Why it Matters: What is the "Real" Cost?

Lesson Overview

This lesson explores the concept of opportunity cost and, more specifically, in the context of the decision to go to college. Students identify the opportunity cost of some simple and some difficult decisions. Then, they apply their understanding of opportunity cost to the college decision.

Lesson Introduction

Opportunity cost is, quite possibly, the most important consideration when making an economic decision. The value of your forgone opportunity is the real cost of the decision.

Opportunity cost is the second-best alternative (or the value of that alternative) that must be given up when scarce resources are used for one purpose instead of another. It is the "real" cost of the decision. If you are going to spend $5 on either a movie ticket or a hamburger and you can't have both, you give-up the one you do not choose. That is your real cost, not the $5 you have already decided to spend...

There are four key components of a good opportunity cost example.

- It must be a situation where there are several (more than one) alternatives.
- The situation must require a choice from among the several alternatives.
- The decision-maker's choice should be limited to one of the alternatives.
- The situation should be "time and space" defined. There should not be the option to have another of the alternatives tomorrow. The decision is in the here and now.

A clear understanding of the opportunity cost of a decision results in a more thoughtful and beneficial choice. Knowing the opportunity cost leads to efficiency and greater consumer satisfaction in the long-run.

Key Terms

Alternative: One of many choices or courses of action that might be taken in a given situation.

Choice: Decision made or course of action taken when faced with a set of alternatives.

Opportunity cost: The second-best alternative (or the value of that alternative) that must be given up when scarce resources are used for one purpose instead of another.

Scarcity: The condition that exists because human wants exceed the capacity of available resources to satisfy those wants; also a situation in which a resource has more than one valuable use. The problem of scarcity faces all individuals and organizations, including firms and government agencies.

Trade-off: The giving up of one benefit or advantage in order to gain another regarded as more favorable.

NOTE: Unless otherwise cited, the definitions used in this lesson are from the Council for Economic Education's Virtual Economics program. They are consistent with the National Voluntary Content Standards in Economics and the Ohio Academic Content Standards for Social Studies.

Lesson Objectives

The student will:
1. Define opportunity cost
2. Identify the opportunity costs of given economic decisions.
3. Explain how knowing the opportunity cost of a decision contributes to better decision-making.

Lesson Materials

Handout/Visual 1: Why It Matters: Opportunity Cost
Handout/Visual 2: What is the Opportunity Cost?
Video: Virtual Economics: Opportunity Cost, Council for Economic Education, 2010. URL: http://www.econedlink.org/interactives/index.php?iid=190

Lesson Preparation

Prepare visuals to project or print copies of the Handout/Visuals for each student:
Handout/Visuals, 1-2
Preview the Virtual Economics video: Opportunity Cost.
http://www.econedlink.org/interactives/index.php?iid=190

Lesson Procedures

1. **Ask students: What is an opportunity?**

[Students may suggest a choice or option, or a chance to do something. Reinforce that opportunity implies some kind of future value or benefit.]

2. **Introduce (reintroduce) the concept of opportunity cost.**

Define opportunity cost as: "The second-best alternative (or the value of that alternative) that must be given up when scarce resources are used for one purpose instead of another."

Explain that when you have a choice among alternatives, you can choose one, but you must give up some other options. Since you can only choose one of the alternatives, your second best choice is your opportunity cost or the real cost of your decision.

Example: Suppose you can choose one piece of fruit: an apple, an orange or a banana. Since you can only have one, you can't have the other two. Your next best choice is the one you really give-up. You choose the banana. If you could not have had the banana, you would have chosen the apple – thus, the apple is your opportunity cost. The orange is not a cost, because you could only have one of the alternatives.

Ask students if they can give additional examples of the opportunity cost of their decisions. As students suggest examples, reinforce the "next best alternative" as the opportunity cost or "real" cost of a decision.

3. **Show the Virtual Economics segment, "Opportunity Cost." The two minute video introduces the concept of opportunity cost through simple examples.**

The video link also includes a Quiz. Use this Quiz to check student understanding of the video content – the definition of opportunity cost and examples.

4. **Distribute copies of Handout/Visual 1: Why It Matters: Opportunity Cost. This article was written by Dr. Julia Heath, Director of the Economics Center, and was published in the Cincinnati Enquirer. Allow students time to read the article.**

5. **Ask the students to review the main points of the article.**

- All choices have costs.
- Opportunity cost is the next best alternative when a choice is made.
- Deciding to attend college has opportunity costs.
- Knowing the opportunity cost of a choice leads to better decision-making.
- College graduates earn more income, but…see the first point.

Ask students: In the article, what are the examples of "real" costs of choosing to attend college?

[The opportunity costs (real costs) of choosing to attend college are other goods or services, forgone income, work experience.]

6. **Distribute copies of Handout/Visual 2: What is the Opportunity Cost?**

This activity can be done individually or in pairs. Using Part 1, direct the students to read the five situations and determine the opportunity cost of each situation. Using a blank piece of paper the students should describe the opportunity cost of each choice in a complete sentence.

[Examples:

A. When Tonya chose the chicken sandwich, her opportunity cost was the burger.

B. When Jimmy chose the licorice, his opportunity cost was the jelly beans.
(Jimmy could not choose the nut clusters because of his allergies.)

C. When Mary chose the jacket, her opportunity cost was either the dress or the shoe, whichever was her next best alternative. (The example does not give enough information to identify her opportunity cost.)

D. When Joe chose the Ford truck, his opportunity cost was the Chevrolet.

E. When the city council chose to build the music stage, their opportunity cost was the wading pool.]

7. **Using Part 2 of Handout/Visual 2: What is the Opportunity Cost? The students (pairs) should write an example of an opportunity cost situation similar to the five situations above.**

Their situations should include the components mentioned in the Lesson Introduction.

- It must be a situation where there are several (more than one) alternatives.
- The situation must require a choice from among the several alternatives.
- The decision-maker's choice should be limited to one of the alternatives.
- The situation should be "time and space" defined. There should not be the option to have another of the alternatives tomorrow. The decision is in the here and now.

The students (pairs) should share their situations with the class. The other students should be able to identify the opportunity cost of the situations or explain why the opportunity cost cannot be identified.

Lesson Conclusion

Refer the students again to Handout/Visual 1, Why It Matters: Opportunity Cost. Review again the main points of the article.

[• All choices have costs.
  - Opportunity cost is the next best alternative when a choice is made.
  - Deciding to attend college has opportunity costs.
  - Knowing the opportunity cost of a choice leads to better decision-making.
- College graduates earn more income, but…see the first point.]

Further discuss the college decision.
Ask: What is the key to making the right decision? [Knowing all of the dollar and opportunity costs of the alternatives.]

Explain: When you choose one alternative over another, you are making a "trade-off" of your goals.

Define trade-off - Trade-off: The giving up of one benefit or advantage in order to gain another regarded as more favorable.

When you make the college choice what is your trade-off? [Current income for working vs. more future income due to more education.]

Ask: What do you think is the key to making the "right" college/work decision for yourself? [Knowing the real costs and benefits of each alternative.]

For more information about the benefits of more education, see the Bureau of Labor Statistics' website, "Education Pays." URL: http://www.bls.gov/emp/ep_chart_001.htm

Reinforce the benefits of knowing the real costs and benefits of decisions – big and small – to maximize your consumer satisfaction and well-being.

Extension Activity

The online ***Kahn Academy**** video programs include two segments about the "production possibilities frontier" and "opportunity cost." These provide a much higher level explanation of opportunity cost in the context of production decisions.

Production Possibilities Frontier: http://www.khanacademy.org/finance-economics/microeconomics/v/production-possibilities-frontier

Opportunity Cost: http://www.khanacademy.org/finance-economics/microeconomics/v/opportunity-cost

***** The *Khan Academy* is a not-for-profit educational organization started by Salman Khan in 2008. Its mission is to provide a free, world-class education to anyone, anywhere. Online materials cover subjects ranging from math and finance to history and art. With thousands of bite-sized videos, step-by-step problems and instant data, *Khan Academy* provides a rich and engaging learning experience.

http://khanacademy.desk.com/customer/portal/articles/337790-what-is-khan-academy-

Handout/Visual 1

Why It Matters: Opportunity Cost

One constant in all our lives is that we must make choices. You make choices from the time you get out of bed in the morning until you go to sleep at night. On any given day, you choose what time to get up, what to wear, what to eat, etc. You also make more significant choices about what to do when you graduate from high school. Will you go straight to work? College? Technical training?

No matter the size of the decision, the common thread in all of them is that they involve an opportunity cost. Opportunity cost is your next best alternative—your second choice. For example, it's a Saturday night, and you are trying to decide between going to the movies, hanging out at a friend's house or going to the football game. You decide to go to the movies. What was your second choice? If it was the football game, then that is your opportunity cost. Opportunity cost is not the football game <u>and</u> hanging out at your friend's house—it's your next best alternative, not all of your other alternatives.

Why is opportunity cost important? Opportunity cost is what you give up when you make a decision. When you ask yourself what you are giving up when you make a certain choice, it forces you to think more critically about all of the other options that you are <u>not</u> choosing. It also forces you to think about the follow-up question connected to your decision--is it worth it? You may find that when you think clearly about all of your options and identify the opportunity costs of your choices, perhaps your choice is not worth what you will choose to give up.

A perfect example of clearly identifying opportunity cost is the decision to go to college. If you are a high school senior, you face several options, including going to college, going to technical school, or going to the work force. Let's assume that your first choice is to go to college and your second choice is to go straight to work. You have probably heard that college graduates make as much as $800,000 more in earnings over the course of their lifetimes than high school graduates do. That seems like an easy decision then, right? Not so fast.

If you choose college, what do you give up? What is the true opportunity cost? If you go to college, you will lose what could have been purchased or saved with the money spent on tuition, housing, books, etc. for four years. But that's not the end of the costs. You would also lose four years' worth of income (and experience) that you could have earned if you had gone straight to work. Of course, the job you could get with a high school diploma is probably much different than the one possible with a college degree, but you would still experience the opportunity cost of foregone earnings during college.

If, as many students do, you would finance your college education with student loans, your opportunity cost rises even higher. The repayment of those loans means that one of the opportunity costs of a college education is the reduction in available income once you graduate from college. Heavy student loan debt can also generate other opportunity costs of choosing college, as many college graduates are forced to live at home, delay graduate school or starting a family—all additional costs of a college education.

It is still the case that college graduates earn more than high school graduates do. It is still the case that the unemployment rate among college graduates (4.1 percent) is less than that of high school graduates (8.8 percent). For many students, going on to college is an appropriate decision. But, like all decisions, it is one that should be arrived at only after looking at the costs—including the opportunity costs—and considering the follow-up question: is it worth it?

Handout/Visual 2

What is the Opportunity Cost?

Part 1: For each of the five situations below, suggest the opportunity (real) cost of the person's choice. One a piece of paper, describe the choice and opportunity cost of each situation. Use a sentence that begins "When…chose the…, his/her opportunity cost was…" Be prepared to explain your answer.

1. Tonya had a hard time deciding between the Big Burger and the Crispy Chicken sandwiches, her two favorites. She chose the chicken because she had more recently had a burger. What was her opportunity cost?

2. Jimmy went to a candy store. He really wanted chocolate nut clusters, jelly beans, and licorice. He only had enough money buy one of them. He can't eat chocolate or nuts because of an allergy. He decided to buy some licorice. What was his opportunity cost?

3. Mary was shopping in a clothing store. She had $100 to spend. She found three items she liked: $99 for a pair of shoes, $98 for a jacket, and $96 for a dress. After over an hour of shopping, she decided to buy the jacket for $98. What was her opportunity cost?

4. Joe was shopping for a truck. He has looked at similarly priced Ford, Chevrolet, Toyota, and Ram models. After a lot of thought, he narrowed it down to either the Ford or the Chevrolet. He selected the Ford because he liked the interior a little better. What was his opportunity cost?

5. The city was building a new park. There was only enough money in the budget to include new tennis courts, a wading pool, a music stage, or a parking lot. At the public hearing, many of the people wanted more parking. City Council voted to build the music stage after narrowing it down to either the stage or the wading pool. What was the city's opportunity cost?

Part 2: Write your own opportunity cost situation, similar to those above. It should include the four components discussed previously.

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