



Embedding Economics: An Interdisciplinary Approach to Teaching Economic Concepts

The views expressed do not necessarily reflect those of the University of Central Arkansas.

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Why Take an Interdisciplinary Approach to Teaching Economics?

- Who is teaching economics in secondary school (7-12th grade)?
- How often does economics appear outside of the economics classroom?
- Does the interdisciplinary approach improve student/educator outcomes?

Economics in Secondary Classrooms

- National Standards have learning objectives and strategies from K-12th grade
- 25/50 states require an economics course for high school graduation
- Most secondary economics teachers have not taken a traditional course in economics



COUNCIL FOR
**Economic
Education**

Teaching Opportunity®

Econ Ed in Education Literature

- Review of Research on Outcomes and Effective Program Delivery in Precollege Economic Education (Wells, 2006)

“A separate secondary course in economics is single most important way to increase knowledge, infusion of [economic educational materials] into other courses and grade levels. . . may be a necessary condition for producing high school graduates with basic and lasting levels of economic literacy”

Econ Ed in Education Literature

- Recent Trends and New Evidence in Economics and Finance Education (Clark, Schug, Harrison 2009)

“There is a difference between integrating economic topics into other course curriculums and teaching economics lessons in those courses, the latter has more effective results”

Econ Ed in Education Literature

- Interdisciplinary Teaching in Economics: How is as Important as Why (Beckman, 2012)

“The relationships between and among disciplines needs often be considered for solving real-world problems”

National Standards Index for Economics

Includes standards in:

- **Mathematics**
 - Quantitative Literacy
 - Probability & Statistics
 - Modeling
- **CTE (Career & Technical Education)**
 - FACS
- **Social Studies**
 - History
 - Geography
 - Civics & Government

National Mathematics Standards

Table 1: Economics Connections in Common Core Standards for Mathematics

Area of Study	Standard	Economics Connection
Statistics & Probability	CCSS.MATH.CONTENT.HSS.ID.A.2: Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.	Econometrics
Statistics & Probability	CCSS.MATH.CONTENT.HSS.ID.A.3: Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).	Econometrics
Statistics & Probability	CCSS.MATH.CONTENT.HSS.ID.A.4 : Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.	Econometrics
Statistics & Probability	CCSS.MATH.CONTENT.HSS.ID.B.5: Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.	Econometrics
Statistics & Probability, Modeling	CCSS.MATH.CONTENT.HSS.ID.B.6: Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.	Econometrics
Statistics & Probability	CCSS.MATH.CONTENT.HSS.ID.C.9: Distinguish between correlation and causation.	Econometrics
Statistics & Probability, Modeling	CCSS.MATH.CONTENT.HSS.MD.A.1: Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions.	Econometrics
Statistics & Probability	CCSS.MATH.CONTENT.HSS.MD.A.4: Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value.	Econometrics
Statistics & Probability	CCSS.MATH.CONTENT.HSS.MD.B.5: Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values.	Econometrics
Statistics & Probability	CCSS.MATH.CONTENT.HSS.MD.B.5.B: Evaluate and compare strategies on the basis of expected values.	Econometrics
Statistics & Probability, Modeling	CCSS.MATH.CONTENT.HSS.MD.B.7: Analyze decisions and strategies using probability concepts	Econometrics

National Family & Consumer Science Standards

Table 2: Economics Connections in National Standards for Family & Consumer Sciences

Area of Study	Standard	Economics Connection
Career, Community and Family Connections	1.1.2 Analyze the effects of social, economic, and technological changes on work and family dynamics.	Globalization & Trade
Career, Community and Family Connections	1.1.6 Develop a life plan, including pathways to acquiring the knowledge and skills needed to achieve individual, family, and career goals.	Financial Decision Making
Career, Community and Family Connections	1.2.1 Analyze potential career choices to determine the knowledge, skills, attitudes, and opportunities associated with each career.	Financial Decision Making
Career, Community and Family Connections	1.3.5 Analyze the effects of federal, state, and local public policies, agencies, and institutions on individuals, communities, and families.	Economic Institutions
Consumer and Family Resources	2.1.2 Analyze how individuals and families make choices to satisfy needs and wants.	Consumers
Consumer and Family Resources	2.4.2 Analyze how media and technological advances influence family and consumer decisions.	Technology
Consumer and Family Resources	2.4.3 Assess the use of technology and its effect on quality of life.	Technology & Productivity
Consumer and Family Resources	2.5.1 Analyze the use of resources in making choices that satisfy needs and wants of individuals, families, and communities	Resource Allocation
Consumer and Family Resources	2.5.2 Analyze individual and family roles in the economic system.	Economic Systems
Consumer and Family Resources	2.5.3 Analyze economic effects of laws and regulations that pertain to consumers and providers of services.	Role of Government
Consumer and Family Resources	2.5.4 Analyze practices that allow families to maintain economic self-sufficiency.	Financial Decision Making
Consumer and Family Resources	2.7.2 Analyze how education, income, career, and life choices relate to achieving financial goals.	Financial Decision Making
Consumer Services	3.1.4 Analyze the effects of the consumer service industry on local, state, national, and global economies.	Economic Systems
Consumer Services	3.3.1 Explain the effects of the economy on personal income, individual and family security, and consumer decisions.	Financial Decision Making
Consumer Services	3.4.1 Investigate sources and types of residential and commercial energy, water policy and usage, waste disposal, and pollution issues.	Environmental Economics
Consumer Services	3.4.4 Examine waste management issues and local, national, international, and global issues.	Environmental Economics
Consumer Services	3.4.5 Examine roles of government, culture, industry, and family in energy consumption.	Environmental Economics
Consumer Services	3.5.3 Analyze features, prices, product information, styles, and performance of consumer goods for potential global impact and trade-offs among the components.	Supply, Demand, & Price, Trade-Offs

National Geography Standards

Table 3: Economics Connections in National Geography Standards from the National Council for Geographic Education

Area of Study	Standard	Economics Connection
Human Systems	9.1A: Explain demographic history of countries using demographic transition model	Human Migration
Human Systems	9.1B: Evaluate the effects of government policies on population characteristics	Economic Institutions
Human Systems	9.2A: Identify and explain how historical, environmental, economic, political, and technological factors have influenced population distribution	Economic Institutions
Human Systems	9.2B: Analyze demographic data and trends in population distribution	Human Migration
Human Systems	9.3A: Compare and explain different examples of migrations in terms of the "laws of migration"	Human Migration
Human Systems	9.3B: Evaluate and explain the impact of international migration on physical and human systems	Resource Allocation, Human Migration
Human Systems	10.2B: Explain differences in human imprints on the physical environment of different cultures	Human Migration
Human Systems	10.3.A: Identify and explain examples of cultural convergence	Globalization
Human Systems	10.4A: Explain how and why globalization has increased the rate of change in cultures	Globalization
Human Systems	11.1A: Explain how the scale and organization of economic activities change over time	Economic Systems
Human Systems	11.2A: Identify and analyze the origins and development of and changes in patterns of economic activities	Economic Systems
Human Systems	11.3A: Explain how the economic systems of countries and regions consist of multiple coordinated economic activities	Economic Systems
Human Systems	11.3B: Explain why and how economic systems change	Economic Systems
Human Systems	11.4A: Explain the effects of technological changes in communications and transportation systems on the speed and distances over which people, products, and ideas move	Globalization, Technology, Productivity
Human Systems	12.4A: Explain and compare the growth and structure of cities using different urban models	Economic Development
Human Systems	13.2.A Evaluate how countries and organizations cooperate to address global issues	Resource Allocation, Globalization
Human Systems	13.3A Explain the ways conflict affects the cohesiveness and fragmentation of countries	Trade, Exchange, & Interdependence

Why Take an Interdisciplinary Approach to Teaching Economics?

- Being efficient with the tools we've already created
- Improves secondary educators economics knowledge
- Positive student outcomes
- Increased number of individuals being introduced to economic concepts

A scenic landscape photograph showing rolling hills under a vibrant sunset sky with orange and yellow hues. The foreground is a green hillside, and the background shows distant mountains and a valley with some mist or low clouds. The word "QUESTIONS?" is overlaid in large, white, bold, sans-serif font.

QUESTIONS?

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A close-up photograph of a lush green hillside with dense foliage and trees. The lighting is bright, suggesting a sunny day.

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