

“Provide a Complete, Concise Economic Analysis of the Following Article...” Using Outside Readings to Train Students to Answer a Single Question

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Abstract

Outside readings are commonly assigned in economics. Most readings can be categorized as falling between two poles: academic readings or entertainment reading. Journal articles tend toward the former, while readings popular with general audiences like Freakonomics tend toward the latter. Between the two extremes lies reality readings: current events. This paper discusses the extensive use and analysis of real-world situations as the core construct on which to build a course in principles of microeconomics. The paper details course content and assignments, including a discussion of grading strategies.

Key words: Current events, Microeconomics instruction, Outside readings

Introduction

In 1951, a group of professors at the University of Pennsylvania put together a collection of outside readings for economics students as a supplement to principles textbooks. The readings were intentionally chosen to be important, provocative, readable, and of course, appropriate for principles students (Hess et al., 1951). The readings included selections from Smith, Malthus,

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Veblen, Fisher, and Boulding. There were also several government reports, including those from the President's Council of Economic Advisors, the Department of Commerce, and the Federal Reserve.

Seventy-five years later, reading collections still exist, but they are far less common. Of course, the entire instructional supplement industry has changed dramatically. In addition to the ubiquitous electronic homework systems like Mylab, instructors can add simulations, videos, music, and even video games (Ng, 2019). It is likely that competition has driven supplementary reading in principles courses to focus on more accessible material. The smash hit *Freakonomics* (Levitt & Dubner, 2009) is probably the quintessential example, but there are others, including *The Armchair Economist* (Landsburg, 2012), *Naked Economics* (Wheelan, 2002), and so forth. It appears that the discipline has shifted away from purely academic readings toward readings with a greater emphasis on entertainment. While the readings of 1951 needed to be “readable, stimulating and provocative,” at least by the standard of the day, today's principles readings are more likely to be outright “good reads.” These works are characterized as “economics-made-fun” by Dekker and Teule (2012), who point out that this approach, while criticized by some, has made the study of economics more palatable to millions of individuals.

These appear to be the two bounds for economics reading: academic economics, which uses essential or recent journal articles or historically significant writing and entertainment economics, which leans heavily on good story-telling. Between the bounds lies the current event readings: reality economics. However, while the bounds are useful, the bulk of economic inquiry takes place in the middle.

In 2016, a group of economists carefully considered what constitutes appropriate learning outcomes in a principles of economics course. In their first paragraph, Allgood and Bayer (2017) state their case:

Scientific inquiry is the essence of economic research, yet explicit attempts to teach students what we actually do are sparse. Instead, as teachers we tell students what they need to know, with little attention to teaching them how to use economics to learn about the world around them. Economists may state that economics is a “way of thinking” but this vague description only hints that economics is an activity rather than a collection of static definitions and results. If “economics is what economists do,” then we are not successful in our jobs as educators if we do not teach students how to do economics.

This quote might be emblazoned on every teaching economist’s wall as a powerful reminder of our purpose. The upshot is that economics students should be able to “do economics,” which is far more difficult than “recognizing” or “appreciating” or “understanding” economics. The Allgood and Bayer construct is an ambitious list of what principles of economics instruction should be. In part, though, a principles student should be able to make sense of current events.

While current events are the bread and butter of the profession, and as a profession we make use of current events in our instruction, only a handful of authors have reported on the use of current event analysis in principles assessment. Aguilar & Soques (2013), reported asking their students the following question:

“Given the data and news stories released in this past week, has your assessment of *overall economic activity* improved, deteriorated, or remained the same as compared to the previous week? In a short paragraph, justify your answer.”

The format can be quickly modified by altering the text in italics to read something like “*Labor Market*” or “*Price level*.” While this exercise does not assign a specific reading, the assignment encourages students to read from a host of well-known economic sources, including “the news.”

More recently, Josephson, DeBoer, Nelson, and Zissimopoulos (2019) describe a macro principles exercise based on current events reading. Students are given an article and asked to construct an essay based on the content. The authors rightly point out that relying on real-world press complicates the assignment because the information is often “disordered.” Journalists and speakers may report on changes in a market, but references to technical economic terms will generally be implicit rather than explicit. This feature complicates the use of the popular press for economic instruction. To mitigate this, Josephson et al. accompany each assignment with a set of questions around which to structure their essay. The questions help bridge the gap between the implicit and the explicit. They help add order to the “disorder” in news articles. The prompts suggest areas of the article on which to focus, what models to use and suggestions about what the models should indicate. Further, the authors report that these assignments are graded by other students. To facilitate the peer-review process, each essay is accompanied by a second set of questions to structure the peer review. A second set of prompts assists students in evaluating another student’s response. The prompts ensure that the answer has a particular structure and hits on certain topics. In the end, students are shepherded to a specific type of analysis.

Unfortunately, though, the process eliminates some of the need for critical thought, which might be considered the basis of the exercise. If, as Allgood and Bayer (2017) suggested, students should be able to “do economics” after completing the course, then perhaps during the course we should test their ability without the comfort of the supporting suggestions.

This paper describes a process designed to train students to provide coherent economic analysis without the detailed prompts associated with the previous examples. In fact, each assignment is delivered with the same prompt: *"Provide a complete, concise economic analysis of the following article."* The task is a bit like walking a tightrope without a net: challenging, exciting, and maybe a bit dangerous. To be successful requires serious preparation!

Institutional Setting

West Chester University is a state-supported University in eastern PA. The Department of Economics and Finance is housed in The School of business and public management and serves primarily business majors. The school does not have a Ph.D. program and is operated under a collective bargaining agreement (CBA) with unionized faculty. There are no teaching assistants, and the CBA requires all grading be done by faculty. Principles classes range in size from approximately 35 to nearly 200 students. The class make-up is fairly gender diverse, with about 20 percent of students identified as underrepresented minorities.

The approach to outside readings described here has been extensively developed for principles of microeconomics, which is a core requirement in the University's AACSB accredited undergraduate business school. It is also a prerequisite for most upper-level business classes. The overwhelming majority of students are first-year business majors. However, the class fulfills

a university-wide general education social science requirement, so there are some non-business majors and upper-level students enrolled.

The undergraduate business program and the general education program are designed to enhance critical thinking, quantitative reasoning, and communication skills, and this approach is directed explicitly at addressing those two student learning outcomes. Table 1 lists the relevant learning outcomes and goals that the course is designed to enhance. Each learning outcome in Table 1 needs to be assessed by at least two instruments in the course, and artifacts must be provided on occasion to the assessment officers in the school of business and for the University general education program.

Table 1. Principles of Microeconomics Goals and Learning outcomes

Undergraduate Program Student Learning Outcomes	General Education Goals
Critical thinking (quantitative) – Students will analyze business issues quantitatively.	Develop critical and analytical thinking skills
Critical thinking (qualitative) – Students will analyze business issues qualitatively.	Implement the appropriate use of quantitative and mathematical methods
Effective communication (written) – Students will write professionally about business topics.	Improved communication skills (written and oral)
Business knowledge - Students will acquire, apply and/or integrate business knowledge.	
Global perspective – Students will recognize the impact of globalization on business.	

In addition to the high-level goals described in Table 1, each component of the course has a set of student learning outcomes focused on what a student should be able to accomplish after

completing the section. For example, the Supply and Demand section has the following student learning outcomes:

- Students will be able to distinguish between a change in quantity demanded and a change in demand.
- Students will be able to recognize the conditions necessary for the existence of a supply curve and distinguish between a change in quantity supplied and a change in supply.
- Students will be able to construct an appropriately labeled model of supply and demand using MS word drawing tools (or equivalent) and specify appropriate values for market price, quantity, and the number of sellers.
- Students will be able to use their model to show changes in demand or supply and show how the resulting shortage or surplus will lead to changes in price, quantity demanded and quantity supplied.
- Students will be able to explain how the market transitions from one equilibrium condition to another.

It is also important to note that each learning outcome is focused on what students will be expected to do and designed to be measurable and can be assessed through a variety of instruments.

Use of outside readings in Principles of Microeconomics

The principles of microeconomics course described here is constructed around outside readings and assignments in reality economics. Lectures prominently feature real-world news. All assignments are focused on a piece of media (typically a news report) and all exams have a news analysis essay component.

These real-world analysis assignments come in two varieties: Low-stakes Exercises (LSEs), and high-stakes assignments. Low stakes exercises are frequent, involve a small amount of credit and are graded for completion only. High stakes assignments are infrequent, high credit and assessed for quality. The high-stakes assignments are Written Homework Assignments (WHWs), and Essay Exams. The low stakes exercises are practice for the high-stakes assignments. Table 2 gives a brief description, frequency, and the approximate percentage of the course grade.

Table 2. Real-world Analysis

Item	Description	Frequency	Percentage of course grade
Low-Stakes Exercises	Scaffolded, guided, collaborative analysis	10 per semester (one per major topic)	20%
Written Homework Assignments (WHW) (High- Stakes)	Independent analysis not time-constrained	5 per semester	25%
Written Essay Exams (High Stakes)	Independent time-constrained analysis	3 per semester	25%

Real-world analysis constitutes almost 70% of the course material and grading. The remaining 30% is multiple-choice problems, audience response questions, and Excel spreadsheet practice.

All high-stakes assignments share the same basic prompt “*Provide a complete economic analysis of the following article. Include appropriate graphs and a complete explanation.*” Each analysis should have appropriately labeled diagrams, clearly show all changes and adjustments, be consistent with economic theory, and be consistent with the facts presented in article that is the

basis for the assignment. Well-constructed responses to this prompt will address several of the five Allgood and Bayer (2017) competencies, including:

- Analyzing behavior using economic models
- Ability to think critically about economic methods and applications
- Ability to communicate economic ideas.

Scaffolding

The course material is scaffolded so that every section builds on previous material. The production possibilities model is introduced first and used to address efficiency issues. Supply and demand follows and is added to the production possibilities model. Finally, production and cost is added to the system. The second half of the course is focused on basic market structures, which are essentially different combinations of the previous three models. Early assignments will only require a production possibilities model. By the mid-term, an analysis will be considered complete if it includes a market diagram and a production possibilities model. By the final exam, students should include all three models (production possibilities, market and a short-run cost diagram) in a framework appropriate for the market structure.

Instruction

The course employs a flipped-classroom approach along the lines described by Caviglia-Harris (2016) and Vazquez and Chiang (2015). Students are asked to watch brief (5 to 10 minutes) lecture videos outside of class. The pre-class lecture videos are “bare-bones.” The color scheme trends toward black and white. They are concise and provide a complete introduction to the material. The videos explain the theory and the graphs but are largely lacking examples. Students are instructed to take notes from the video lectures before class and are actively

discouraged from taking notes during class. The goal is to preserve class time for discussions and real-world applications.

Two or three lecture periods are devoted to each topic. The first in-person lecture opens with an engaging and entertaining video relevant to the topic at hand followed by an audience response system question and a discussion of the results. The goal here is to get students engaged immediately. The next segment is a rapid review of the pre-class lecture. This segment is not intended to teach but is offered as a quick review for students who have already taken notes. The remaining time is devoted to real world analysis. A real-world economics video (often a news segment) is played that illustrates the concept at hand then the material is applied to the example. The key to the real-world analysis is specifying the model: adding appropriate labels and values and completely illustrating a change or adjustment.

Low-Stakes Exercises

After reviewing examples as a class, the students engage in Low-Stakes Exercises (LSEs). These active-learning activities are an opportunity to practice the material and learn from mistakes. The LSEs can be completed as group assignment during class. This gives students an opportunity to share their thoughts and test their ideas with their peers. While the work can be collaborative, each student should submit their own work to mitigate free riding.

In addition to the news segment or article, these assignments contain additional prompts along the lines of the Josephson et al. (2019) model designed to ensure that the economic analysis is complete. Prompts will include suggestions for appropriate models (i.e., “Use a Production Possibilities Curve”), suggestions about labeling (“make sure the equilibrium price is clearly

identified with appropriate values”) and suggestions about content (“Discuss the efficiency implications”). The prompts are designed to be generic and applicable to any situation that might correlate to a particular economic model. The prompts included in low-stakes exercises are part of the training process and do not accompany the high-stakes exercises. The Appendix has a link to a sample LSE used for the production possibilities material.

These low-stakes assignments are infrequently updated, and articles are chosen carefully to be stylized examples of a particular concept. The examples are not bullet-proof; people can have reasonable disagreements about the analysis. Before, during and especially after the LSE emphasis is placed on providing “*a good answer*” rather than “*the correct answer.*” Often there are at least two responses to the article in the LSE that dominate the discussion. It is useful to point out that even answers that are not absolutely correct may have a lot to recommend them. As a rule, though, better answers will have:

- Well-constructed and appropriately labeled diagrams.
- A clearly labeled change consistent with economic theory and the facts in the article.
- An explanation that corresponds with the economic theory and the facts.

The low-stakes exercises set the stage for the high-stakes exercises: Written homework and essay exams.

High-Stakes Assignments: Written Homework

Written homework (WHW) is assigned several times per semester. The homework has a single set of instructions, including the standard prompt, and a set of basic requirements: a three bullet-point summary, appropriate graphs constructed using MS Word or equivalent, and a paragraph

explaining the graphs. The instructions contain suggestions for completing each portion. A link to the complete instructions is included in the Appendix.

The single set of instructions includes links to five articles assigned for the semester. While articles could be used from many possible sources, these are chosen from the National Public Radio (NPR) website. Most of the articles include interviews with individuals intimately involved in the story, a series of high-quality images, and audio files of the original radio broadcast. The audio file can be played during homework review to quickly refresh students' memories. NPR also has a good mix of international stories and often covers issues overlooked by mainstream media. Past articles have included stories about guinea pig consumption in Peru and a septic pumping cartel in Senegal. In addition to being freely available without a subscription, the links are extremely stable, lasting years.

The expectations regarding what is considered a complete analysis increases as the semester progresses. The first assignment only requires a production possibilities model (PPC). The second requires a PPC and a market diagram, and the last three also require a cost diagram for a single firm. The articles are chosen to be appropriate for the economic analysis at each stage of the course. The first is selected to be analyzed using a PPC. The rest will reflect market economics: Supply and demand, perfect competition and firm behavior, imperfect markets (monopoly/oligopoly). It is made clear to the students that if the first assignment were moved to the end, the expectations of what would constitute a "complete" analysis would be greater.

High-Stakes Assignments: Written Essay Exams

The final high-stakes assignments are essay exams. A typical exam will have a roughly one-hour time limit and consist of approximately 25 multiple choice questions and one essay. The essay portion of each exam is similar to a written homework. The essay will carry the standard prompt above a newspaper article. The two primary differences are that for in-class exams, graphs must be constructed by hand, and no collaboration is allowed. This method of examination is a significant test of a student's understanding.

Grading

Low-stakes submissions are graded for completeness, but not content. The point here is to practice for the next level (written homework) without concern for making mistakes. Because the assignments are “low-stakes” the students should not be concerned about submitting the “right” answer. Further, since the incentive is small and not tied to the correctness, students should feel free to participate actively and be willing to make mistakes. This construct is designed to encourage a growth mindset encouraging students to learn from their mistakes rather than avoid them. Awarding a small amount of credit serves as a nudge to encourage the behavior required to succeed at the next level without provoking anxiety. Significant credit is not necessary for compliance because students who do not take the low-stakes exercises seriously will face serious consequences at the next stage: written homework assignments (WHW).

High-stakes assignments are graded for completeness *and* content. A rubric is provided featuring a number of criteria. Each criterion of the rubric is designed to correspond with a particular portion of the assignment and measures different orders of thinking. The full rubric is available in the appendix. One criterion assesses written communication skills and, as a time-

saving measure, can be based entirely on their execution of a three-bullet summary of the article.

The next four criteria are designed to evaluate the economic content.

The rubric is designed to measure higher-order thinking and separates the analysis into subtasks of varying difficulty using Marzano's new taxonomy (Marzano & Kendall, 2007). The taxonomy makes a useful distinction between tasks that can be completed through recognition and recall and those that require higher-order thinking.

A "model design" criteria scores the student's ability to choose and construct the necessary graphs. Choosing appropriate models is a non-trivial endeavor requiring significant critical (higher order) thought and should probably warrant additional criteria in the grading system. However, that thought process is undermined to a degree because the models are learned consecutively. The student does not face a choice from a significant array until the very end of the course.

To get maximum credit on model design, every line should have the appropriate shape and labels. Demand curves should go downward and to the right, be labeled with a "D" and be positioned on axes with "P" on the vertical and "Q" horizontally. These elements will illustrate a basic familiarity with the material, can be completed through student recall, and can be executed independent of the information in the question. Most (though not all) students score highly on this portion, so it is best not taken for granted. A student who is asked to construct a market diagram will usually label the axes correctly. Experience suggests that if asked to construct a PPC *and* a market diagram, many students will put price on both vertical axes.

The “model specification” criteria requires students to specify the model to correspond to the assignment. This specification is a critical test of higher order thinking. This row cannot be completed by recall alone as the values depend critically on the context of the question. Labels should correspond well with the information in the article. For example, if the subject is milk, instead of “Q” they might add the label “Gallons of milk” to the horizontal axis on the market diagram. Further, instead of a symbol (Q^*) it is more revealing to require that the equilibrium quantity have a value reflective of the current market conditions, i.e., a number. The quantities can be obtained in three ways: from the article, through researching the subject. (Students may google it, but not during an in-class exam), or via an educated guess.

It is not essential that the values or the labels be “correct,” but the values and labels reflect a student’s ability to think critically about the subject. This step also provides an opportunity for instructors to assess critical understanding. Returning to the milk example, suppose the article states:

“Due to a recent surge in popularity, the average consumer in Pennsylvania now drinks almost 5 gallons of milk per year, and the price per gallon has increased about 10% to nearly \$4.”

It takes a basic understanding to construct a market diagram correctly, label a market equilibrium at P^* and Q^* , and show a demand shift to the right. It is another level of difficulty to add values to each scale. On the price axis, the price should move from about \$3.50 up to \$4.00 (a very rough 10 percent increase). While the math on that is pretty trivial, the insight will escape many less prepared students. The quantity axis is even more problematic. Faced with this information, many students will label the equilibrium quantity as *starting* at 5 gallons. A number like that

indicates a lack of understanding of what constitutes a market. A student thinking critically and with access to the internet will quickly determine that with more than 10 million people in Pennsylvania, the equilibrium quantity should be around 50 million *after the shift*. Even without the internet, a student could estimate a value millions (but hopefully not billions!) of times larger than 5 gallons.

A third criteria measures the student's ability to demonstrate an understanding of economic processes by graphing all changes and adjustments. First, students must glean from the information in the article wherein the model change originates and which direction. Next, the students should be able to show how the adjustment occurs. For example, a thorough understanding of the market processes associated with an increase in demand would be to show the shift, the resulting shortage, the price increase, and the related changes in quantity demanded and quantity supplied.

The final criterion is the explanation. It is tempting to view this portion of the assignment as the principle component of the analysis and, therefore, the most difficult. However, like constructing the graphs, this portion can be completed entirely through recall and recognition. The task is more complex, but one of the beautiful parts of economic analysis is the absence of truly unique situations. Every market adjustment to a demand increase follows the same process. If a student memorizes the process of market adjustment, that explanation can be plugged into any appropriate situation.

The grading rubric allows dimensionality to the learning outcomes. Rather than a binary “could the student do the analysis or not.” This flexibility allows us to assess the quality of the analysis objectively.

Anecdotal Evidence of Effectiveness

At the end of each semester, students are asked to respond to a survey regarding the usefulness of the in-class (Low Stakes) exercises and the written homework on a Likert scale (1 = not very helpful to 5 = very helpful). As Table 3 indicates, the overwhelming majority of students found those exercises useful as preparation for the essay portion of the exam.

Table 3. Usefulness of Low-Stakes exercises and written homework

Usefulness in preparing for the essay portion of exam	Low Stakes exercises Number of students (%)	Written Homework Number of students (%)
1 not very helpful	3 (1%)	7 (1.5%)
2	6 (2.1%)	32 (6.7 %)
3	40 (13.8 %)	61 (12.8 %)
4	91 (31.5 %)	124 (26.1%)
5 very helpful	149 (51.6 %)	251 (52.8%)

Of course, the proof is in the pudding! Using the strategies laid out here, the best students are able to generate outstanding economic analysis. Many of them might be considered suitable for framing. Some examples are provided in along with the homework instructions in the Appendix.

Conclusion

A course level learning outcome suggested for principles students by Bayer and Allgood (2017) is:

Discuss economic issues in ways that promote mutual understanding and inquiry, demonstrate fluency in basic economic terminology and tools, and explain economic reasoning to and incorporate insights from noneconomists

The authors also tucked an interesting proposal for a useful lesson-specific learning outcome associated with LO5 into the manuscript:

—Summarize, using economic terminology and graphs, an article from the business section of a newspaper.

The proposal here is essentially to feature this learning outcome in virtually every lesson. The point of the learning outcomes is to force faculty to consider critically what the outcome will look like and what the necessary and appropriate methods are to achieve that goal.

Taking this approach forces both students and instructors to make significant changes. Some students will be unconditioned to the admittedly rigorous expectations, but students adapt and some revel in it. There are significant instructional changes also. From a content perspective, requiring students to select an appropriate model means instructors have to be careful in their own choices. This also means that same care should be exhibited by the instructional resources. Unfortunately, this is not always the case. Textbooks often mis-specify models. A common problem is the use supply and demand framework in examples that are clearly not perfectly competitive. Others will not be explicit about how a market adjusts. Finally, choosing articles may force an adjustment in emphasis. Texts emphasize market adjustments to changes in demand, but experience suggests that articles are far more often related to changes in costs or supply.

During a wide-ranging keynote speech at an economic education conference (National Economics Teaching Conference in Dallas, TX., November 2015), Nobel Economist and founder of Aplia, Paul Romer was asked during a discussion of his work on educational testing his opinion of “teaching to the test.” “It’s fine,” he replied, surprising more than a few of us in the audience before adding an important caveat “*if it’s a good test!*” He noted that flight instructors regularly teach to the test, but the course ends in a real test: the student has to fly a plane. For a principles student, or their instructor for that matter, this prompt “Provide a complete economic analysis of the following article.” is a good test!

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Appendix: Supplemental Materials

[Low-Stakes Exercise Sample](#) This a link to a Low-stakes exercise designed to prepare students to use a production possibilities model

[Written Homework Instructions](#). This link has instructions for written homework assignments. It also includes sample articles and grading rubrics.