This module is updated based on one created by Susanne Morgan of Ithaca College to include more recent data and for ease of use with WebCHIP 4.0.

Value of an Education (Instructor's Guide)

An introductory module using WebCHIP and data from the U.S. Census

THIS MODULE HAS THE FOLLOWING OBJECTIVES:

Skills

- To orient students to WebCHIP, by in-class demonstration
- To learn to identify the contents of various datasets, read marginals, and read a percentaged crosstab table.
- To give beginning practice writing about data.
- To provide a brief homework assignment beginning to graphically illustrate data.

Substance

- To clarify common misperceptions about the frequency and value of a college education.
- To use collaborative learning techniques.

CLASS SETTING, EQUIPMENT AND MATERIALS

In class, with projection from a Macintosh or PC. Full lab is not necessary.

Materials:

- In-class Exercise: Quiz and grid for answers
- Instructions and grids for the homework assignment.

Faculty steps:

- Distribute In-Class Exercise: Value of a College Education in the U.S. for individual completion. Remind them that the numbers should be percentages of the U.S. population.
- Form students into groups, and instruct them to arrive at one group guess.
- Briefly, have the groups report their answers, and record them on the board or transparency.

- Note: This module uses three different datasets from acs2008, each with different variables and different categories. You need to return to the BROWSE window to move from one dataset to another. For this introductory exercise, the in-class part uses two datasets, but the homework uses only one, so it should not be as confusing for the students.
- To open the dataset in WebCHIP:
    - Go to http://ssdan.net/datacounts/webchip
    - In "Collections" on the left sidebar. Find **acs2008** in the drop-down box and select it.
    - In data sets find **EducOccup** and select it
- Create a *Marginals* table to see the population in the dataset, and the variables included. This screen will give the answers to the first part of the exercise. Ask students to fill in the correct answers on their copies of the In-class Exercise.
- Ask students why they think the percentage with a college education is so low. If they suggest that older people may have been less likely to attend college, then demonstrate by creating a percent across crosstab with age as the first variable (for the rows) and then education as the second variable (for the columns). Spend some time asking students to read the table. The form should be "Of all those over 65, ...% have a college degree." Compare those over 65 with those 25-34, noting the percentages with a college degree or with less than 9 years of school.
- If they do not have any ideas about the reasons the percentage of college education is low, then go on to the next step.
- To find the answers to the second part of the exercise, you need to go back to the data browser and open the dataset **Earn** file in **acs2008**.
- Create a *Marginals* table to see the population in the dataset, and the variables included. This screen will give the answers to the second part of the exercise. Ask students to fill in the correct answers on their copies of the In-Class Exercise.
- Ask students to speculate on the value of a college education. For this example, we should consider only people who are 25-34, because they are products of contemporary education and you would remove the effect of older people being less likely to have a college degree. What proportion of those aged 25-34 with a college degree or higher do students predict are now earning over $50,000? What proportion of those with less than a high school diploma are not earning over $50,000?
- Now, go back to the data browser and open the **Work-25** file under "datasets" Note the label of the table to see who is included here (only full-time workers, and only in the age group 25-34.)
- Create a percent across crosstab with EDUC in the rows (click first) and EARNINGS in the columns (click second.) Spend some time asking students to read the table. The form should be "Of all those with a college degree, ...% are earning under $25,000, while of all those with less than high school, ... % are earning under $25,000."

In-class activity:

Ask each student to choose 3 numbers from the tables and write an interpretative statement about it. Suggest the form, "Of all the,…% are " Have them work in pairs to check their answers, and clarify any confusion in class. Collect the papers.

Homework Assignment: *Graphing the value of a college education in the U.S.*

This assignment does not require them to use a computer, as the answers will be on their handout of the tables from class. However, encourage them to try to enter WebCHIP and the EducOccup data set, and to see what else they can discover in it. They should form teams of two.

The Value of an Education (Exercise Document for Students)

An introductory module using WebCHIP and data from the U.S. Census

This PACKET INCLUDES THE FOLLOWING TEACHING MATERIALS:

- **In-Class Exercise** (one-page handout to distribute to students. It involves individual guesses, group consensus, and then demonstration of census data.)
- **Homework Assignment** (handout to distribute at the end of class: it includes graphs for them to make and brief writing assignments.)

This module has the following objectives:

Skills

- To orient students to WebCHIP, by in-class demonstration
- To learn to identify the contents of various datasets, read marginals, and read a percentaged crosstab table.
- To give beginning practice writing about data.
- To provide a brief homework assignment beginning to graphically illustrate data.

Substance

- To clarify common misperceptions about the frequency and value of a college education.
- To use collaborative learning techniques.

This module was developed by Susanne Morgan, Department of Sociology, Ithaca College. It uses datasets and materials from SSDAN, Social Science Data Analysis Network, directed by William H. Frey of the Population Studies Center, The University of Michigan. The idea for the module comes from Tony Catanese, Department of Economics, DePauw University.

In-Class Exercise

The Value of a College Education

In the first column below, please write your guess as to the percentages of the adult (over 25) U.S. population which has completed the following levels of education:

Table 1

Education	*Your guess*	*Group consensus*	*Census Data*
<9 years			
10-12 years			
HighSchoolGrad			
Some College			
College Grad			
Master's Degree			
Ph.D./Professional			

Now please write your guess as to the percentages of the adult, full-time employed U.S. Population which earns the following amounts per year.

Table 2

Earnings	*Your guess*	*Group consensus*	*Census Data*
<15 K			
15-25K			
25-35K			
35-50K			
50K+			

When you have completed your guesses, meet with a group of 4-6 and arrive at a group guess. Enter that guess in the second column.

After the groups report on their guesses, fill in the actual data from the data sets in the **acs2008** Collection, which will be projected or handed out. To find this information, create a Marginals table in each of the datasets.

To open the datasets in acs2008 in WebCHIP. To load the dataset:

1. Go to http://ssdan.net/datacounts/webchip
2. From there, in collections find **"acs2008"** in the drop-down box and select it.
3. Scroll down through the list of data sets until you find the specified dataset and select it:

Table 1 Data: EducOccup.dat

Table 2 Data: Earn.dat

Homework Assignment
The Value of a College Education

This assignment uses WebCHIP 4.0 and the **Work-25** data set in the **acs2008** collection.

To load the dataset:

1. Go to https://ssdan.net/datacounts/webchip
2. In collections find **acs2008** in the drop-down box and select it.
3. In data sets find **Work-25** and select it

Then make tables using these steps:

- Creating a *Marginals* table to see the variables and total percentages.
- Creating a percent across crosstab with EDUC as the first variable (the first selected goes in the rows) and EARNING as the second variable (for the columns.)

See what you can discover in the tables.

Before beginning to create the graphs, be sure to be clear about the statements you want to make. The form is "Of all the, % are " where the ad refers to the variable in which you have percentages, the variable in which all the percentages add up to about 100%.

Make a bar graph of Earnings by Education, contrasting the percentages of people earning less than 25K and over 50K in each education group. Use a pencil and indicate the percentage of each in the appropriate bar**.** Label the graph appropriately, indicating the variables, the sample, and the source.

Write a short paragraph describing what you have learned about the value of a college education. Make general statements, and illustrate them with examples from the tables or from your graph. (note: graph on next page says less than 15K use less than 25K)

Earnings by Education