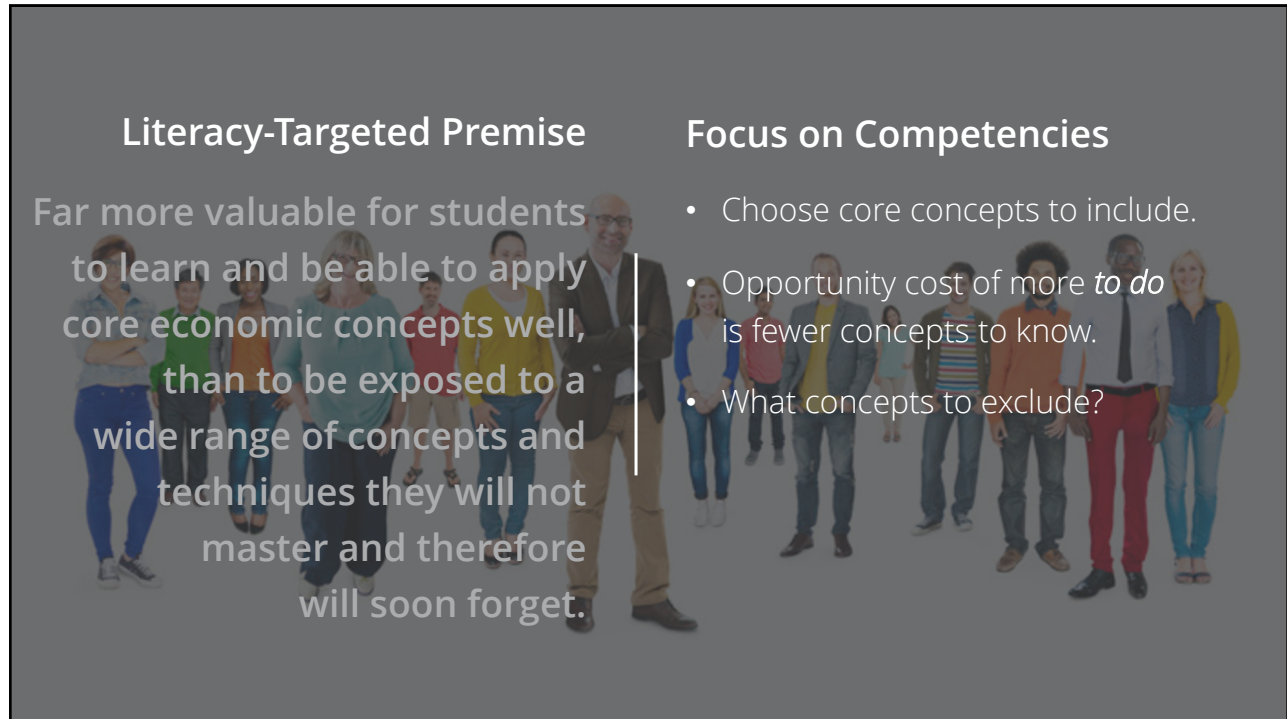
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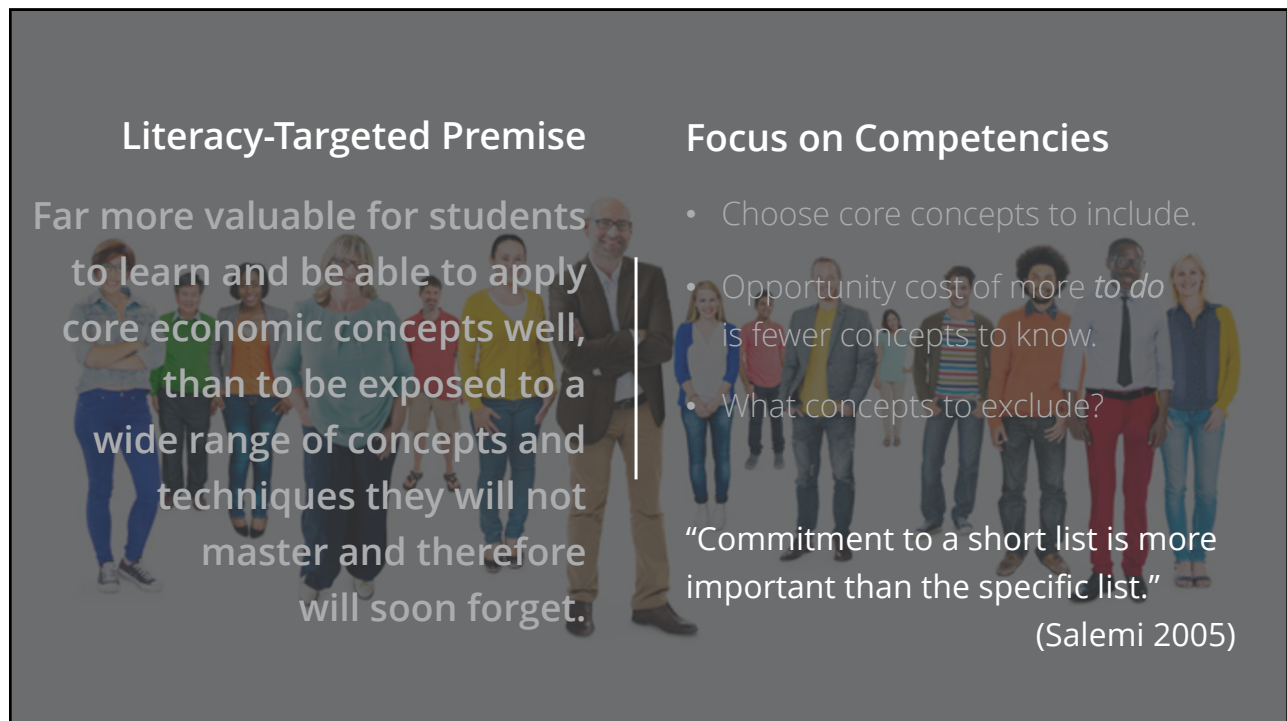


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Literacy-Targeted Premise	Focus on Competencies
<p>Far more valuable for students to learn and be able to apply core economic concepts well, than to be exposed to a wide range of concepts and techniques they will not master and therefore will soon forget.</p>	<ul style="list-style-type: none">• Choose core concepts to include.• Opportunity cost of more <i>to do</i> is fewer concepts to know.• What concepts to exclude?

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"Commitment to a short list is more important than the specific list."

(Salemi 2005)

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Possible Exclusions from LT Principles Course

- Drop cost curves
- Drop comparisons of imperfectly competitive industries
- Drop formulas for elasticities (beyond, for example, % change quantity / % change price) but keep total revenue test
- Drop national income accounting (keep aggregate expenditure)
- Drop formulas for multipliers (beyond, for example, $1 / (\% \text{ leakages})$ from circular flow)
- Limit graphs

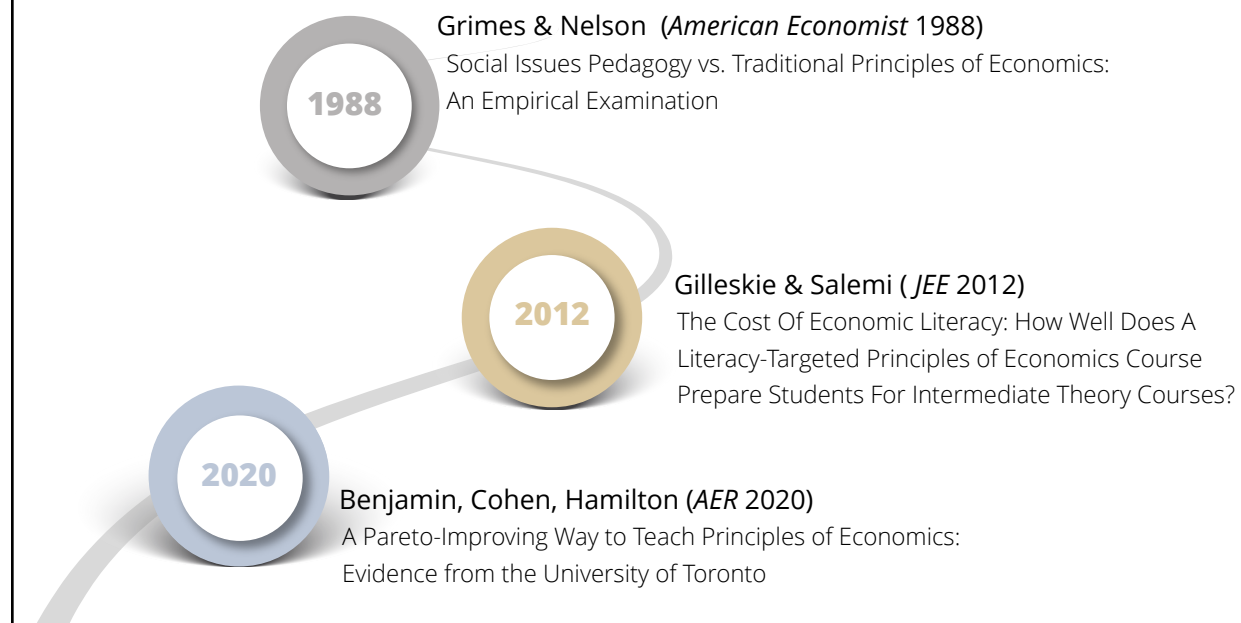
"It is less important that everyone agree on ... the best possible short list of principles than that instructors begin with a plausible short list, and then hammer away at each of its items repeatedly."

(Frank 2012)



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Assessing the LT Approach



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Assessing the LT Approach

Grimes & Nelson (1988) Social Issues Pedagogy vs. Traditional Principles of Economics: An Empirical Examination

Social Issues course based on “belief that students learn more when the subject matter is interesting and relevant and when what they are supposed to learn is repeated by means of a learning process involving contemporary social issues. ... **a set of concepts and principles would be selected that would be used over and over again in a set of issues until its elements were firmly established in students' minds.**”

Social Issues students

- “did not score significantly different on the macro POST TUCE relative to ... Principles of Macroeconomics [students]”
- “scored significantly below the Principles students on the micro version of the TUCE”

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Assessing the LT Approach

Gilleskie, Salemi (*JEE* 2012) The Cost Of Economic Literacy: How Well Does A Literacy-Targeted Principles of Economics Course Prepare Students For Intermediate Theory Courses?

“Students who complete a literacy-targeted principles course earn grades as high in intermediate Microeconomics and intermediate Macroeconomics as those students who complete a traditional principles course.”

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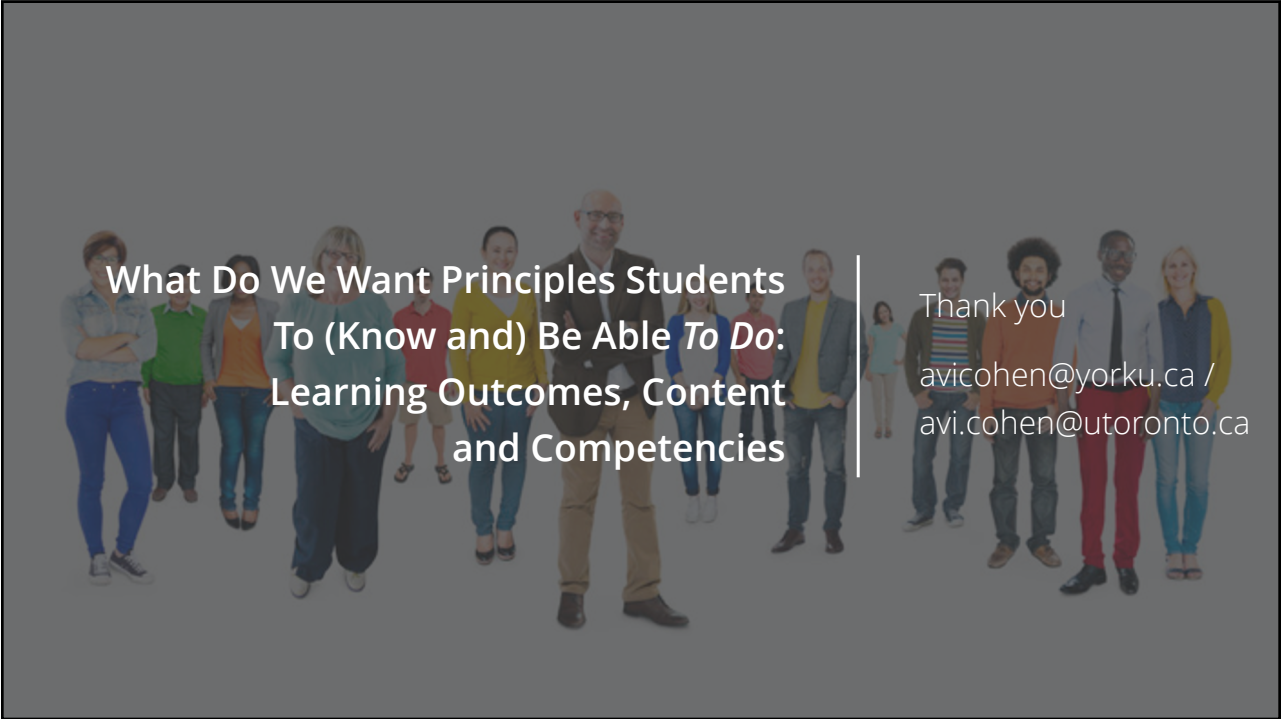
Benjamin, Cohen, Hamilton (*AER* 2020) A Pareto-Improving Way to Teach Principles of Economics: Evidence from the University of Toronto

"Our results demonstrate that ... departments can offer LT principles courses while preserving subsequent disciplinary rigor. Students can take such courses without disadvantage should they change their minds and pursue further studies in economics. The vast majority of "one and done" principles students will be better off with LT courses better suited to their interests and abilities."

Diversity and Inclusiveness

"Women are disproportionately represented in the LT course. Given that there is no disadvantage in taking the LT course, offering an LT approach may improve the chances that female students progress in economics."

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What Do We Want Principles Students
To (Know and) Be Able To Do:
Learning Outcomes, Content
and Competencies

Thank you
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