

IDA Project  
Sinclair Community College  
Kathy Rowell

Student Learning Module 3  
Sociology 205  
Social Problems  
**Investigating Differences in Earnings based on Gender**

### **Learning Objectives**

**After the completion of this module, the learner should be able to:**

1. Demonstrate the ability to state a hypothesis.
2. Demonstrate an understanding of both the dependent and independent variable.
3. Demonstrate how to create a cross-tabulation using both frequencies and percentages.
4. Demonstrate how to create both a bar chart and a pie graph.
5. Explain how each of the following variables is related to differences income earnings within the United States: Race, Age, Gender, and Education. Explain what is meant by the term gender gap.
6. Demonstrate how to control for a variable and interpret a control variable.
7. Examine and use web resources to explore possible policy implications of data findings in this module.
8. Demonstrate an effective use of the sociological imagination.

### **Key Concepts**

Gender gap	Dependent Variable
Hypothesis	Control Variable
Independent Variable	Operationalization

Learner's name \_\_\_\_\_

### **Learner Pre-Assessment**

Before beginning this module, take a few minutes to respond to the following questions:

1. What is meant by the term gender gap?
2. Do you think gender plays a role in income earnings?
3. How comfortable are you with numerical information? Please circle which best describes you.
  1. Not Comfortable
  2. Somewhat Comfortable
  3. Comfortable
  4. Very Comfortable
  5. Extremely Comfortable

## A Brief Introduction to the Topic:

Please note: Before trying this module, you must read Chapter 4 in your textbook on Gender. This module assumes that you have a basic familiarity with the content of this chapter.

For this assignment, you will be using the following dataset within Student Chip(Work9-25.DAT). Be sure to refer to your Sociological Toolbox if you need help in opening and using this dataset.

Before we begin, let's take a closer look at the data. Choose marginals on student chip and let's examine the data for each variable presented in (Work9-25.DAT). This data set holds information on 1990 Full time workers by education, occupation and earnings, age 25-34.

Please complete the following information:

1. What percentage of full time workers are white?  
\_\_\_\_\_
2. What percentage of full time workers are male? \_\_\_\_\_
3. What percentage of full-time workers have a high school degree \_\_\_\_\_?
4. What percentage of full-time workers earn more than 50k? \_\_\_\_\_

### Investigating Relationship #1 Gender

If you as a researcher used various theories on income differences. What would you hypothesize about income differences between men and women?

#### STATE HYPOTHESIS

1: \_\_\_\_\_

(Remember your rules on how to state a hypothesis).

In the above hypothesis:

What would be your independent variable? \_\_\_\_\_

Why? \_\_\_\_\_

What would be your dependent variable? \_\_\_\_\_

Why? \_\_\_\_\_

**CREATE A CROSS TAB TO EXAMINE YOUR HYPOTHESIS**

*Hint : SEE TOOLBOX*

*Dependent Variable=Row*

*Independent Variable=Column*

*Percent Down*

See next page

Use the Space Below to list the results of your cross tab.

**CRITICAL THINKING MOMENT 1**

**In examining the above table, explain the relationship that seems to exist between gender and earnings.** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**CRITICAL THINKING MOMENT 2:**

**Overall, do you seem to be on the right track with your hypothesis? Why or Why not?**

## Investigating Relationship #2 Controlling for Education

Sometimes researchers have to control for one variable while examining the relationship between two variables. Controlling allows the researcher to examine whether or not a third variable is accounting for the relationship found between two variables. It might be the case that gender is not the main reason why there is a difference in earnings rather it might be that men have a higher education than women and thus, they earn more than women. In order to examine this relationship, you will need to control for education in the above example.

Directions on controlling for education (Teacher will demonstrate:

**CLICK ON TABLE MENU**

**CLICK ON CONTROL**

**HIGHLIGHT THE VARIABLE YOU WANT TO CONTROL)**

**CLICK ON SELECT**

**CLICK ON TABLE MENU**

**CLICK ON PERCENT DOWN (YOU MUST TELL STUDENT CHIP HOW TO DO THIS AGAIN)**

**STATE HYPOTHESIS**

You will now have several tables to scroll down and examine by education. Carefully examine the data and answer the following questions.

1. Do earnings differ between men and women with less than a high school education?

Explain \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

2. Do earnings differ between men and women with a high school degree?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

3. Do earnings differ between men and women with some college? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

4. Do earnings differ between men and women with a college degree? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

5. Overall, do educational differences between men and women (ages 25-34) seem to be accounting for gender differences in earnings?  
Explain \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

**Investigating Relationship #3 Controlling for Occupation**

In thinking about gender differences in earnings, we learned in class that often times women choose occupations that pay less. As a researcher you can control for occupation and examine the relationship occupation has to gender differences in earnings.

Directions on controlling for occupation  
:

- You will need to do the Crosstab again before controlling for occupation
- CLICK ON TABLE MENU**
- CLICK ON CONTROL**
- HIGHLIGHT THE VARIABLE YOU WANT TO CONTROL**
- CLICK ON SELECT**
- CLICK ON TABLE MENU**
- CLICK ON PERCENT DOWN (YOU MUST TELL STUDENT CHIP HOW TO DO THIS AGAIN)**
- STATE HYPOTHESIS**

You will now have several tables to scroll down and examine by education. Carefully examine the data and answer the following questions.

1. Do earnings differ between men and women with blue collar occupations? \_\_\_\_\_  
\_\_\_\_\_.

2. Do earnings differ between men and women with Service occupations? \_\_\_\_\_  
\_\_\_\_\_.

3. Do earnings differ between men and women with other white collar occupations? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

4. Do earnings differ between men and women with Top White Collar occupations? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

5. Overall, do Occupational differences between men and women (ages 25-34) seem to be accounting for gender differences in earnings? Explain \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

**What other factors(control variables) do you think might account for the differences in earnings between men and women? Why?**

**How much of gender differences in earnings do you think is due to gender discrimination? Why?**

Learner's name \_\_\_\_\_

## LEARNER'S POST ASSESSMENT

Take a few moments to reflect upon what you have learned in this module:

1. What factors seem to be related to the gender gap?
  
2. What surprised you most about doing this module? Explain
  
3. How comfortable are you with numerical information? Please circle which best describes you.
  1. Not Comfortable
  2. Somewhat Comfortable
  3. Comfortable
  4. Very Comfortable
  5. Extremely Comfortable



**Grading Rubric (Scale)**  
**Learning Module 3**

Competent (3)= Learner demonstrates excellent understanding of learning objectives.  
 Learner answered each question accurately.

Needs Improvement (2)= Learner demonstrated good understanding of learning objectives.  
 Learner answered 80% of the questions in an accurate and thorough manner.

Not Competent (1)= Learner demonstrates some understanding of the material, but needs  
 more practice. Learner answered less than 79% of the material.

	Highly Competent	Competent	N.I.
Demonstrates how to write a hypothesis.	3	2	1
Understands the difference between independent and dependent variable	3	2	1
Demonstrates the skills to create a cross table	3	2	1
Demonstrates the skills to use a control variable	3	2	1
Demonstrates an understanding of data interpretation	3	2	1
Overall Sociological Imagination Score on this Module	_____		
(Average Score= Your score divided by 15)	_____		