

Lesson Plan

Globalization: Threat or Opportunity for the U.S. Economy?

Overview:

This lesson introduces students to the pros and cons of globalization by highlighting the economic concepts of comparative advantage, specialization, and opportunity cost. Additionally, students will actively read and discuss the *FRBSF Economic Letter: Globalization: Threat or Opportunity for the U.S. Economy?*

Economic Concepts Covered in the Lesson Plan:

- Comparative advantage
- Opportunity cost
- Productivity
- Globalization
- Outsourcing
- Offshoring

Student Objectives:

Students will:

- Analyze opportunity costs to determine a comparative advantage.
- Examine how specialization can lead to greater productivity.
- Explore the effects of globalization on the U.S. economy.

Time:

One class period

Materials Needed:

- White board/chalk board
- Student Handouts 1 & 2 (1 copy per student)
- May 21, 2004 *Economic Letter: Globalization: Threat or Opportunity for the U.S. Economy?* (1 copy per student)

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Procedure:

1. Read the following statement:

Marisa and Jaheed attend Lincoln high school and are in the same economics class. Tonight's economic assignment contains six math problems and three English problems for a total of nine problems. This assignment gives students the option of working in a group or individually. Lincoln high's state championship basketball game is tonight and both Jaheed and Marisa need to finish their homework prior to attending the game. Should Marisa and Jaheed work separately or together?

2. Record the following chart and information on the board:

Chart A

Student	English problems in one hour	Time per English problem	math problems in one hour	Time per math problem
Marisa	4		6	
Jaheed	3		4	

- It takes Marisa _____ minutes to finish the assignment working alone.
 - It takes Jaheed _____ minutes to finish the assignment working alone.
3. State the following and record the information in the chart as you go through the example.
 - If she spends all her time on English and none on math, Marisa can complete four English problems in one hour. If she instead spends all her time on math and none on English, she can complete six math problems in one hour.
 - If he spends all his time on English and none on math, Jaheed can complete three English problems in one hour. If he instead spends all his time on math and none on English, he can complete four math problems in one hour.
 4. Ask the following questions:
 - a. How long does it take Marisa to complete one problem of English? (sixty minutes divided by four equals **15 minutes**).
 - b. How long does it take for Marisa to complete one problem of math? (sixty minutes divided by six equals **10 minutes**).
 - c. How long will it take Marisa to complete the assignment? (**It will take Marisa 105 minutes to finish the assignment:**
$$6 \text{ math problems} \times 10 \text{ minutes per math problem}$$
$$+ 3 \text{ English problems} \times 15 \text{ minutes per English problem}$$
$$= 105 \text{ minutes}).$$
 - d. How long does it take for Jaheed to complete one problem of English? (sixty minutes divided by three equals **20 minutes**).
 - e. How long does it take for Jaheed to complete one problem of math? (sixty minutes divided by four equals **15 minutes**).

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- f. How long will it take Jaheed to finish the assignment? (**It will take Jaheed 150 minutes to finish the assignment:**

$$\begin{aligned} & 6 \text{ math problems} * 15 \text{ minutes per math problem} \\ & + \underline{3 \text{ English problems} * 20 \text{ minutes per English problem}} \\ & = 150 \text{ minutes).} \end{aligned}$$

Completed Chart A

Student	English Problems in one hour	Time per English problem	math Problems in one hour	Time per math problem
Marisa	4	15 minutes	6	10 minutes
Jaheed	3	20 minutes	4	15 minutes

- It takes Marisa **105** minutes to finish the assignment working alone.
 - It takes Jaheed **150** minutes to finish the assignment working alone.
- g. What do you notice about these numbers? (Marisa can do both English and math faster and both students can do math assignments faster than English assignments).
- h. If Marisa is faster than Jaheed at both English and math, why would she work with a partner? (She would work with a partner if doing so would save time, given that she cannot work on two subjects at once).
- i. If Marisa and Jaheed decide to work together by each working on one subject, how do we know who should work on math and who should work on English? There are two economic concepts that can help us solve our problem: comparative advantage¹ and opportunity cost².
5. Define comparative advantage and opportunity cost. Write the definitions on the board. Explain to the class or write on the board that Marisa and Jaheed each should specialize in the subject in which they have a comparative advantage.
6. Distribute Handout #1.
7. Record the following information on the board.

Chart B

Marisa	Jaheed
In one hour, Marisa can complete either 6 math problems or 4 English problems.	In one hour, Jaheed can complete either 4 math problems or 3 English problems.
Time to complete 6 math problems = time to complete 4 English problems	Time to complete 4 math problems = time to complete 3 English problems
Tradeoff: 1 English = _____ math	Tradeoff: 1 English = _____ math
Tradeoff: 1 math = _____ English	Tradeoff: 1 math = _____ English

¹ Comparative advantage is the comparison among producers of a good according to their opportunity cost. Definitions from Mankiw, 2004 "Principles of Macroeconomics."

² Opportunity cost is whatever must be given up to obtain some item. Definitions from Mankiw, 2004 "Principles of Macroeconomics."

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8. State the following and record the information in the chart as you go through the example.
- We will now identify each students' opportunity cost of working on each subject. How many math problems must Marisa give up in order to work on one English problem? Marisa's opportunity cost of one problem of English homework is $\frac{6}{4}$ or 1.5 problems of math homework.
 - How many English problems must Marisa give up in order to work on one math problem? Marisa's opportunity cost of one problem of math homework is $\frac{4}{6}$ or .67 problems of English homework.
 - How many math problems must Jaheed give up in order to work on one English problem? Jaheed's opportunity cost of one problem of English homework is $\frac{4}{3}$ or 1.3 problems of math homework
 - How many English problems must Jaheed give up in order to work on one math problem? Jaheed's opportunity cost of one problem of math homework is $\frac{3}{4}$ or .75 problems of English homework.

Completed Chart B

Marisa	Jaheed
In one hour, Marisa can work on 6 math problems or 4 English problems.	In one hour, Jaheed can work on 4 math problems or 3 English problems.
6 math = 4 English or 4 English = 6 math	4 math = 3 English or 3 English = 4 math
1 English = $\frac{6}{4}$ math, or 1.5 math	1 English = $\frac{4}{3}$ math, or 1.3 math
1 math = $\frac{4}{6}$ English, or .67 English	1 math = $\frac{3}{4}$ English, or .75 English

- Looking at our chart, who gives up less math to complete one problem of English? That is, who has the lowest opportunity cost of doing a problem on English homework? (Jaheed: one English costs him 1.3 math, whereas it costs Marisa 1.5 math).
- Who gives up less English to complete one problem of math? That is, who has the lowest opportunity cost of doing a problem of math homework? (Marisa: one math costs her .67 English, whereas it costs Jaheed .75 English).
- Since Jaheed has the lowest opportunity cost of completing a problem of English homework, he has a comparative advantage in English. Since Marisa has the lowest opportunity cost in completing a math homework, she has a comparative advantage in math. Knowing the students' opportunity costs allows us to determine the specialization pattern: each student should specialize in the subject in which he/she has a comparative advantage. If Marisa specializes in math and Jaheed specializes in English, how much time will it take them to finish the assignment? To answer this question, let's revisit how long it took each student to complete each problem of the homework assignment.

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9. Record the following chart on the board

Chart C

Student	Comparative Advantage	Time per problem	Total time to complete subject
Marisa	Math	10 minutes ³	
Jaheed	English	15 minutes	

- If they work together, Jaheed and Marisa can have the entire homework assignment completed in _____ minutes.

10. State the following and record the information in the chart as you go through the example.

- How long will it take Jaheed to finish the English? (It will take him 15 minutes for each problem of English, for a total of 45 minutes for three problems of English.)
- How long will it take Marisa to finish the math? (It will take her 10 minutes for each problem of math, for a total of one hour for six problems of math.)

Completed Chart C

Student	Comparative Advantage	Time per problem	Total time to complete subject
Marisa	Math	10 minutes	60 minutes
Jaheed	English	15 minutes	45 minutes

- If they work together, Jaheed and Marisa can have the entire homework assignment completed in 60 minutes.

11. Using both charts A and C, ask the following questions:

- Do Marisa and Jaheed save time working together? (Yes).
- How much time does Marisa save? (Marisa saves 45 minutes. 105 minus 60 equals 45 minutes).
- How much time does Jaheed save? (Jaheed saves 90 minutes. 150 minus 45 equals 105 minutes).

12. State the following:

Our activity explained the economic concepts of specialization, comparative advantage and opportunity cost, and showed how gains from trade can be realized. In fact, even though Marisa had the absolute advantage in both math and English (meaning, she is faster than Jaheed in both subjects), she still benefits from working with Jaheed and specializing in the subject in which she had a lower opportunity cost. Next, you will read an article that uses these concepts to explore how countries can benefit when they trade with other countries.

13. Hand each student a copy of *Economic Letter* titled *Globalization: Threat or Opportunity for the U.S. Economy?* and a copy of student handout #2.

14. Instruct students to read through the *Economic Letter* and answer all questions to student handout number #2. Inform students that after they finish reading the *Economic letter* four volunteers will be needed to debate the pros and cons of globalization: two for globalization and two against globalization. Students may use their answers to handout #2 for their argument.

³ You might want to reference the original chart to explain where the time per problem came from.

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Assessment Activity:

After students have finished reading and debating the issue of globalization, assess their understanding of comparative advantage, specialization, and opportunity cost by reviewing the following activity.

The following assessment activity "NAFTA: Are Jobs Being Sucked out the United States?" was written by William Luksetich of the Department of Economics at St. Cloud University. The activity can be viewed in its entirety by accessing <http://www.econedlink.org/lessons/index.cfm?lesson=EM50&page=teacher>.

Extension Activity:

Download a free copy of *International Trade and Central Banking*. *International Trade and Central Banking* is a two class period activity based lesson plan that will introduce your students to the structure, purposes, and functions of the Federal Reserve System in the U.S. Using compare/contrast techniques, students will learn about the Federal Reserve System by investigating similarities and difference among the central banks in different countries. In addition, students will learn how the Federal Reserve is related to the international economy and trade.
(<http://www.frbsf.org/education/curriculum/complete.pdf>)

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Student Handout #1

Marisa	Jaheed
In one hour, Marisa can work on 6 math problems or 4 English problems.	In one hour, Jaheed can work on 4 math problems or 3 English problems.
6 math = 4 English or 4 English = 6 math	4 math = 3 English or 3 English = 4 math
1 English = _____ math	1 English = _____ math
1 math = _____ English	1 math = _____ English

1. How many math problems must Marisa give up in order to work on one English problem?
2. How many English problems must Marisa give up in order to work on one math problem?
3. How many math problems must Jaheed give up in order to work on one English problem?
4. If Jaheed works on one problem of English he must give up working on 1.3 problems of math (four problems of math divided by three problems of English equals 1.3).
5. How many English problems must Jaheed give up in order to work on one math problem?

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Student Handout #2

Directions: With your copy of the *Globalization: Threat or Opportunity for the U.S. Economy?*, please respond to the following questions in preparation for a class discussion and debate.

1. Using the article, define outsourcing and offshoring. How are they different?
2. What might be an example of outsourcing and offshoring NOT mentioned in the article?
3. According to the author, why does globalization help increase productivity growth in the U.S.?
4. Using the article, cite one pro and one con to increased productivity in the U.S. workplace.
5. What are the "hallmarks of a flexible economy" and why are they significant?
6. Name three types of programs that might assist a displaced employee? (Answers don't necessarily have to be cited in the article.)
7. What does the author state as the long term solution to helping workers displaced by globalization? Why?

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Student Handout #2 Answer Key

Directions: With your copy of the *Globalization: Threat or Opportunity for the U.S. Economy?*, please respond to the following questions in preparation for a class discussion and debate.

1. Using the article, define outsourcing and offshoring. How are they different?
 - *Outsourcing is simply contracting out functions that had been done in-house.*
 - *Offshoring: instead of turning to domestic providers, firms may decide to purchase a good or service from overseas providers because of lower costs.*

Students should note the distinction between contracting out certain job functions (outsourcing) and the purchase of a good or service from an international provider. (offshoring).

2. What might be an example of outsourcing and offshoring **NOT** mentioned in the article.

Answers will vary, but two examples are included below.

- Outsourcing: An IT company decides to contract with a health benefit administrator as opposed to hiring an HR person to do the job.
- Offshoring: A German chocolate company supplies the chocolate for an American candy bar company.

3. According to the author, how can globalization help increase productivity growth in the U.S.?

Using the Economic Letter's example of offshoring IT services, the offshoring has led to reduced prices of computer and telecommunications equipment by 10%-30%. These price declines boosted the spread of IT throughout the U.S. economy and raised both productivity and growth.

4. Using the article, cite a pro and a con to increased productivity in the U.S. workplace.

- Pro: Higher productivity creates higher standards of living across the economy.
- Con: Displaced U.S. workers.

5. What are the "hallmarks of a flexible economy" and why are they significant?

The emergence of new jobs and workers' ability to move into them are the hallmarks of a flexible economy—that is, an economy in which labor and capital resources move freely among firms and industries. And such flexibility is a significant strength of the U.S. economy. We operate in competitive markets, and competition, whether from domestic or foreign competitors, induces change. To adapt to that change, and to ease the burden adjusting to it, flexible labor and capital markets are critically important.

6. Name three types of programs that might assist a displaced employee? (Answers don't necessarily have to be cited in the article.)

Answers will vary, but some suggestions are:

- Unemployment insurance
- Job training
- Job placement services

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7. What does the author state as the long term solution to helping workers displaced by globalization? Why?

In the long—run, of course, the solution is simple to state, but difficult—and costly—to implement. And that solution is improving the performance of the U.S. education system. Education is the bedrock of our current edge in technology and productivity. It's the key to producing workers with the flexibility to learn new skills as market conditions evolve. And it's the hope and promise we must provide for future generations of Americans.