CREATING A STANDARDS-BASED ECONOMICS PRINCIPLES COURSE

by

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American Economic Illiteracy

Americans know little about economics. A comprehensive survey conducted for the Advertising Council (1975) detailed wide gaps in economic knowledge among not only students and educators but also business and financial leaders, professionals, and the clergy. A more recent national survey conducted by the Gallop Organization revealed that only two percent of the public and only 42 percent of college seniors could recognize an example of monetary policy action by the Federal Reserve. It also revealed that most of the surveyed individuals knew that prices in competitive markets are determined by supply and demand, yet 65 percent of the public and 43 percent of college seniors believed that in an "oil crisis" government should control the price of oil (Walstad and Larsen 1992).

A still more recent and much publicized study, based on a test of basic economic knowledge developed by the National Council on Economic Education and conducted by Louis Harris & Associates (Harris 1999), demonstrates that people show little understanding of either microeconomics or macroeconomics.[1] On basic microeconomics questions, only 58 percent of adults knew that people would most likely respond to a doubling in the relative price of beef to poultry by buying more poultry and less beef. Only 37 percent understood that because resources are limited, people must make choices about how to use them. Barely one-third understood that competition in the marketplace serves to lower prices and increase quality.

Test takers showed even less understanding of basic macroeconomics. Fewer than two in five adults recognized that money does not hold its value in times of inflation. Only one in three recognized that people who borrowed money at a fixed interest rate are most likely to benefit from inflation. Instead, one in three believed that banks lending at fixed interest rates benefit from inflation.

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[1] The examination itself and detailed results of the literacy survey are available at www.nationalcouncil.org/poll/results.html.

Test takers also lacked a basic understanding of the economics of government. Only 45 percent knew that if a city government imposes a binding ceiling on rents, people will want to rent more apartments than are available. Only half the adults understood that in any year when federal government expenditures are greater than its revenue, the result is a budget deficit. Almost one in four confused "deficit" and "national debt." Adults did not understand the concept of public goods. Only a third of adults understood that government-supplied products and services usually benefit more than one person at a time whether they have paid for them or not.

Test takers did better with questions that concerned their day-to-day lives. When deciding which of two items to purchase, 86 percent of adults understood that one should compare the costs with the benefits of both items. Four of five adults knew that if the United States were to stop importing automobiles from other countries, U.S. automobile manufactures and not U. S. consumers would be most likely to benefit. Two out of three adults understood that when a person rents an apartment both the renter and the landlord benefit.

The lack of economic understanding displayed by adults appears even more shocking when one realizes that adults generally believe that economics is important. Seventy-four percent of adults reported themselves either very or somewhat interested in economics. Eighty-eight percent of adults believed that it is very important for politicians to have a good understanding of economics. Strikingly, ninety-six percent of American adults agreed that basic economics should be included in high-school education.

These findings are reaffirmed by respondents to the Minneapolis Federal Reserve Bank's Economic Literacy Survey[2] (Fettig, 1998). Only half of the survey respondents understood that "When industries or countries specialize in producing goods and services," the result is "greater economic interdependence." When asked "What is the most important task of all economies?" a mere

[2] For complete results of the survey, see the Minneapolis Federal Reserve Bank web site at minneapolisfed.org.

twenty-eight percent chose “To make the best use of scarce resources.”

Professional economists might quarrel with the results and meaning of these surveys. Objections can always be raised to, among other things, the selection of questions, their wording, their dependence on economic jargon, what is implicitly held constant, and the like. Yet, four national surveys administered by respected survey firms all support the same conclusion. Americans know little about economics.

The College Economics Principles Course Viewed as a Missed Opportunity

The principles of economics course, as taught at most colleges and universities, continues to be a missed opportunity to improve economic literacy. Complaints about the principles course are hardly new. They date back to the early post-WWII American Economic Association report on undergraduate economics (Taylor 1950). That report recommended that: (1) The number of objectives and the content of the elementary course should be reduced; (2) Economics should be granted a more important place in Liberal Arts requirements; (3) Students should receive more training in the use of analytical tools to deal with current economic problems; (4) Students should be trained to follow current news to enhance their interest in the applicability of economics; and (5) The quality of classroom instruction should be improved.

Similar dissatisfaction persists today. One major complaint voiced recently is that the goals of the principles course are in serious conflict. McConnell (1998, p. 39) argues that students who take only principles should achieve a “usable level of economic literacy” and that students who will go on to study economics further should achieve a “viable foundation of economic understanding” for subsequent course work. He also contends that the principles course should stimulate student interest in economics and contribute to the intellectual maturation of all who take it.

Attaining these goals is difficult because of the evolution of the discipline and textbooks. Since World War II there has been an explosion of economic knowledge. As an illustration, McConnell (1998,

p. 32) notes Taussig's 1946 text contained about 12 diagrams while a present day mainstream text contains about 200. Since Samuelson in 1946 introduced formal macroeconomics into his principles text, mainstream texts have increased in size as they added material on many topics: growth, money and monetarism, new classical economics, public choice, the role of expectations in equilibrium, environmental economics, game theory, and some topics in which interest now appears to be declining, such as institutions and economic development. Parkin (2000) notes how technically demanding the textbooks have become; he highlights the increased complexity in demonstrating how the latest macroeconomic theories are incorporated into textbooks.[3]

Others argue that the principles course should focus on a limited number of principles that produce economic literacy. Frank (1998, p. 13) asserts that the "...best way to teach introductory microeconomics (or any subject for that matter) is to expose students to repeated applications of a short list of the core ideas of the discipline." The rub, according to Frank, is whose short list to use. The view that the principles course is overburdened is not new, as the 1950 AEA study reveals. Moreover, that view has been regularly reinforced, as in 1971, by Mandelstamm (p.43) who argued that "(m)ost of us are simply giving students too many 'principles.'", and as in 1963 by Stigler who said:

"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 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."

Perhaps the foremost champion of the short-list approach to teaching the principles course is Phillip Saunders who consistently reminds instructors: "It's not what we cover,...it's what they learn."

The opportunity cost of the last topic added to the mainstream principles course syllabus is

[3] For example, to understand what it means for an economy to be in long-run equilibrium, students must master the concepts of aggregate demand, short-run aggregate supply and long-run aggregate supply; they must know the definition of equilibrium and understand the difference between long and short run equilibrium, and they must understand how to represent equilibrium with demand and supply schedules and what moves the economy toward a long run equilibrium.

certainly high. What are the tradeoffs? Frank emphasizes that students need repeated exposure to basic concepts through applications. Taylor (2000) argues that we may be neglecting what causes students to judge the principles course as interesting and important: how it helps them understand current policy and important issues facing policy makers. Boskin (1998, p. 28) contends that the typical course should but does not explain what it means for economic agents to be rational, a concept that underpins both microeconomics and macroeconomics, nor does it give sufficient attention to alternative mechanisms for allocating resources.

Another way to measure the cost of the long-list approach to the principles course is to look at how the course is taught. Based on a survey completed by 628 college-level economics teachers, Becker and Watts (1996, 1998) report that the median amount of time spent lecturing in the principles course is 83 percent while the median amount of time spent on cooperative learning and other hands-on activities is less than 5 percent. The fact that these statistics are the same at research, doctoral, masters, liberal arts, and associate institutions suggests that they are driven, at least in part, by the nature of the principles course. Instructors lecture in the principles course in order to cover the long list of topics included in the principles curriculum.

When everything is considered, the most persuasive evidence for a short-list approach to the principles course is the evidence that many college students and citizens are illiterate in economics. The principles course is a missed opportunity to improve literacy because it does not teach students how to apply economics to their personal, professional, and public lives. It is not enough to reduce the content of the course. Principles instructors must also change <u>how</u> they teach the course, by providing repeated opportunities for students to practice using the short-list of ideas. Moreover, the principles course must emphasize applications that show students how to apply economics to current problems and issues in settings similar to those they will face after completing college.

Another compelling reason for reexamining the principles course comes from recent enrollment data. Siegfried[4] reports that as of 1998 about 40 percent of all undergraduate students took at least one economics course; Twenty-one percent took at least two courses, implying that 19 percent of all undergraduate students took only one course. When students take a single course in economics, it is invariably a principles course which serves as a universal gateway into the discipline. When they take only two courses it is almost always a two-semester principles sequence. Yet, only one of twenty students who takes the introductory course goes on to major in economics. Though the numbers suggest that the principles course should be constructed to improve the economic literacy of those who take it, those who teach it too often approach their task as that of preparing the five percent who are potential majors for subsequent work rather than as the last chance to reach the 95 percent who will not major in economics.

In what follows, we describe what form a terminal principles course devoted to improving economic literacy might take. It is based on the National Standards rather than the encyclopedic content of the typical principles course. It is taught so that students gain practice in demonstrating what they are learning rather than being lectured at. It is focused on issues that students will face in their personal, professional, and public lives. The upshot is a reorganized principles course sequence, a first semester devoted to improving economic literacy and the second providing a gateway into the economics major.

Whose Short List? The Voluntary National Content Standards in Economics

The recently published Voluntary National Content Standards in Economics (Standards 1998) offer a new opportunity for restructuring the principles course. Developed by the National Council on

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[4] The mean percentage of new students at four-year colleges and universities in 1997-98 who are expected to take at least one economics course is 39.5 in a sample of 236 colleges and universities that responded to the AEA Universal Academic Questionnaire for Fall, 1998. The mean is 39.1 percent for public institutions and 41.0 percent for private institutions. The means are 35.8, 30.4, and 45.0 percent for bachelor, master, and Ph.D. granting institutions.

Economic Education (NCEE) as part of the Goals 2000 initiative, and now the cornerstone of the NCEE's national Campaign for Economic Literacy, the Standards are a product of a coalition of organizations formed to write guidelines for curriculum development in high school economics courses. [5]

The Standards begin by defining economic literacy. Any course that teaches to the Standards will emphasize economic literacy, whether taught at the high school or college level. The Standards include twenty statements that define a core of economic knowledge. The Standards include a parallel set of statements describing what students should be able to do with that knowledge. There is also a set of benchmarks that provide an array of applications for each standard.

The Standards provide an excellent answer to the question "Whose short list?" By teaching to the Standards, the first college-level principles course would give priority to the goal of economic literacy. As a result, it would provide meaningful, lifetime education for the hundreds-of-thousands of undergraduate students who take only a course or two in economics each year.

What do the Standards say is basic to economics? The answer can be illustrated by describing what the Standards say about three key topics.

The most basic idea in Economics is that scarcity of resources forces people to choose among competing uses. Accordingly, the first Standard content statement is:

Productive resources are limited. Therefore, people can not have all the goods and services they want; as a result, they must choose some things and give up others.

Students could demonstrate mastery of the first Standard by applying it correctly to an interesting

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[5] The coalition included representatives of the American Economic Association's Committee on Economic Education, the Foundation for Teaching Economics, the National Association of Economic Educators, and the Economics America network of state councils and centers for economic education. The writing committee was chaired by John Siegfried and included teachers, economic educators, and university professors. The Standards were reviewed by a committee of university economists including William Baumol, Sandy Darity, Claudia Goldin, John Taylor and committee chair, Michael Salemi.

problem. For example, they might explain why their decision to work twenty hours per week while in college could reduce their lifetime income. Or they might indentify what is sacrificed by a community that decides to use $300 million of tax revenue to build a football stadium and lease it rent-free to a National Footbal League team.

Five of the Standards address Boskin's concern that the typical principles course fails to describe rational economic behavior.

Effective decision making requires comparing the additional costs of alternatives with the additional benefits. Most choices involve doing a little more or a little less of something: few choices are "all or nothing" decisions.

People respond predictably to positive and negative incentives.

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and usually among individuals or organizations in different nations.

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.

Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.

Students can demonstrate mastery of the "economic behavior" Standards by writing an essay on pollution control. In that essay, they would explain why it generally does not make economic sense to reduce pollution to zero, why allowing firms to trade "pollution rights" can lower the economic costs of reducing pollution, why it makes sense to have some firms specialize in reducing pollution, and why the prices of pollution rights provide incentives to firms to find cleaner technologies for production.

Three Standards address the allocation of goods and services.

Different methods can be used to allocate goods and services. People acting individually or collectively through government must choose which methods to use to allocate different kinds of goods and services.

Voluntary exchange occurs only when all participating parties expect to gain. This is true

for trade among individuals or organizations within a nation, and usually among individuals or organizations in different nations.

Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.

Students can demonstrate mastery of the "allocation" Standards by describing the costs and benefits to society of a market-based mechanism for allocating donor organs to transplant candidates. They should be able to explain why the price of lodging in the Olympics host-city skyrockets during the competition and what incentives the higher price of lodging creates. They should understand that buyers benefit from a voluntary transaction even if the seller charges a price just below the buyers' reservation price.

While we have not discussed all twenty of the Standards, some conclusions are warranted. First, the Standards define basic economic ideas. Eight of the twenty Standards describe scarcity, economic behavior, and allocation. Second, economic literacy requires that students be able to use the Standards to address problems. The illustrative demonstrations involve making arguments, describing costs and benefits, offering explanations. To master these Standards students must work with them repeatedly during the principles course.

To appreciate the difference between a Standards-based course and the traditional curriculm compare the eight Standards reviewed above with the microeconomics section of standard principles texts.[6] For example, of the 36 chapters in *Samuelson and Nordhaus (1998)*, only three are devoted to the basic concepts described above while eight are devoted to more advanced microeconomic topics including consumer behavior, production and business organization, analysis of costs, supply in competitive markets, imperfect competition, oligopoly, monopolistic competition, and uncertainty and game theory. Much the same is true of most other books. Yet, *Baumol and Blinder (1991, pp. 2-8)* hint at the importance of a short list in their Chapter 1 listing of twelve "Ideas for Beyond the Final Exam," including

[6] A complete analysis of principles texts is beyond the scope of our paper. The interested reader should consult Walstad, Watts and Bossardt (1998). While selective, we believe our comparison to be instructive.

the following:

The Trade-off Between Inflation and Unemployment
The Illusion of High Interest Rates
Do Budget Deficits Burden Future Generations?
The Overwhelming Importance of Productivity Growth in the Long Run
Mutual Gains from Voluntary Exchange
The Surprising Principle of Comparative Advantage
Attempts to Repeal the Laws of Supply and Demand: The Market Strikes Back
Externalities: A Shortcoming of the Market Cured by Market Methods
Rational Choice and True Economic Costs
The Importance of Marginal Analysis
The Cost Disease of Personal Services
The Tradeoff Between Output and Equality

Unfortunately, these ideas get lost in almost 900 pages of text, charts, graphs, boxed "At the Frontier," summaries, lists of key concepts, and the like.

A principles course dedicated to improving economic literacy of the general population must focus more sharply on basic concepts than a course based on currently available principles texts. That is not to say that the course will be easier. Rather, the educational resources released by limiting the number of topics can be used to study the basic topics more intensively, to move students from a superficial familiarity to a truly working understanding. Additionally, some of those resources can be dedicated to helping students learn how to apply the core concepts more effectively to questions, puzzles, issues and problems of the kind they will face throughout their lives. But what should be dropped?

The Budget Constraint: What's Gotta Go?

As advocates of the short-list approach to the principles course, it is our responsibility to explain how the course can be shortened to provide the resources needed to teach the basics more thoroughly. We offer two admonitions, followed by five specific recommendations for what should be excluded. Finally, we advance three recommendations for reorienting the principles course to promote adult economic literacy.

Two admonitions.

The binding constraint on learning is the students' ability to learn material, not the instructor's ability to present it. Despite the exhortations of Phillip Saunders and others, economists still describe course objectives in terms of the material they intend to "cover." In our view, the opportunity cost of the long-list approach to principles is that students end up with at best a limited familiarity with economics once the course is over. Critics may object that a short-list approach is a disguised effort to "dumb down" the principles course, by using Standards that were written to describe 12th grade knowledge of economics. We disagree. There is no single level of mastery. Students will master the Standards at different levels; our expectation is that higher levels of mastery will be set for the college or university principles course than for a high school economics course, just as the 12th grade level of mastery will exceed that expected of 8th graders. Indeed, instructors must feel free to set higher goals for the principles course than student mastery of the twenty Standards. But they should first teach to the Standards and assure themselves that before proceeding on to loftier objectives, their students have thoroughly mastered these Standards so that they can properly apply them to new and different situations rather than having gained only a superficial familiarity with them.

What matters is what students can use later, long after they complete their schooling. If the purpose of the principles course is to improve economic literacy, we must emphasize the concepts that students can use throughout their lives as citizens, consumers, and decision makers; we must help students internalize those concepts well enough through repeated applications so they stick in students' minds for many years.

Specific recommendations.

To release the resources necessary for students to master the Standards in the principles course, we recommend that some of the traditional content be dropped. Much of this material could and should

be covered in an advanced principles course, of the kind described below.

Drop MC, AVC, ATC, and AFC. It is difficult to claim that the kind of detailed understanding of cost curves typically pursued in the principles course contributes to economic literacy. It is not unusual for 10 or even 15 percent of course resources to be devoted to presentation and mastery of these cost concepts, their graphic representation, and their relationship to one another. The benefits of mastering the cost curves are twofold. First, students can use the curves to predict output levels for price taking and price setting firms. Second, students can determine whether firms will enter or leave an industry and whether economic profits are being earned.

In our view, the costs of teaching these curves exceed the benefits. Most students will not have many, if any, opportunities in their lives to apply marginal analysis with the aid of nicely drawn, well-behaved curves even if they find themselves setting prices or output for a firm. It would be better to have students practice applying marginal analysis to problems that are more like those they may face as consumers and citizens. With respect to the role of economic profits, an important principle that is covered by the Standards, students should understand that economic agents seek rents and that firms tend to enter profitable industries and exit unprofitable ones. Most students should be able to master this idea with becoming accomplished at manipulating cost curves.

Limit the use of graphical tools. The marginal cost of mastering graphs is high for the many students who are not analytically inclined. Economists use graphs to represent many of their ideas. For those students who quickly catch on, a graph is a highly effective way of representing functional dependence among variables. But many students do not catch on quickly. Some do not even catch on slowly. They have not mastered graphs in the past, do not use them to represent interrelationships, and will not use them in the future. Faced with this reality, the instructor can either spend scarce course resources to teach graphing and the use of each new graph, or the instructor can economize on the use of

graphs, asking whether the concept can be conveyed adequately without a graph. We recommend a greater use of the latter approach. It is unlikely that principles students, on the basis of their economics course alone, will develop a lasting facility with graphs. It is more likely that they will memorize the required graphs and forget about them shortly after the end of the course. As P.J. O'Rourke puts it in *Eat the Rich*:

> "This is how economics is understood after two semesters at most colleges:
>
> I. There are a lot of graphs.
> II. I'd better memorize them.
> III. Or get last year's test."

Drop detailed analysis of industry structures. Students need to know the basic difference between price taking and price seeking behavior. They do not need to know the difference between an oligopoly and monopolistic competition. Economic literacy is better promoted by having students understand more fully how and why competition enhances welfare. They will find useful an understanding of strategies that agents use to extract rents. They will not find it useful to be able to differentiate between market structures in the petroleum, soft-drink, beer, and fast-food industries.

Limit the use of elasticity computations. The overwhelming majority of students will never compute a price, income, or cross elasticity once they leave the principles course. Nevertheless, many instructors expect students to memorize and apply elasticity formulas. Some even require students to know the difference between arc and point elasticities. Economic literates know that price seekers who face inelastic demand can raise their revenues by withholding output. They understand why those who bring perishables to market might prefer to throw them away rather than sell them at market clearing prices, and why a hotel can earn more revenue half-full at $250 per night than sold out at $100 per night. Students should understand that in some situations a change in price induces a relatively small quantity

response, while in others it induces a relatively large response, and that the magnitude of the quantity response has implications for the change in revenue. They don't need to know much more about elasticity than that.

Drop consumption and banking multipliers. Little in macroeconomics depends upon the consumption multiplier. In intermediate macro courses, it is worthwhile to teach the multiplier because it provides a simple introduction to reduced form equations and policy multipliers. Economic literacy includes understanding that a government induced increase in demand triggers increases in consumption and, perhaps, investment. It does not require that students learn a formula that predicts the total increase in spending or that they know the formula for summing convergent geometric series. Literacy includes understanding that the Fed increases the money supply through open market purchases of government bonds. It does not require understanding of a deposit-multiplier formula. Expecting students to memorize and manipulate the various multiplier formulas is too expensive in terms of scarce instructional time.

Emphasize the real rate of interest. People would be more literate if they learned instead about the real rate of interest. The survey results reported earlier show that Americans do not understand the relationship between inflation and nominal interest rates. For example, they do not understand that the real rate of interest during the 1990's was quite high. Instead, many adults remember double-digit nominal rates from the late 1970's and think that interest rates are low today by comparison. The real rate of interest is one of the most important concepts in macroeconomics. Kennedy (2000) argues that it is the most important macro concept taught in the principles courses. The Standards agree by asking students to understand that:

Interest rates, adjusted for inflation, rise and fall to balance the amount saved with the amount borrowed, which affects the allocation of scarce resources between present and future uses.

That the real rate of interest involves an adjustment for expected inflation is more important than any particular theory about how inflation expectations are computed. It is reasonable to use (flow) demand and supply of funds to explain how market forces determine the real rate of interest

Drop aggregate demand and aggregate supply (AD-AS). Aggregate demand and supply analysis is difficult to do correctly and doing it correctly is too time consuming for the principles course. Principles students readily confuse the aggregate demand schedule with demand schedules that they encountered earlier in the course. They think, for example, that an increase in the general level of prices lowers aggregate demand because "goods are more expensive." Of course, the real reason is a wealth effect that is too subtle and perhaps too controversial to be the foundation for macro principles. Principles students are likewise confused by aggregate supply because it is necessary to introduce both short-run and long-run schedules. Introducing the long-run aggregate supply schedule is necessary in order to explain why sustained increases in the rate of money growth ultimately lead only to higher inflation and not to continued real growth beyond the natural rate.

Taylor offer an alternative to AD-AS (2000) . He argues that the macro section of the principles course should exploit student interest in macro policy questions and the extensive media coverage of macro policy issues. Taylor's approach builds on three ideas: (1) A decrease in the real rate of interest stimulates the economy and raises output; (2) Inflation occurs when output remains above its "natural rate;" and (3) Federal Reserve policy may be represented by a reaction function which shows how the Fed alters the nominal interest rate in response to changes in the state of the economy. The advantage of Taylor's approach is that it permits students to think about policy questions without first mastering the large number of concepts that underpin AD-AS.[7]

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[7] It is true that the Taylor approach requires that students understand the real rate of interest, the Fisher effect, and the long-run neutrality of monetary policy. But he argues, and we agree, that these ideas are central to a basic understanding of modern macro.

Recommendations for Course Structure and Orientation

Replace the two semester macro-micro sequence with a vertical sequence: A principles course devoted to improving economic literacy followed by an advanced principles course designed to meet the needs of prospective majors. Economic educators have struggled for years with the sequence question: "Micro before macro or the other way around?" We recommend an entirely different approach. The first course should be redesigned and teach to both the micro and macro Standards. The second course should be designed to address McConnell's "foundation" objective. This means that in the second course students will revisit many topics from the first course and in the process be called upon to master tools, techniques, computations, graphs, and details they will need in advanced economics courses. Instead of teaching the traditional two-semester sequence to 20 percent of undergraduates, one half of the two-semester sequence to 12 percent of undergraduates and a self-contained one-semester course to only 8 percent of undergraduates, the profession should aspire to teach the first course as a self-contained unit to 50 percent of undergraduates and the second course to 10 percent who are either trying out economics as a major or are simply interested in learning more about the subject. If just a third of the ten percent in the second course continued on as majors, the number of economics degrees awarded would increase by 50 percent.

Orient the principles course around problems, issues, and policies, as well as interesting puzzles. Students should come away from the course not only believing but knowing that they better understand their world. This calls for focusing the course on current economic problems, issues, and policies that students can relate to through regular reading of newspapers and news magazines, particularly those with an economics orientation (e.g., The Economist or Business Week). It calls for helping them learn which tools of analysis and what kinds of evidence, both quantitative and qualitative,

can be drawn upon to understand these problems, issues, and policies. It calls for helping them learn how to resolve interesting puzzles with important economic dimensions.

Create many opportunities for students to practice using economics. The mode of instruction should shift away from "chalk and talk" toward involving students directly in their own learning. Assigning problem sets of the typical kind is not sufficient when the problems have only a single solution. Rather, students need to be engaged in examining problems, issues, and policies that are important in their own right and may have no clear resolution, rather than illustrating one particular type of tool or form of analysis. Nor is it sufficient that students see one or two illustrations of economics at work. Instead, they need practice applying economics to a wide range of real world economic problems, issues, and policies. Moreover, they need to be shown how to structure their analyses so that they can build their analytical skill in applying economics. In short, they need practice and more practice. The kind of practice they need cannot occur if instructors devote class time exclusively to lecturing rather than some mixture of lecturing with intermittent questioning, structured opportunities for class discussion, and writing assignments that challenge the ability of students to make their thinking understandable to others including the instructor.

Changing the focus and structure of the principles course: Implications

(1) *For instruction, learning, and assessment*. The changes proposed here are not beyond the realm of possibility. Numerous economics departments offer one-semester courses whose aim is to promote economic literacy. Typically, these courses are oriented around what are called "problems, issues, and policies" rather than the encyclopedic coverage of typical textbooks. One such text is *Economics and Contemporary Issues* (Edgmand, Moomaw, and Olson 1994) which covers both micro and macro economics. Each of its 17 chapters is topic oriented, introducing relevant background information, basic concepts, and appropriate tools of analysis to understand the topic and what matters are at issue. Texts

such as these have a unity and coherence often lacking in traditional texts. This point becomes clear when reviewing what traditional texts say about how their chapters can be used in single- semester or single-quarter courses. Splitting the principles texts into their micro and macro halves does not give students the breadth of coverage they need from taking a single course. The combinations of micro and macro economic chapters recommended as suitable for a one semester course invariably fail to measure up because the chapters must be patched together with the links found in a one-semester text.[8] Thus, the challenge is that of enlisting well-known economists to produce single-semester principles texts suitable to the type of course we propose.

Faculty may need to reorient their teaching approach to fit the new course structure, to focus on current problems, issues, and policies, and different ways of approaching their teaching. The active learning focus of workshops provided at the American Economic Association Annual Meetings offer immediate help for faculty who want to alter their teaching approaches. Additional information on how faculty can change their teaching approaches and styles is available from two recent books on undergraduate education in economics (Becker and Watts 1998, Walstad and Saunders 1998).

Because so much college-level instruction is lecture-based, particularly at institutions with large enrollments, students may need assistance in learning how to engage themselves more actively in their own learning. Any movement away from the traditional "chalk and talk" approach to economics instruction is likely to more actively engage students in their own learning. Not only do students need to become continuous learners, but these other approaches involve more active student participation in class or in class-related activities.

New ways of assessing student learning will have to be devised to measure how well students

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[8] The Blinder-Baumol text, *Economics Principles and Policy*, 5th edition, 1991) offers a menu of combinations for one-semester courses emphasizing macroeconomics, microeconomics, both microeconomics and macroeconomics, with similar permutations for one-quarter rather one-semester courses. All represent reshufflings of chapters from the full text.

have mastered the Standards. Setting out "what the student should be able to do" is essential and lays the groundwork for assessing student learning. The question remains: how best to test how well students meet these learning objectives. Whether some form of pencil and paper examination can do the job is unclear; perhaps portfolios of student work will be required.

(2) *For departments.* Finally, these changes are going to have implications for both course enrollment levels and the structure of a department's courses. These issues must be confronted directly because they are of collective faculty concern.

With the introduction of a vertical structure for the first two principles courses, with a current issues-oriented first course designed to enhance literacy followed by a second course to prepare students for the major, greater numbers of students should be attracted to the first course and fewer to the second course. This change could either increase or decrease total enrollments; there is no way of telling what will happen. What such a change will do is rearrange the teaching workload by requiring more staff to teach the first course we are recommending and fewer to teach the advanced course that develops cost curves and predicts whether profit maximizing output increases or decreases when demand or supply shifts, etc. Whether there are sufficient faculty equipped to teach the new first course is unknown. This course will be more difficult to teach than the more technical sequence it replaces.

We would hope that the reorganized first course would be more attractive to non-majors and perhaps increase the proportion of college students who take it from 40 to 50 percent. The second class naturally will enroll fewer non-majors, and the proportion taking it may decline from the current 20 percent to 10 percent of undergraduate students. The reorganization may also affect the number of majors. We predict that more students will sample the first course, that more of them will find it interesting, that more of them will take the second course, and, assuming that the second course is well designed, and effectively taught, the number of economics majors should increase. Even if overall

enrollment declines, this change may not be all bad if those enrollments consist of more students in the first course and more majors, and fewer students who take two semesters of economics and then drop the subject.

Departments that don't have a one-semester course will have to establish one. For departments that already have such a course, the adjustment will be easier, but in many cases they may have to refurbish it to accomplish the goals we advocate. Some institutions may even find the introductory course proposed here sufficient to prepare students for intermediate theory courses. They will discover this fact if they cannot find sufficient content to fill the second course, and find themselves teaching intermediate theory there. Since much of the content in the two-semester principles course overlaps intermediate theory, we suspect this will frequently be the case.

If a department decides that students can go directly from the one semester principles course into intermediate theory, it may be able to add an applied field course elective to the major without changing the total number of credits students take. Or, it could add either an elective or required undergraduate advanced theory course beyond intermediate micro and macro (Kasper, 1991).

Changing the principles course also has implications for the major. Compared to many departments that currently require a two-semester principles course, a one-semester introductory course may improve access to economics electives for non-majors. Many departments already offer some electives that require only the principles course as a pre-requisite, while other elective courses require the appropriate intermediate theory course. If the new one-semester course is sufficient to prepare students for at least some selected applied field courses, then students from other programs , e.g., international studies, area studies, public policy, urban studies, industrial relations, environmental studies, or health policy, will have access to a wider array of economics courses of interest to them and their programs. Though such courses may not build the analytical rigor that would be possible if students had completed

an intermediate theory prerequisite, they may attract more students, and particularly those who later in life will have the authority to make decisions about public policy in these areas.

Conclusions

We argue for a short-list approach to the principles of economics course. In our view, the 40 percent of undergraduates who currently take at least one economics course will be better served by a course that prepares them to apply core economic principles for the rest of their lives than they are by the current, long-list course. In our view, the right way to teach the principles course is to teach to the National Voluntary Content Standards. The Standards provide a working definition of economic literacy and address what students should be able to do with their economics months and years after the course is over. We understand that colleagues rightly will be concerned about preparing the one-in-twenty principles student who goes on to major in economics. Yet, we firmly believe that both majors and non-majors will be better served by moving economic tools and details to an advanced principles course.

Implementing this shift toward the National Voluntary Content Standards will be facilitated by developing one-semester, current issues-oriented introductory principles courses. Doing so will require some realignment of teaching assignments in departments, it will trigger the need for faculty to adapt their teaching objectives and styles to providing students with more practice in applying their economics to real-world issues, and it will force the discipline to develop new methods of assessing what students are learning and judging their effectiveness in demonstrating that learning. It may require considerable investment for instructors who are facile with analytical tools but inexperienced in applications.

The changes we propose will not necessarily cause a decline in economics course enrollments. While fewer students will take two semesters of principles, the new-and-improved principles course should attract more students. A realistic goal is to teach the new principles course to half of all undergraduates at four-year colleges and universities. In addition, departments may find it advantageous

to offer to non-majors selected economics field courses that require only a principles prerequisite. The new principles course would be the gateway to two tracks: a majors track passing through (perhaps an advanced principles course and) the intermediate theory courses, and a non-majors track proceeding directly to non-majors field courses.

Are economics instructors ready for a new approach to the principles course? In March, 2000, Michael Salemi presented an early version of this paper at a Conference on Teaching Economics at Bowling Green State University. At the end of his presentation, thirty-nine conference participants completed a survey about their views on revision of the principles course. Of these, 34 regularly taught the principles course; 32 taught in departments that offered a two-semester principles course while 7 taught in departments with a one-semester course. The survey results are presented in the table.

Bowling Green State University Teaching Conference

Survey Results

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The most important goal of the principles course should be to enhance the economic literacy of students.	29	7	1	0	1
The most important goal of the principles course is to provide students with a foundation for further study in economics.	3	12	11	11	1
Teaching to the National Voluntary Content Standards is an appropriate way to revise the principles course.	10	15	13	0	1
The principles course at my home institution requires substantial revision in order to better promote economic literacy.	6	18	6	10	1

The responses contain good news and bad news. Conference participants endorsed our view that the most important goal of the principles course should be to enhance economic literacy. However, participants appeared to be less convinced than we are that the literacy and foundation goals conflict. Some who strongly agreed about the importance of the literacy goal also believed in the importance of the foundation goal. Participants supported teaching to the National Voluntary Content Standards as a strategy for revising the principles course. They were less sure, however, that their own courses required substantial revision: 24 agreed or strongly agreed that substantial revision was needed, 6 were neutral, and 11 disagreed or strongly disagreed.

When asked what topics could be dropped from the principles course, 18 respondents mentioned cost curves, 11 mentioned market structure, 7 mentioned indifference curves, 13 mentioned the Keynesian macro model, 8 mentioned calculation-intensive topics, and 5 mentioned AD-AS. When asked what they would do with the course time and student effort recovered by dropping topics, 11 answered that they would have students do more work with demand and supply, 7 answered that they would emphasize more current events, 7 answered that they would have students engage in more active learning, and 23 answered that they would have students do more applications.

The goal of getting all economics instructors marching to the same drummer is elusive. Still, we believe that strong sentiment exists for changes of the kind described here. The challenge lies in finding ways of easing the transition for faculty so that the costs of rearranging their instructional capital are minimized. The development of prototype courses may be an important step in demonstrating concretely what can be done and the effects of doing so. Some existing courses may come close to serving as model courses. These courses need to be identified and publicized so that economics faculty can see more precisely what is involved in shifting the focus of their teaching and learning approach toward economic literacy.

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Appendix 1: The Voluntary National Content Standards

Scarcity and Choice

1. Productive resources are limited. Therefore, people can not have all the goods and services they want; as a result, they must choose some things and give up others.

Economic Behavior

2. Effective decision making requires comparing the additional costs of alternatives with the additional benefits. Most choices involve doing a little more or a little less of something: few choices are "all or nothing" decisions.

4. People respond predictably to positive and negative incentives.

5. Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and usually among individuals or organizations in different nations.

6. 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.

8. Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.

Allocation of Goods and Services

3. Different methods can be used to allocate goods and services. People acting individually or collectively through government must choose which methods to use to allocate different kinds of goods and services.

5. Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and usually among individuals or organizations in different nations.

7. Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.

Markets

7. Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.

8. Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.

9. Competition among sellers lowers costs and prices and encourages producers to produce more of what consumers are willing and able to buy. Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.

Factors of Production

13. Income for most people is determined by the market value of the productive resources they sell. What workers earn depends, primarily, on the market value of what they produce and how productive they are.

14. Entrepreneurs are people who take the risks of organizing productive resources to make goods and services. Profit is an important incentive that leads entrepreneurs to accept the risks of business failures.

15. Investment in factories, machinery, new technology, and in the health, education, and training of people can raise future standards of living.

Macroeconomics

11. Money makes it easier to trade, borrow, save, invest, and compare the value of goods and services.

12. Interest rates, adjusted for inflation, rise and fall to balance the amount saved with the amount borrowed, which affects the allocation of scarce resources between present and future uses.

18. A nation's overall levels of income, employment, and prices are determined by the interaction of spending and production decisions made by all households, firms, government agencies, and others in the economy.

19. Unemployment imposes costs on individuals and nations. Unexpected inflation imposes costs on many people and benefits some others because it arbitrarily redistributes purchasing power. Inflation can reduce the rate of growth of national living standards because individuals and organizations use resources to protect themselves against the uncertainty of future prices.

20. Federal government budgetary policy and the Federal Reserve System's monetary policy influence the overall levels of employment, output, and prices.

Government and Economic Institutions

10. Institutions evolve in market economies to help individuals and groups accomplish their goals. Banks, labor unions, corporations, legal systems, and not-for-profit organizations are examples of important institutions. A different kind of institution, clearly defined and enforced property rights, is essential to a market economy.

16. There is an economic role for government in a market economy whenever the benefits of a government policy outweigh its costs. Governments often provide for national defense, address environmental concerns, define and protect property rights, and attempt to make markets more competitive. Most government policies also redistribute income.

17. Costs of government policies sometimes exceed benefits. This may occur because of incentive facing voters, government officials, and government employees, because of actions by special interest groups that can impose costs on the general public, or because social goals other than economic efficiency are being pursued.

20. Federal government budgetary policy and the Federal Reserve System's monetary policy influence the overall levels of employment, output, and prices.