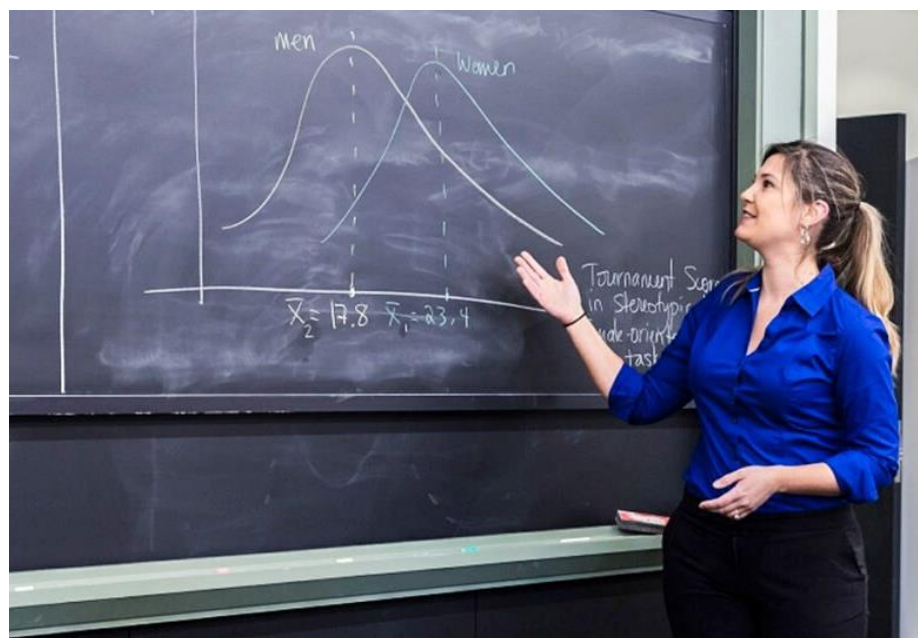


A Practice-Based Theory and Practical Applications of How to Teach Economics at the Secondary Level



JET SET

August 3, 2024

10:35-11:50



Introduction



Cheryl A. Ayers, MBA, PhD

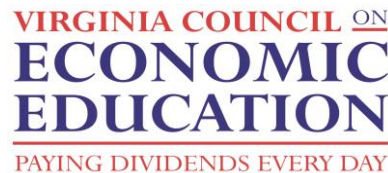
Virginia Tech Center for Economic Education

Virginia Council on Economic Education

Council on Economic Education

U.S. Economic Empowerment Project

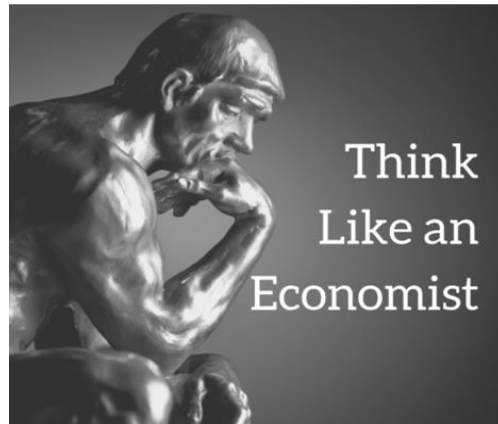
NAEE National Economics Pedagogy Scholar



Session Objectives

Discuss key findings of a research-based article grounded in decades of economic education literature on how award-winning secondary economics teachers demonstrated their pedagogical content knowledge (PCK)—that is, what makes teaching economics different from teaching other subjects

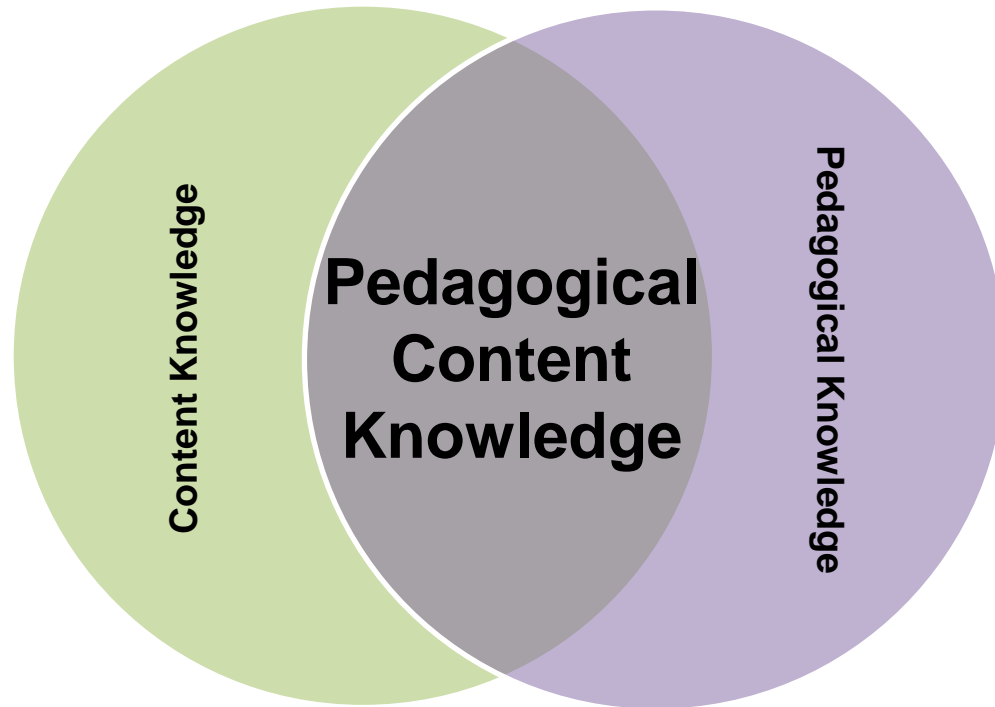
- ❖ Including practical applications for teaching economics at the secondary level



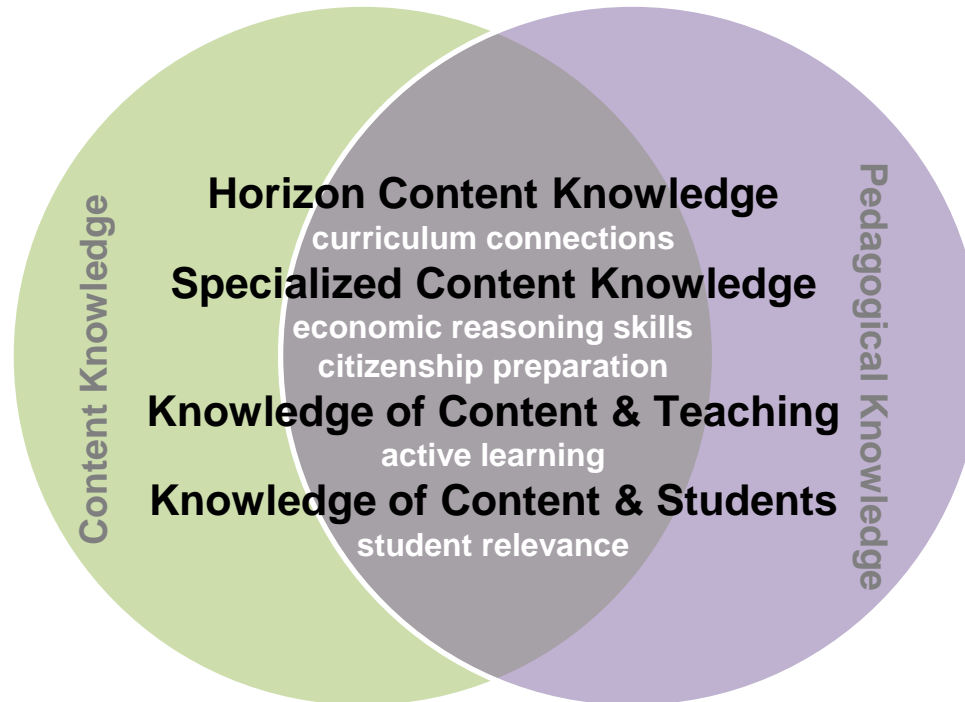
Effective Disciplinary Instruction

Pedagogical Content Knowledge (PCK)

“ways of representing and formulating a subject that make it comprehensible to others”
(Shulman, 1986)



Effective Economics Instruction



Ayers, C. A. (2018). A first step toward a practice-based theory of pedagogical content knowledge in secondary economics. *Journal of Social Studies Research*, 42, 61-79.



Horizon Content Knowledge (Ayers, 2018, Table 1)

Curriculum connections across grades, subjects, and economics courses

- ❖ Integrate multi/interdisciplinary instruction (math, English, entrepreneurship, other social studies subjects), albeit with caution
 - Pre-test graphing skills before teaching supply and demand graphs
- ❖ Promote cross-curricular, higher-order thinking (issues are multidimensional)
- ❖ Create and activate prior knowledge via intradisciplinary instruction—strategic foreshadowing (opportunity cost and PPF)



Knowledge of Content & Teaching (Ayers, 2018, Table 1)

Active learning instructional practices

- ❖ “Do” economics by utilizing constructivist, student-centered instructional practices (simulations, role-playing, games, and technology-related activities such as Webquests and Stock Market Game™)
- ❖ Debrief activities to explicitly connect simulated experiences to economic content and real-world contexts

InvestWrite Essay Competition – Real-world investment strategy

- ❖ Align assessments to active learning, skills-based learning objectives (performance-based assessments with rubrics)

CEE/VCEE National Personal Finance Challenge Case Study



Knowledge of Content & Students (Ayers, 2018, Table 1)

Emphasis on student relevance and scaffolding

- ❖ Implement culturally relevant instructional practices (scarcity, trade-offs differ for students) – Anonymous surveys for examples
- ❖ Incorporate real-world examples and analogies that relate to students' everyday lives as the focal point of lessons (cars = micro/macro; weather = economic predictions)
- ❖ Student Relevance Journals
- ❖ Identify and address difficult economic content and misconceptions (opportunity cost)—Pre-tests



Specialized Content Knowledge (Ayers, 2018, Table 1)

Frequent and practical applications of economic reasoning tools

- ❖ Instill accurate disciplinary knowledge in economics by “thinking like an economist” regularly
- ❖ Drill productive economic decision-making on a personal and societal level with many units
- ❖ Emphasize economic reasoning skills using supply and demand graphs, production possibilities frontier graphs, circular flow of money in a market economy models, cost-benefit analysis charts, PACED decision-making models, and economic way of thinking principles

Qualitative and qualitative instruction and assignments



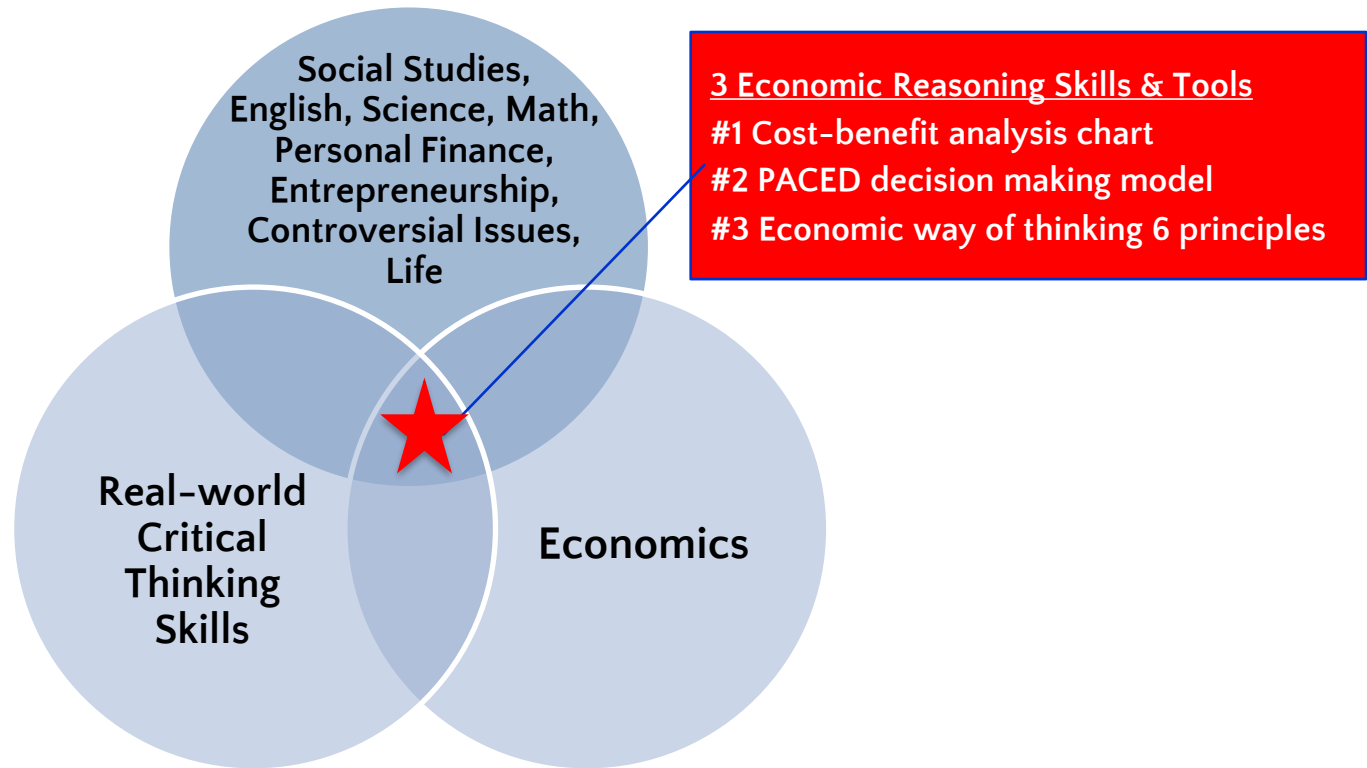
Specialized Content Knowledge (Ayers, 2018, Table 1)

Critically-minded, reflective citizenship preparation

- ❖ Connect current events to the economy and students' personal lives
- ❖ Utilize economic current events to assess content understanding; develop critical literacy, critical thinking, and multiple perspectives; and articulate sound economic opinions and arguments
- ❖ Include authentic discussions that co-construct understanding of economic and controversial issues
- ❖ Demonstrate how to cast informed votes based on economic policy positions (think aloud)



3 Economic Reasoning Skills & Tools



Ayers, C. A. (2019). Teaching students to 'think like economists' as democratic citizenship preparation. *Journal of Social Studies Research*, 43(4), 405-419.



Essay & Debate Assessments

Tool #1 Cost-Benefit Analysis Chart

CHOICE: Raise the minimum wage to \$15

1=not at all important

3=average importance

5=very important

COSTS (disadvantages/given up)	1-5	BENEFITS (advantages/gained)	1-5
Totals		Totals	
DECISION:			
OPPORTUNITY COST:			

- 1) State FOR or AGAINST raising minimum wage to \$15/hour.
- 2) Share arguments through the lens of Economic Reasoning Tools.

Tool #2 PACED Decision-Making Model

1. Question/Problem: What should be done with minimum wage (assume current wage is \$10)?

3. Criteria	Help Employees	Help Employers	Incentivize Higher Ed	Reduce Unemployment	Totals
2. Alternatives					
Reduce to \$7.25					
Raise to \$15.00					
Raise to \$50.00					
\$2.50 + Tips					

4. Evaluate the Alternatives

- 3 = alternative meets criteria very well
2 = alternative meets criteria satisfactorily
1 = alternative does not meet criteria satisfactorily

5. Decision (highest scoring alternative): _____

Tool #3 Economic Way of Thinking 6 Principles

- 1) People choose.
- 2) People's choices involve costs.
- 3) People respond to incentives in predictable ways.
- 4) People create rules and economic systems that influence individual choices and incentives.
- 5) People gain when they trade voluntarily.
- 6) People's choices have consequences that lie in the future.

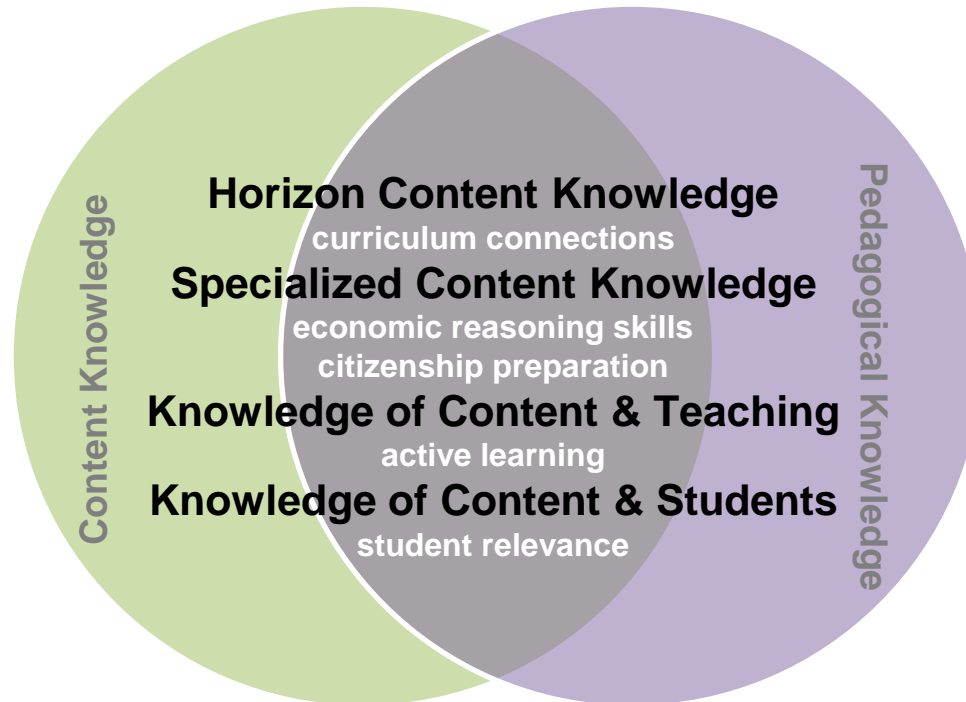
3 Economic Reasoning Skills (Ayers, 2019)

Student Learning Outcomes

- 1) sharpening critical thinking and critical literacy skills
- 2) entertaining multiple perspectives
- 3) gaining a deeper, nuanced understanding of subject-specific content
- 4) making students' thinking explicit for assessment purposes
- 5) achieving a inter/multidisciplinary understanding of current events
- 6) using evidence to draw conclusions and make generalizations
- 7) articulating and defending positions using content vocabulary
- 8) laying the groundwork for authentic discussions and civil debates
- 9) casting informed votes
- 10) analyzing and synthesizing primary and secondary sources
- 11) comparing and contrasting historical, cultural, and political perspectives
- 12) explaining cause-and-effect relationships
- 13) practicing citizenship skills such as collaborating, compromising, and reaching consensus
- 14) thinking like an economist for authentic disciplinary learning (like historical thinking)
- 15) making more productive and prosperous workplace and everyday life decisions



Other Instructional Examples?



Ayers, C. A. (2018). A first step toward a practice-based theory of pedagogical content knowledge in secondary economics. *Journal of Social Studies Research*, 42, 61-79.



U.S. Entrepreneurship Certification Exam



ASSOCIATION FOR
CAREER & TECHNICAL
EDUCATION®



Ayers, C. A. (2025)

A second step toward a practice-based
theory of pedagogical content
knowledge in secondary economics



THANK YOU!

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