

Battling the Forces of Darkness: How Can Economic Freedom Be Effectively Taught in the Pre-College Curriculum?

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Abstract

How can the institutions of a free-market economy be sustained if teachers and students fail to grasp a basic economic understanding? This article describes the current status of economic education at the pre-college levels including teacher knowledge, student knowledge, and the status of economics in the school curriculum. Concern is expressed that the weak status of economics at the pre-college level may have contributed to the recent decline of economic freedom in the United States. Next, we will examine steps that can be taken to strengthen economics at the kindergarten to grade 12 level. We suggest three approaches: changes in pedagogy, curriculum, and teacher training. We believe that taking actions along these lines will deepen young people's understanding of free markets and strengthen their support for economic freedom.

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I. Introduction

In most American elementary and secondary schools, the teaching of economics receives little serious attention. Economics is nearly absent from elementary school programs—crowded out by a heavy emphasis on teaching reading and mathematics. In high school programs economics also has a weak presence. Some programs offer a stand-alone, one-semester course in economics, usually designated for students in grades 11 and 12, while others claim to integrate economics content within a range of history and civics courses. By

itself, the slight, diffuse presence implied by this profile points to a clear problem. Nobody would take seriously any proposal to restrict the teaching of mathematics or English, for example, along similar lines. It would be understood that those subjects are too important to get such short shrift. But there is more to the problem than that. Most pre-college teachers who do try to address economics in a stand-alone course or in the context of a history or civics course are poorly prepared to do so. They know too little about economics to teach it well. It is not surprising, then, that results from state and national assessments have consistently shown that most American students learn very little about economics in the course of their school programs. We are left to wonder: how can the institutions of a free-market economy be sustained if teachers and students fail to grasp a basic economic understanding and the curriculum provides little opportunity for in-depth instruction on the subject?

The problems implied by this overview are large and complex. We focus here on two parts of the whole. First, to establish a basic premise, we describe the current status of economic education at the pre-college level in some empirical detail, describing aspects of teacher preparation and program configurations. In this description we find generally a pattern of weak attention to economics in the schools, while noting also some promising developments. Second, we examine steps that could be taken to strengthen the teaching of economics in the kindergarten to grade 12 (K-12) schools. We suggest three courses of action: changes in pedagogy, to emphasize direct approaches to teaching the economic way of thinking; changes in curriculum, to include more economic content; and changes in teacher training, with support to be sought from the private sector. We include remarks suggesting that action taken along these lines might deepen students' understanding of free markets and help strengthen students' support for economic freedom.

II. The Current Status of Economic Education

A. Teacher Preparation

Teacher preparation for economic education is generally weak (Miller and VanFossen, 2008). Except in advanced placement economics courses, economics is taught for the most part by social studies teachers who hold comprehensive or general social studies certifications. These teachers typically have completed several college or university courses in history, plus a smattering of courses in other

social science areas. They typically have avoided coursework in economics. Miller and VanFossen observe that, as of 2008, for states that specify minimum coursework requirements in the social sciences in their licensure rules, social studies teachers in training took a mean number of 3.9 semester hours in economics—slightly more than a one-semester course.

Similarly, a report on economic education in Wisconsin includes a transcript analysis of courses taken by prospective teachers at the University of Wisconsin-Madison School of Education (Schug and Western, 2003). The transcripts showed that 72% of the University's secondary education broad field social studies majors took no courses in business or economics. Elementary education majors at the University of Wisconsin-Madison were even less likely to have taken business or economics courses. Eighty-one percent of them took none at all. This lack of economics preparation matters: students learn more economics from teachers who have more formal preparation in economics (Watts, 2005).

B. Programs in the K-12 Curriculum

The Council on Economic Education conducts a biannual survey of the 50 states to describe the current status of economic and financial education. The survey results for 2011 show that all 50 states include economics in their state standards. However, only 40 states require implementation of the economics standards. Fewer than half of the states (22) include high school economics as a graduation requirement, and fewer still (16) test for economic knowledge.

We regard a high school economics course as a bare minimum curricular requirement, necessary for introducing economics in a way likely to foster economic understanding. Any school subject regarded as fundamental should be taught early and often, like many other subjects are. Educators cannot assume, moreover, that a single high school economics course will have been preceded by a sequential program of study beginning in the early grades. Although several states now have standards calling for economics to be taught in the earlier grades, in practice schools rarely take those standards seriously. Owing to other state and federal requirements, including those built into the No Child Left Behind legislation, little time remains in the elementary school curriculum for teaching subjects

beyond mathematics and reading/English (Center for Education Policy, 2007).

Although the status of economics in the K-12 curriculum looks bleak overall, some exceptional initiatives stand out. For example, the state of Georgia recently introduced End of Course Testing as a requirement for students taking economics and several other high school courses. End of Course Testing replaces the state high school graduation test. The intention of this testing program is to hold teachers accountable for results in student learning. The program also provides an incentive for students to study hard, because their performance in the course contributes to their grade on the test. In 2012, students taking economics courses showed the biggest End of Course Testing gains, as compared to students in other courses, with 77% passing, up from 72% in 2011 (McManus, 2012).

Other promising initiatives have emerged in the charter school movement. BASIS charter schools, founded by economists Michael and Olga Block, rank in the top ten of all schools in the nation by *Business Week*, *Newsweek*, *U.S. News and World Report* and *The Washington Post* (see <https://www.basisschools.org>). BASIS schools follow a strong economics curriculum which requires, for example, that all students pass AP Microeconomics and AP Macroeconomics.

Charter schools that specialize in teaching economics—including charter schools in inner-city settings—have often performed well. Schug and Hagedorn (2004) have reported on a K-8 charter school that follows an economics and personal finance curriculum at each grade level. Assessment results for this school showed that its students made significant gains on pre- and post-test knowledge of economics and personal finance, outperforming students in a comparison group. In a separate study, Schug and Hagedorn (2006) found that intensive summer programs for inner-city youth also produced meaningful knowledge gains. One such program was a two-week economics and personal finance program called the Youth Enterprise Academy. An analysis of the pre- and post-test scores over an eight-year period revealed large, statistically significant student gains on tests of economic and financial knowledge. These exceptional cases show that young people can learn economics. All that remains is for teachers to teach it.

C. Assessments of Student Learning

For decades, state and national tests have shown that young people have a weak understanding of economics (Becker et al., 1990). This finding holds even for students who have taken a high school course in economics. Walstad and Rebeck (2001) reported that students who completed an economics course were able to answer only 61% of the questions correctly on the Test of Economic Literacy, compared to 41% for students who had not taken economics. A 2005 survey (Harris Interactive) confirmed this low level of economic knowledge among high school students: 2,242 students in grades 9-12 completed the 24-item survey, which was prepared by the then National Council on Economic Education. Of the students surveyed, 60% received a failing grade by answering less than 60% of the items correctly.

The first National Assessment of Educational Progress in Economics (NAEP) was performed by the U.S. Department of Education in 2006. The data were collected from a stratified, national sample of 11,490 twelfth-grade students in 590 public and non-public schools, representing a target population of 3,059,000 students. An examination of the results sorted by achievement level revealed that 79% of twelfth graders performed at or above the Basic level, 42% at or above Proficient, and 3% at Advanced. Although one must be cautious in comparing NAEP results in economics to the performance of students on other tests, this level of achievement was much higher than the levels reported for the 2010 assessments in history, civics, or geography. Yet the economics results show that 45% of the students are proficient or advanced in their economic understanding.

More recently, the Wisconsin Policy Research Institute released a report on high school students' economic understanding (Niederjohn, 2011). With the cooperation of Wisconsin teachers, 480 randomly selected Wisconsin high school students completed the *Test of Economic Literacy* developed by the Council for Economic Education. The 480 students earned, on average, a correct score of 14.5 out of the 30 questions (48%). Only 21% of the students knew what Gross Domestic Product is, 19% knew what inflation is, and 14% knew what entrepreneurs do. Only 11% understood the relationship between market prices and competition.

D. Economic Education and Economic Freedom

We can point to pockets of success in various states and individual schools where good things are being done in economic education. More generally, however, the evidence suggests that economic education takes a back seat in most schools, and that most students attain only low levels of economic understanding in their K-12 programs. We wonder what the relationship might be between weak school programs in economics and prevailing levels of economic freedom in the United States. Might low levels of achievement in economic understanding, sustained over many decades, contribute to an erosion of economic freedom?

Most economists agree that a nation's basic political and legal institutions are fundamentally important to long-term economic growth and prosperity. The *Economic Freedom of the World Report* (Gwartney et al., 2012) identifies these institutions as political stability, secure private property rights, freedom to trade, competition, the profit motive, and legal systems based on the rule of law. To the extent that these institutions are present in a given society, that society enjoys economic freedom. High levels of economic freedom lead to long-term investments in physical and human capital and subsequent economic growth.

The United States, historically one of the world's freest economies, is losing ground. The results of the *Economic Freedom of the World Report* (Gwartney et al., 2012) show that the ranking of the United States, among 142 nations, has fallen from second in 2000 to eighth in 2005 and to eighteenth in 2010. United States ratings declined in four of the five main areas in the index, including size of government, protection of property rights, freedom to trade, and extent of regulation.

What explains these changes? Ordinary observation suggests that central planning has made a comeback, nurtured in various ways by American politicians and with the tacit approval of the public. Budget deficits and the national debt have soared. Politicians drag their feet regarding free trade. Key economic sectors such as energy, health, and public education have come under far-reaching regulatory control. It would be facile to suppose that weaknesses in our schools have single-handedly resulted in these outcomes. At the very least, however, we can say that school programs in economic education have failed to produce any antidotes to widespread complacency about the declining levels of economic freedom in the United States.

American voters, perhaps as a result of economic ignorance, have failed to punish the responsible parties in Washington and in the state capitols.

III. Recommendations for Reform

Here we outline an agenda for improving economic education in the K-12 schools. We propose changes in pedagogy, curriculum, and teacher training.

A. Changes in Pedagogy

Economic educators should rely on those teaching practices that are most likely to improve student learning. They should resist old bromides about instruction that are promulgated within the teaching profession regardless of evidence about effects on student learning.

For decades, progressive educators—professors in schools of education, but also school principals and superintendents—have recommended instructional approaches that favor unguided teaching or partially guided teaching over more direct forms of instruction. Unguided approaches are called by many different names, including discovery learning, problem-based learning, inquiry learning, and constructivist learning. Details of practice vary in particular cases, but the underlying idea of unguided learning is that teachers should refrain from telling students anything or showing them how to do anything. Instruction of that sort, it is held, merely stifles genuine learning. Instead, teachers should create an atmosphere in which students will feel empowered to explore problems that are of interest to them; teachers should then stand aside and encourage the students as they carry out inquiries and construct knowledge arising from the information and ideas they discover.

How well does teaching of this sort work at the pre-college level? In a recent summary of research, Clark et al. (2012) review evidence from well-designed, controlled experimental studies dating from the 1980s to the present. They reach an unambiguous conclusion:

Decades of research clearly demonstrate that *for novices* (comprising virtually all students), direct, explicit instruction is more effective and more efficient than partial guidance. So, when teaching new content and skills to novices, teachers are more effective when they provide explicit guidance accompanied by practice and feedback, not when they require

students to discover many aspects of what they must learn.
(p. 6)

Richard Mayer (2004) reached the same conclusion. He reviewed studies conducted from 1950 to the late 1980s, comparing pure discovery learning (defined as unguided, problem-based instruction) with guided instruction. He found that, in each decade, empirical studies provided strong evidence that the unguided approach did not work. He also noted that evidence of ineffectiveness did nothing to dissipate enthusiasm for discovery learning among its proponents. Advocacy for discovery learning continued to pop up, often under a different name, following each wave of contrary evidence. Each new set of advocates would appear to be unaware of the research history or uninterested in it.

Economic educators can do better. They may avail themselves of an expanding supply of instructional materials designed for explicit teaching of economic reasoning, or the economic way of thinking. (Disclosure: author Mark Schug has participated in the development of several of these publications.)

For decades, leading economic educators have contended that economic education in the K-12 schools should focus on teaching students how to use the economic way of thinking (see, for example, Wentworth, 1987; Wentworth and Western, 1990). According to this view of economic education, teachers should introduce a small set of basic principles of economics and then engage students in extended practice using those principles to think in new ways about a wide range of incidents and issues in market activity, as well as in the institutions that surround that activity. For example, take the following principle: *people respond to incentives*. How might this principle explain certain observed consequences of rent-control legislation? One set of principles suitable for use in this manner has been formulated in *Voluntary National Content Standards in Economics* (Council on Economic Education, 2010). These standards have now begun to influence the development of state standards, textbooks, and other instructional materials.

Instructional materials designed to teach the economic way of thinking have been developed for use in various classroom settings. One example is *Capstone: Exemplary Lessons for High School Economics* (2005), by Jane Lopus et al., appropriate for use in stand-alone high school economics courses. Others include *Focus: Understanding*

Economics in U.S. History (2006), by Mark C. Schug et al., and *Economic Episodes in American History* (2011), by Mark C. Schug and William C. Wood, appropriate for use as supplementary textbooks in history courses.

B. Changes in Curriculum

Research dating back several years shows that children and adolescents can do well in learning to use the economic way of thinking (Miller and VanFossen, 2008). But success depends in part on curricular arrangements. High school students who take a course in high school economics score significantly higher on assessments of learning than students who do not take such a course. Assessments of economic learning for students who complete social studies courses (with or without an infusion of economics content) generally show no gains from pre- to post-test scores.

These findings intensify the debate between those who favor an integrated economics curriculum versus those who favor a specialized economics curriculum. It is not surprising that it is hard to detect an improved knowledge of economics following students' completion of courses such as United States history. It is easy to imagine history teachers reporting to researchers that they integrate economics into the teaching of their main subject, but it seems unlikely that many history teachers would explicitly teach economic concepts and then encourage students to use them when thinking through various problems presented in well-designed materials.

This is not to say that educators need to give up on the idea of integrating economics content into social science courses. To do so successfully, however, teachers need to introduce economics concepts and principles explicitly in economics lessons oriented to the host subject. When this happens, integration can be effective. Schug and Niederjohn (2008), for example, have found that when lessons explicitly introduce economics content in United States history classes, statistically significant gains in knowledge of economics can be achieved. Under the right circumstances, economics integration in various history and civics courses can serve as an effective complement to the capstone high school economics course.

Stated informally, the lesson seems to be this: if you want results in economic education, include economics prominently in economic education. After reviewing research conducted at elementary and

secondary school levels, Michael Watts (2005) reported that students learned more economics when they studied with teachers who knew more economics and spent more time teaching economics using appropriate instructional materials. This conclusion will strike many readers as mere common sense. Nonetheless, we find it reassuring.

C. Changes in Teacher Training with Help from the Private Sector

The history of teacher training in colleges and schools of education amounts to a history of complaint about courses in education. Critics claim that these courses are shallow at best and that they provide a sheltered arena in which faculty members can, to harmful effect, engage students in time-wasting activity governed by fads, ideology, or personal preoccupations, rather than passing on knowledge about how to teach, say, mathematics, economics, or English. Reviewing main themes in the published work of people who teach education courses, E.D. Hirsch (1996), for example, describes what he calls a “thoughtworld” (pp. 69–126)—an orthodox, institutional view of teaching and learning within which academic disciplines and instructional skills are routinely denigrated.

Economic educators can find substitutes for these much-maligned sources of guidance. Several organizations around the nation now offer economic education for teachers in a variety of online and face-to-face formats. They include the Federal Reserve Bank of St. Louis, the Foundation for Teaching Economics, and several college- and university-based Centers for Economic Education and state Councils on Economic Education. By and large these organizations offer economic education programs for teachers who are already at work in classrooms, as opposed to students enrolled in pre-service training programs in college and university schools of education.

The focus on in-service teachers has at least four advantages. First, those teachers attend training programs voluntarily rather than being required to attend by certification requirements or other regulations. The voluntary nexus makes for participants who are more likely to be eager learners. Second, in-service teachers who attend these programs teach students every day. They are well positioned to apply what they learn and evaluate their efforts by reference to effects on their students’ responses. Third, the instructors at work in these training programs are often themselves talented teachers. Why otherwise would teachers who have many

professional development choices volunteer to attend? We suspect, further, that the instruction provided in teacher workshops is much more engaging than what is commonly taught in traditional principles of economics courses at colleges and universities. Finally, although the studies differ in approach, research in economic education reveals that workshops and courses for teachers are associated with gains in student learning (for a recent summary of research, see, for example, Swinton et al., 2011).

The Georgia Council on Economic Education provides a case in point. The Georgia Council on Economic Education is a private non-profit organization that receives its support from businesses, foundations, and individuals. It offers several workshops for teachers: more than 1,200 workshops have been provided over the past 11 years, attended by nearly 30,000 teachers (Georgia Council on Economic Education, 2012).

The current context of economic education in Georgia is somewhat unique. Since 2004, Georgia has required that every student who is enrolled in, or receives credit in, a state-required course, including economics, must take the End of Course Test once the course is completed. These tests count for 15% of a student's final grade. Although it is possible to pass the courses without passing the End of Course Test, students are provided with an incentive to perform well on the test.

Georgia Council on Economic Education programs are effective in improving teachers' economic understanding. Within the End of Course Testing context, the Georgia Council on Economic Education developed a two-day workshop, offered to high school economics teachers to improve student performance in Georgia's economics courses. Swinton et al. (2011) analyzed the program for effectiveness. They were given access to the End of Course Testing economics scores by the Georgia Department of Education, which included three years of data. They also obtained teacher attendance data from the Georgia Council on Economic Education. Swinton and his colleagues were able to test four alternative sampling strategies involving large sample sizes. Their most important sample for our purposes included teachers who took the Georgia Council on Economic Education High School Economics workshop and teachers who did not take the workshop ($N = 132,255$ students).

After a careful analysis, the authors concluded that the students of teachers who attended the Georgia Council on Economic

Education High School Economics workshop achieved significantly higher scores on the End of Course Test in economics than other students. Specifically, teacher participation in the Georgia Council High School workshop resulted in a 5.7% of a standard deviation increase in student performance on Georgia's End of Course Test in economics. The authors note that compared to other treatments usually considered in public education policy, such as class size reductions, this two-day seminar is extremely cost effective.

The case of the Georgia Council on Economic Education is somewhat exceptional; it might be the most effective and cost efficient source of in-service training in the nation. For that reason, it represents a model for improving the teaching of economics with private sector support.

IV. Conclusions

Economic education continues to be haunted by old ghosts. Teachers by and large remain poorly prepared to teach economics. State and national tests continue to show that young people emerge from 12 years of schooling with little understanding of economics. The school curriculum in most cases remains weak, often depending narrowly on a one-semester economics course to correct for years of curriculum neglect. This state of affairs could be different. Scholars and teachers have identified ways to make changes for the better, and some exemplary results have been achieved. Still, no comprehensive, evidence-based reform has taken hold. Meanwhile, measures of economic freedom show declining scores for the United States. The stakes therefore look high.

We should not rely on a single high school economics course to provide the level of economic understanding required of today's citizens. Economic education on that meager scale will not suffice, for example, to give equal curricular attention to the public sector (the required content in government and civics courses, which are typically addressed over several school years) *and* the private sector (content provided in perhaps one economics course). Achieving parity on that score would involve increasing the amount of specialized and integrated teaching of economics in the K-12 schools.

The overall task will require big changes in pedagogy, curriculum, and teacher training. It sounds like a tall order, and it is. But we can look to private-sector organizations such as the Georgia Council on

Economic Education for evidence that the necessary changes are not impossible to conceive or attain.

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