

*The Myth of Objectivity: Creating a more realistic and inclusive high school  
economics class*

## ABSTRACT

Economic textbooks make a clear distinction between positive economics, defined as the study of *what is*, and normative economics, the study of *what should be*. Economic students are taught that economic analysis is positive, and by implication, objective analysis. Economics, therefore, determines the effects of various normative policies without being normative itself. The fallacy of this distinction is it ignores both the reality of how economics is taught and the normative bias that might exist in the assumptions used in creating economic models.

In this paper, I examine the implication of the assumption of objectivity in economics and examine its implication for the classroom. In particular, I demonstrate ways in which subjective choices are made (perhaps unconsciously) in economic education. The choice of content used, the approach to economic policy emphasized and the pedagogy used all affect what economic students learn. I argue that instead of ignoring this contradiction, that the differences are discussed and related to the material they are learning. The National Voluntary Content Standards are used to illustrate the normative biases in the mainstream curriculum.

In addition, by explicitly challenging assumptions that may not represent the experiences of the increasingly more diverse students who are entering colleges, and therefore more likely to take economics in high school this approach helps create a more inclusive classroom. The paper concludes with some practical suggestions on incorporating this approach into teaching strategies using the National Voluntary Content Standards.

... economics itself [as a discipline] has always been partly a vehicle for the ruling ideology of each period as well as partly a method of scientific investigation.

Robinson, Joan. (1962). *Economic Philosophy*. London: C. A. Watts & Co. p. 1.

### ***I: Introduction***

One of the first ideas students learn in an economics class is the distinction between positive and normative economics. The first is defined as the study of *what is*, while the second is the study of *what should be*. Students learn that economics is positive analysis, while the application of the analysis to determine, for example, what policy the government should use, is normative analysis and done by other social scientists. One implication of this artificial distinction, however, is that it ignores the subjective choices made in the assumptions used in economic models and both the content and pedagogical choices made when teaching economics. Feminist economists, among others, have long taken issue with the idea of positive economics (See, for example, Blau 1981, Harding, 1995 and Nelson, 1996) and argued that true objectivity is impossible.

The assumption of rationality, one of the foundations of economics, is an example of a normative assumption masquerading as a positive one. This assumption posits, among other things, that people always act in their own self interest. This idea contradicts developments in other social sciences, particularly psychology, and even recent developments in behavioral and experimental economics suggest the limitations of this assumption. Yet rationality underlies the foundation of economic models without qualification in essentially all mainstream economic analysis and textbooks.

The positive approach creates the illusion that economic analysis itself is objective, that is, devoid of bias, because if economists are studying *what is*, than they must be studying fact, not a single perspective. This approach does students a great disservice. Students who see contradictory economic arguments, which arise with regularity in macroeconomic topics, or talk to other students who have had teachers present material in ways that contradict each other, have no way in which to interpret this lack of objectivity within the context of disciplinary analysis.

The emphasis on positive analysis, in addition to presenting a single perspective, leaves students thinking they are learning “truths” when in fact they are learning concepts that represents a specific set of assumptions about the economy and economic behavior that represent the neoclassical paradigm. To challenge the reliance on objectivity, however, is in part to challenge the

fundamental tenets of neoclassical economics (Miller, 1991). Miller outlines 11 normative assumptions embedded in neoclassical economics, such as decisions are best made by “free informed, rational individuals” and competitive markets as the best regulator of market activity. The paradigm created by these assumptions is critically evaluated and the implication for economic education addressed.

Leming (1987), in making the case for a normative economic education with a free-market orientation, argues that teaching concepts is insufficient. He argues that “ultimately all discussions of the goals of economic education...are based on conceptions of how society should be organized and how individual lives should be lived out in that society.” Thus he makes explicit what many do not: that the neoclassical paradigm represents a point of view with a particular set of values attached.

Much of economic analysis hinges on the idea that economic behavior can be analyzed using universal assumptions about the behavior of individuals. This assumption allows economists to simplify the models they use to examine the economy at the cost of excluding some of the very things that make it a social science. As a result, economics has adapted a methodology for analyzing social phenomena that is more closely allied to the scientific method. However, economists appear to lag behind scientists in recognizing the role of the observer in defining “truth”; scientists since Kuhn (1962) have acknowledged the role one’s point of view plays in creating theory and empirical questions.

**Impossibility of objectivity: the role of choice**

In science and other social science disciplines, the assumption of perspective is part of the discourse on methodology. In economics, however, the issue of methodology, outside of data analysis, is excluded from the mainstream curriculum though it is found in feminist, economic thought and heterodox literature. The questions economic researchers choose to ask are based on issues each individual thinks are important or interesting. These come at least partly from our experiences, which are in turn affected by, among other things, race, class, ability, religious background and gender. Not surprisingly, the influx of women in economics, for example, has significantly increased research into such topics as unpaid caring labor and gender-related issues.

As individuals, we face many choices. We choose our friends, who to vote for, how to raise children, or whether to raise them at all. In the same way, as educators, we also face choices, including the choice of curriculum, pedagogy and evaluation methods. These are not simply objective choices, but reflect the sum of our experiences.

As educators, our responsibility is to teach students more than simply content or a single perspective. When teaching economics as a positive discipline, however, students have no sense that the material represents a particular point of view. Instead, they are taught economics as if these theories

and ideas are truths, in the same way mathematical relationships or the chemical compounds exist. Often only in graduate school, if ever, are students taught that economic theories should be regarded as malleable and challengeable tools, not facts. As a result, the curriculum becomes training into a narrow way of thinking rather than teaching students how to think critically, an oft-stated goal of economics at the university level (Siegfried, John J., Bartlett, Robin, Hansen, Lee W., Kelley, Allen C., McCloskey D.N. & Tietenberg, Thomas H., 1991). Hansen (1998) argues that high school students cannot be expected to meet the goals of economic education set out for college students, but the education literature supports the idea of teaching critical thinking and evaluation of texts, even at the primary school level (Burstein and Hutton, 2005). Acknowledging economics' limitations as well as its strengths is an important part of learning critical thinking in economics.

Students also bring their own multifaceted backgrounds to the classroom. Much recent research in pedagogy emphasizes the importance of trying to connect the material to the student's experience, particularly for multicultural students (Gay, 2002). Incorporating these complex realities into the content increases the likelihood of students finding the subject matter relevant, compelling and engaging. But doing so asks students to see the material through their own eyes, which by definition is subjective.

For example, to students raised in the United States, the study of inflation

seems of little relevance because they have not experienced inflation as a factor in their lives. For these students, the most useful aspect is learning how to distinguish between real and nominal wages to ensure their salary increases cover inflation. When I taught at Florida International University in Miami, which had a large percentage of immigrant students, I always had at least one student who had lived through a hyperinflation. Their ability to bring their experience to class transformed the lesson from an academic one to something that happened to people like them. Because of that, I was able to teach by letting students talk about their experiences with inflation. In this case, the lesson was not only about wages and interest rates, but also about different policies and the devastating effects of high and variable inflation. These students also had a very different sense of what low inflation was. While I tried to teach essentially the same information in another school with primarily domestic students, their experiences, and the questions they asked, shaped the different lessons they learned.

### ***Perspective in the economics classroom***

The neoclassical view of the world may have much to offer; the ideas of opportunity costs and marginal analysis are applicable in many areas outside of traditional economic analysis. The neoclassical view does, however, contradict the ideas presented in other social sciences, in which social, political and historical factors affect both decision processes and their outcomes. In addition,

the neoclassical perspective can also contradict the experience of students themselves, who then are asked to choose to either believe in a system of ideas that contradicts the evidence of their own lives or reject the discipline entirely.

Every teacher has some freedom to determine what to teach in their classroom. Even when given a defined curriculum and so have little choice over content, each teacher makes a choice regarding what material to emphasize. As a result, what students learn from their high school economics classes can be quite different. The following examples of different types of economics teachers came from conversations with students in my Principles of Macroeconomics classes who took high school economics.

One student had a teacher who believed the market generally produced the best outcome, and so emphasized the negative effects of government spending while arguing the private sector allocates spending more efficiently. A second teacher concentrated on the effects of recessions and unemployment, spending more time examining the role of policy in stabilizing the economy. A third had a teacher who took a strong libertarian stand, arguing that government intervention, with the exception of public goods, is always inefficient. These different approaches could have coexisted in the same school system, although students are assumed to have taken the same class regardless of which approach they are learning (while the issues of perspective and subjectivity occur in all social science disciplines, economics is the only one claiming otherwise). Thus if

teachers are approaching economics as an objective discipline, they are all looking at “what is,” but that objective norm is different when teachers choose to emphasize different topics. Can a variable norm be consistent with value-neutral content? If not, then the very idea of teaching economics as a positive, objective discipline comes into question.

Teaching style also reflects individual experiences. While I was unable to find any research on teacher’s beliefs and pedagogy in economics, evidence from other social sciences “clearly indicate the impact of the classroom teacher’s goals on the content students are exposed to and how that content is taught (VanFossen, 2000).” Since economics is generally taught as part of the social science curriculum, the opportunity exists to incorporate economic analysis with that of other social sciences. If, however, the teacher is required to cling to the idea of objectivity, that becomes extremely difficult. This further limits the ability to integrate economics successfully into the social science curriculum for both students and teachers.

I had always viewed myself as someone who kept my personal views out of my class. My desire to do so was borne out of my experiences as a student. Having had professors who presented only one perspective within macroeconomics, I felt the only way to let students come to their own view on economics issues meant that I had to keep my own hidden. At least on that front I was successful—students generally could not guess my economic or political

views. However, I came to realize that simply by choosing to spend time on some material and not others, I made value judgments without allowing my students to know what they were. Any discussion (or non-discussion) of policy has important normative implications.

### ***Voluntary Content Standards***

To provide an illustration of the standard economics curriculum for high school I use one of the Principles from the *Voluntary National Content Standards in Economics* (VCS) developed by the National Council on Economic Education (NCEE) in partnership with the National Association of Economic Educators and the private Foundation for Teaching Economics (FTE). These Standards are intended to represent the “essential principles of economics.” For each Standard, benchmark goals are provided for students in grades 4, 8, and 12. These Standards exemplify the approach to teaching promoted by the professional economics organizations and determine the content used in the *Test of Economic Literacy*. The reason for using the Standards is not to attack them per se, but rather to illuminate the approach to teaching economics that underlies them.

These Standards stress principles over skills and facts, as opposed to guidelines in other disciplines (Hansen, 1998). Thus while using cost-benefit as a way to evaluate decisions is part of the Standards, little guidance is provided on how to do so. Similarly, no basic economic knowledge is part of the Standards,

so understanding the definitions of GDP, unemployment, or a deficit, for example, are not part of the expected content standards.

By focusing on principles, however, the VCS stress a single-view approach to economics, as these principles are presumed to be universal. Market outcomes are emphasized, and FTE lessons supporting the Standards focus on the importance of freer markets and individual freedom. In a study looking at 11 textbooks for high school economics, Leet and Lopus (2006) found that all incorporated the Standards into the text, although the extent and depth differed.

These Standards have been criticized for a variety of reasons. Hansen (1998) raised concern about the decision that the “standards be expressed with ‘parsimony,’” as this provided little guidance on how to apply these standards. This lack of a rich explanation increases the likelihood that teachers will misunderstand or misrepresent these ideas, particularly as many of the teachers have very limited training in economics. In a study done in 1995 for the 27 states that then required minimum coursework for licensure in a discipline, the mean number of semester credit hours required for economic teachers was 3.9, compared to 5 in political science and 16.6 for history (Dumas, Evans and Weible, 1997). Thus an economics teacher who only took one course in economics may be teaching material not covered in the class taken. This limited training, in addition to the lack of attention to content, causes Hansen to argue it may be quite difficult to achieve the goals set out by the Standards.

Siegfried and Meszaros (1988), in an article introducing the Standards, argue that including alternative perspectives would create unnecessary confusion and, “With too many qualifications and alternatives, teachers and their students may abandon economics entirely out of frustration born of confusion and uncertainty.” This is precisely the focus of Ferber’s (1999) critique, which highlights the uniformity and the false simplicity of the Standards. Ferber particularly objects to the idea that the teacher should avoid discussions of the strong assumptions behind these principles—the antithesis of critical thinking.

However, other social sciences acknowledge the role of perspective in their disciplines. Indeed, a high school economic text (O’Sullivan and Sheffrin, p.364) includes a discussion of the role of perspective in history (but does not acknowledge that same role in economics!). Several alternative approaches to the VCS have been suggested. Schneider and Shackelford (2001), propose alternative Standards to be included in any guidelines for economic education. These incorporate feminist and heterodox ideas, including the importance of economics of the family, nonmarket activities and incorporating the role of gender and race into economic analysis. Lewis and McGoldrick (2001) offer ways to adapt the Standards to include more recent scholarship, including that which challenges the mainstream. They provide an example using Standard 13, which addresses the determination of income, and demonstrate ways of modifying the curriculum to include more realistic and alternative perspectives. Maier and Nelson

(forthcoming) provides a critical commentary on the Standards and a more progressive approach to the traditional topics in an economics course.

Significantly, these authors, along with Ferber (1999), raise concerns about the misleading emphasis on objectivity in the Standards.

***Incorporating subjectivity into economic education:***

Some economists, while acknowledging economics may not be truly objective, argue the costs of moving away from ostensible objectivity are too high, in terms of time and the confusion it may create. In writing about the Standards Siegfried and Meszaros (1998, p. 143), while acknowledging that all models are based on assumptions, argue that

“To report all of those assumptions each time would detract from the effectiveness of the standards, as readers would be left with the responsibility of sorting the principle from the assumptions ....”

However, the pedagogical costs of not making assumptions explicit are considerable, particularly if one of the goals of economics education, and education overall, is to teach students to learn think critically and evaluate economic ideas and concepts. This also ignores the role of assumptions in the determination of what was included and excluded from the Standards themselves.

The objective approach to economics communicates a certainty that does not mirror the world the students live in. These theories may be inconsistent with students' experiences, leaving them with the choice of either choosing to believe

what they are taught or what their life experience is, although it is certainly possible to teach students the relationship between economic ideas and their own lives. The decision to present only the neoclassical, objective approach in the Standards was intentional, and in fact, some of the people involved in creating the Standards state that including “minority views of economic processes risks undermining the entire venture” (Siegfried and Meszaros, 1998). As a result, Lewis and McGoldrick (2001) argue, the Standards are “not only perpetuating the narrowly-conceived neoclassical paradigm but also indoctrinating future generations with their particular conception of economics.” Similarly, in her critique of the VCS, Marianne Ferber argues “merely presenting the consensus comes perilously close to brainwashing, rather than teaching (Ferber, 1999).”

*Example: Teaching International Trade*

Content Standard 5 states that “Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.” One of the Benchmarks used for Grade 8 acknowledges that not everyone gains from trade. “Despite the mutual benefits from trade among many nations employ trade barriers to restrict free trade for national defense reasons or because some companies and workers are hurt by free trade (National Council on Economic Education, 2005).” However, in a Benchmark for Grade 12 students

are warned that the effect of import barriers is to increase costs to consumers, reduce profits for firms and decrease job opportunities. This is followed by Content Standard Six, which states “When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.” Thus the implication of the lessons are that trade between countries only occurs when it is beneficial to the actual traders and will increase consumption and production overall.

This approach ignores many realities that are especially important when translating theory into the classroom. For example, trade has significant redistributionary effects and those who are made worse off are rarely compensated. In addition, while the Standards examine the drawbacks to trade barriers and the role special interests play in creating those barriers, they ignore possibility that different special interests, political or otherwise, could cause trade to occur that might have negative economic effects. The Standards do not address this issue at all—no mention is even made of the losses that also occur as a result of trade. In addition, the Standards, and economics overall, provide little guidance on how to analyze the disaggregated effects of income redistribution, since cost-benefit analysis in this case is an aggregate calculation. However, these ideas can be woven into the material in a manner that makes the material and the pedagogy richer. The following are several ways to approach teaching this material. Schneider and Shackelford (2001) demonstrate a different way to

present some of the inequalities that can arise from trade than the one presented below, focusing on the redistribution of income within the household in some developing countries.

One approach is not to cover it at all. The idea of comparative advantage can be confusing to students and some teachers never cover it. This leaves it to the students to figure out whether trade is desirable or not based on the idea of opportunity cost and other lessons they learned in their economics class as well as information acquired elsewhere.

Another approach, taken in most textbooks, is to cover the idea of gains from trade and demonstrate that countries can expand their production and consumption through trade. Trade barriers raise prices and consumers are worse off at the expense of other groups and on net are never beneficial. This leads to the conclusion that when trade occurs it is desirable because it makes both countries better off, and trade barriers distort trade and only make people worse off. This result, consistent with the mainstream view of the profession and at the level of high school and most principles class, is generally presented without challenge.

In reality, people's views on trade are not so positive. A class on trade could instead examine *why* people have different views on this issue. According to a Pew Research Center survey in 2003, 21% of people in the United States thought global trade's impact on the country was "very good," with another 57%

believing it was “somewhat good.” These estimates varied quite a bit across countries, with 37 believing the impact was very good in Germany and but only 12 in Japan. The determinant of gains from trade is a net national calculation; that is, while total production and consumption may increase, significant redistributionary effects may occur that are not addressed by policy. There are some programs, such as the Trade Assistance Act, which are designed to help people harmed from trade. The availability of this aid, however, is limited. In addition, most treatments of trade, outside of a perhaps a specialized college course, ignore the difficulty in actually determining the net effects of trade with a country or countries. This calculation requires the use of highly aggregated general equilibrium models and very strong assumptions.

By explicitly addressing the distributionary issue, teachers can address students’ actual experiences. For example, when conducting an economic education workshop in Louisville, I was asked what to say to a student whose parents were laid off when an auto plant closed down because of trade. At that time, all I had to offer her was the standard argument that overall the country gains, and so in the long run they are better off. I think that answer was equally unsatisfactory for both of us.

A response that speaks more directly to the student’s experience might begin by observing that for some students and sectors of the country, jobs have been displaced either because of trade or the technological change that trade

allowed. Thus students whose parents had been employed in the steel, auto and textile sector would be more likely to have a negative experience with trade. Other sectors, however, have done very well and students whose families are employed in more highly skilled sectors may be at the other. Without addressing these experiences, simply pointing out the benefits of trade does not provide students the resources to apply this knowledge to their lives.

The students are also likely to be more engaged in a discussion they see as relevant, making it easier to move the discussion from one of perceptions of trade to the economic views on trade. Economists who support freer trade (which is the majority of economists) are quick to acknowledge the real and sometimes significant dislocation costs involved, although they are less frequently addressed in class or in textbooks. On the other hand, the popular press tends to focus on the negative effects of trade. Part of that difference is one of the benefits of trade is seen in cheaper consumption goods, which is a more diffuse positive effect than the negative effect of a factory closing because production is moving offshore. This also provides an opportunity to discuss how the gains are distributed differently from trade. One implicit assumption in the economic analysis is that the costs to those who lose (using traditional economic terminology) are made up by those who gain, even though they are likely not the same people. Addressing that assumption explicitly allows students to decide whether they agree with that evaluation method and what possible policy implications that might have. The

lesson can then be extended to discuss other political and social factors that might be affected by trade. In this way, students understand *why* most economists view trade in such a positive light but others do not. This creates a deeper level of learning.

### Pedagogy

Combining a critical approach to content with a pedagogy that incorporates different learning styles enhances overall learning. Economics (as well as most topics), is traditionally taught in lecture format, in part because economics is very content-driven and the amount of material in economic textbooks is substantial. This continues to be the dominant approach, at least at the university level (Becker and Watts, 2001). The lecture approach, however, does not benefit all types of learners. In addition, as the education literature has increasingly demonstrated, different teaching styles reach different types of students (Tyler, et. al, 2006, Gay, 2002). Some students can learn effectively in a lecture or individualized setting, but women and some multicultural students learn best when group work and projects are emphasized (Anderson and Adams, 1992, Bartlett, 1996). In addition, critical thinking occurs when students actively participate in a dialogue or debate (Hsui, 2002).

One example of alternative pedagogy is to have students form groups to role-play the effects of international trade, with each group takes on the role of a

different demographic group that is affected. One group might be workers in a closing factory, while another contain workers in business expanding from trade. A third group could be simply consumers, and a fourth could be the government. The number of groups can be expanded depending on the size of the class. A traditional economics class would focus only on the economic effects. A much richer exercise, however, would ask them to think about *all* the effects; not only economic but the effects on family structure, socio-economic standing and the communities affected. For example, the class could discuss the social, political and economic implications of workers needing to move or invest in retraining to get work. Similarly, for students who have high-educated parents, the effect of downsizing on household income and family dynamics may be particularly relevant issues for discussion. The role gender, race and education play in determining the effects of trade are also possible topics for discussion.

Another approach is to have students act as policy makers on a current trade issue. Several examples are available or can be adapted from the National Council of Education's website. The lesson *To Buy or Not to Buy* examines domestic consumer boycotts but the arguments easily extend to international boycotts as well (although the negative effects may be less domestically). That assignment asks students to outline the broad objectives of the boycott and what boycotts they might support. Instead of simply asking students what boycott they would support, however, the students could explore how their gender, religion (or

lack thereof), parents views, race, and other factors affect that decision. By trying to get students to see *why* they have the views they have, rather than simply what their views are, students begin a reflective process that will help them be more, rather than less, objective (For an example of how to conduct this type of exercise, see Butler, 2006). Similarly, in the case study *US and EU Go Bananas over Trade*, students are asked to recommend a policy for resolving the US-EU trade dispute to the head of the WTO. Again, having them reflect on the source of those views gives students them a richer understanding of economics and its interaction with other social sciences.

## CONCLUSION

Economics' insistence on the artificial distinction between positive and normative analysis implies a level of objectivity that is impossible to achieve. Perspective affects the assumptions and norms of the discipline, which do change over time. Many factors affect the pedagogical choices of a teacher, including their training and background, and thus are not value-neutral either; the presentation of the content informs how students learn. By not acknowledging our biases, students either have to accept economics as taught or reject the discipline itself.

Furthermore, without incorporating their experiences into the classroom, deep learning will not occur. Economic education is extremely important, but to

succeed it needs to incorporate student's experiences and explore the real contradictions and biases that exist in economics. By teaching students to how to think critically about economics, we make them better consumers of economics information and better prepared to face life's challenges.

## References

- Anderson, James A. and Maurianne Adams. (1992). "Acknowledging the learning styles of diverse student populations: implications for instructional design. *New Directions for Teaching and Learning*. 49, 19-33.
- Bartlett, Robin. L. (1996). "Discovering diversity in introductory economics." *Journal of Economics Perspectives*. 10, 141-153.
- Bartlett, Robin, L., ed. (1996). *Introducing Race and Gender into Economics*. London: Routledge Press.
- Blau, Francine D. (1981). *Signs*. 6, 538-540.
- Bonner, Patricia. (2004). *To buy or not to buy?* Retrieved December 15 from <http://www.econedlink.org/lessons/index.cfm?lesson=EM552&page=teacher>.
- Butler, Alison (2006). "Assumptions, economics and policymaking: how personal perspective shapes policy choice, mimeo.
- Ferber, Marianne A. (1999). "Guidelines for pre-college economic education: a critique." *Feminist Economics*. 5,135-42.
- Gay, Geneva. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education*. 53, 106-116.
- Hansen, W. Lee. (1998). "Principles-based standards: on the voluntary national content standards in economics." *Journal of Economic Education* 29, 149-56.
- Leming, James S. (1987). On the normative foundations of economic education, *Theory and Research in Social Education*. 15(2), 63-76.
- Lewis, Margaret, and McGoldrick, KimMarie (2001), Moving beyond the masculine neoclassical classroom. *Feminist Economics*. 7(2), 91-103.
- Miller, Raymond C. (1993) In order to save the world for human habitation, we must stop teaching economics. *Theory and Research in Social Education* 21(1), 25-48.
- National Council on Economic Education (2005). *National voluntary content standards*. Retrieved August 5, 2006 from

<http://www.ncee.net/ea/standards/standards.pdf>.

Nelson, Julie A. (1996). *Feminism, Objectivity and Economics* London ; New York : Routledge.

Robinson, Joan. (1962). *Economic Philosophy*. London: C. A. Watts & Co. p. 1.

Schneider, Geoff, and Shackleford, Jean. (2001) "Economics standards and lists: proposed antidotes for feminist economists," *Feminist Economics*. 7, 77-89.

Schweke, William. (2004). "Getting beyond argument and invective: can we bridge the gap between free and fair trade advocates?" Presented at the Regional Economic Development: Current Issues Seminar Series at Western Michigan University.

Sheffrin, Steven M. and O'Sullivan, Arthur (2003). *Economics in Action*. Pearson Prentice Hall.

Siegfried, John J., Bartlett, Robin, Hansen, Lee W., Kelley, Allen C., McCloskey D.N. and Tietenberg, Thomas H. (1991). "The status and prospects of the economics major." *Journal of Economic Education* 22, 197-224.

Siegfried, John J. and Bonnie T. Meszaros. (1998). "Voluntary economics content standards for america's schools: rationale and development." *Journal of Economic Education*. 29, 139-48.

Tsui, Lisa (2002). Fostering critical thinking through effective pedagogy: evidence from four institutional case studies. *The Journal of Higher Education*. Vol. 73 (6), pp. 740-763.

Tyler, Kenneth, M., Boykin, A. Wade, and Walton, Tia R. (2006). "Cultural considerations in teachers' perceptions of student classroom behavior and achievement," *Teaching and Teacher Education* 22 pp. 998-1005.

VanFossen, Phillip J. (1999). US and EU go bananas over trade. Retrieved December 20 from <http://www.econedlink.org/lessons/index.cfm?lesson=EM129&page=teacher>.

\_\_\_\_ (2000). "Teachers' rationale for high-school economics, *Theory and Research in Social Education*. 28, 391-410.