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Evaluation/Reflection

Barbara A. Holland Collection for Service Learning and Community Engagement (SLCE)

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## Data Analysis

Project STAR

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# Data Analysis



## **Project STAR**

480 E. 4<sup>th</sup> Ave., Unit A  
San Mateo, CA 94401-3349  
1800-548-3656 FAX 650-348-0260

<http://projectstar.org>  
[star@aiweb.com](mailto:star@aiweb.com)

NSLC  
c/o ETR Associates  
4 Carbonero Way  
Scotts Valley, CA 95066

#1196

## **Introduction**

Data analysis acts as the “Construction Phase” of your evaluation. The process of data analysis includes deciding on the appropriate analysis to conduct for each question, preparing data for analysis, and summarizing results. For outcome data, the result of analysis should enable you to answer the question, “What changed because of AmeriCorps services?”

This packet will describe the steps you need to analyze simple instruments you use. Each step includes explanations and examples. On pages 21 and 22 you will find a practice worksheet and a blank sample survey for you to practice analysis skills using the sample surveys found on pages 23-32. In addition, there is a glossary of terms on page 33.

## **Steps to Data Analysis**

- 1. Start with a Plan**
- 2. Collect and Clean Your Data**
- 3. Determine a Coding System**
- 4. Tabulate Your Data**
- 5. Transfer Your Information**
- 6. Check Your Plan**

## Step 1

### ***Starting with a Plan***

Before you begin your data analysis, plan how you will analyze your data. Choose a type of analysis for each question: frequency, percent distribution, mean, change in score from pre-test to a post-test, or content analysis. Next to each question on your instrument, list the type of analysis you are going to conduct.

<b>While you examine your instrument, think about the following questions:</b>	<b>Analysis</b>
Do you want to report the number of people who answered each question?	<i>A Count</i>
Do you want to report how many people answered "a", "b", or "c"?	<i>A Frequency</i>
Do you want to report what percentage of people answered "a", "b", or "c"?	<i>A Percent Distribution</i>
Do you want to report an average score?	<i>A Mean</i>
Do you want to report a change in score from a pre-test to a post-test?	<i>Change in Scores</i>
Do you have open-ended questions?	<i>Content Analysis</i>

**A complete analysis plan of a sample survey might look like page 4.**

# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
<b>1. Organization of the project (Mean)</b>	1	2	3	4	5
<b>2. Student participation (Mean)</b>	1	2	3	4	5
<b>3. Benefit to the community (Mean)</b>	1	2	3	4	5
<b>4. Briefly describe the work that was completed:</b>					
<b>(Content Analysis)</b>					
<b>5. For how long did you participate in this activity? ___ hours</b>					
<b>(Mean)</b>					
<b>6. How did you hear about this project? (Check all that apply.)</b>					
<b>(Frequency and Percentages)</b>					
Newspaper	Someone told me	Saw it in person	Spoke with the team members		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>7. I feel my knowledge of community service after participating in this activity is (Check only one):</b>					
<b>(Frequency and Percentages)</b>					
Better than	Worse than	The same as it was			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

## Step 2

### **Collecting and Cleaning Your Data**

Keep all of the forms you received for each survey, test, or interview in one place. At this point, you may wish to remove forms which are substantially incomplete or don't make any sense. Record the number of forms you remove and the reasons why they were removed. You may want to include this in your report. Assign identification (ID) numbers to each form to help keep track of which forms you have processed.

### **Qualitative Data**

The purpose of doing qualitative data analysis is to reduce the amount of text and organize responses to identify trends in your data. One method of doing qualitative data analysis is Content Analysis. By doing Content Analysis, you are creating a structure to organize open-ended, unstructured information.

### **Identify the Unit of Analysis**

Begin by identifying the Unit of Analysis. The Unit of Analysis is the smallest block of text examined in the content analysis determined by the person conducting the analysis. Potential Units of Analysis include: respondent, response, paragraph, sentence, idea, or word.

### **Arrange the Raw Data**

After you determine your Unit of Analysis, arrange the raw data by Unit of Analysis. (For example, if your unit of analysis is "Response," then put all the responses to question 1 together, all the responses to question 2 together, etc., keeping each person's responses separate.) If possible, type the data into a word processing program.

### **After reviewing the sample responses on page 6, an identified Unit of Analysis might look like the following:**

*An appropriate Unit of Analysis would be "response." This was chosen because the first question and the second question are not related.*

### **Arranging data by the Unit of Analysis would look like the following:**

**What did you like about this project?**

*The whole experience, especially group work to beautify our school.*

*The obvious planning of each detail. First, the lesson given on planting bulbs was interesting and on a level that primary students could understand. Second, the students had planned the planting session very well. Each adult working with 3-4 students. Great hands on project for students.*

*The involvement of all students in a common activity.*

*The excitement of the students in an assignment.*

*Students seeing how they can apply what they learn in class in everyday life.*

## **Sample Open-Ended Responses for Content Analysis**

### **Respondent 1**

**How would you apply the skills and knowledge you learned today to future activities?**

*Getting along and working with others.*

**What did you like about this project?**

*The whole experience, especially group work to beautify our school.*

### **Respondent 2**

**How would you apply the skills and knowledge you learned today to future activities?**

*Small groups work well with adult or older youth. We will be working with high school students in Giraffe Project. In small groups each child has opportunity to play an active role.*

**What did you like about this project?**

*The obvious planning of each detail First the lesson given on planting bulbs was interesting and on a level that primary students could understand Second the students had planned the planting session very well Each adult working with 3-4 students. Great hands on project for students.*

### **Respondent 3**

**How would you apply the skills and knowledge you learned today to future activities?**

*Assign homework to my students in the area of environmental sciences where they contribute to their community.*

**What did you like about this project?**

*The involvement of all students in a common activity.*

### **Respondent 4**

**How would you apply the skills and knowledge you learned today to future activities?**

*I would like to use this type of activity with reading assignments, have my students read to elders or younger children as a means of practicing their reading.*

**What did you like about this project?**

*The excitement of the students in an assignment.*

### **Respondent 5**

**How would you apply the skills and knowledge you learned today to future activities?**

*I would like to try an activity which involves parents, where both the student and parent participate in a joint community service activity.*

**What did you like about this project?**

*Students seeing how they can apply what they learn in class in every day life.*



### **It's Your Turn**

Using the Sample Surveys (pages 23-32), assign each survey an ID number to help you identify which surveys you have processed.

## Step 3

### **Determining a Coding System**

#### **Quantitative Data**

If you are going to use a spreadsheet or a database, you will need to convert “check box” type answers to a numbered code. This will speed up data entry, since you will only type the number corresponding to the answer into the computer, rather than the whole word. On a blank copy of your instrument, assign a number, or code, for each potential answer to each question.

#### **A coded question might look like one of the following:**

1. Were you aware of AmeriCorps Programs in your neighborhood? ( 1 ) Yes ( 2 ) No
2. How would you rate the quality of service provided?  
( 4 ) Great ( 3 ) Good ( 2 ) So-so ( 1 ) Awful *Blank = Blank*
3. Please rate the service on a scale of 1-10, where 10 is excellent and 1 is poor.  
*# = Number Blank = Blank*
4. How much time did you spend with the tutor?  
( 4 ) 30 min. or more ( 3 ) 20-29 min. ( 2 ) 10-19 min. ( 1 ) 0-9 min. *Blank = Blank*
5. What were the outcomes of the community service efforts in your area? (check all that apply)  
( ) increased pride ( ) decrease in vandalism ( ) increased safety ( ) other \_\_\_\_\_  
*Checked = 1 Not Checked = 0*
6. Approximately what proportion of all aluminum cans in the United States is recycled?  
*Coded to determine only the number of right answers: ( 0 ) 20% ( 1 ) 40% ( 0 ) 60% ( 0 ) 80%*  
*Coded to determine which answers people are choosing: ( 2 ) 20% ( 1 ) 40% ( 3 ) 60% ( 4 ) 80%*



#### **It's Your Turn**

Using the blank sample survey (page 22), code the responses for question 6 and question 7.



## Organize Your Responses

**By Hand:** Write the name and number of each question from your instrument on a blank piece of paper. Create a column on that piece of paper for each potential answer. Go through your stack of instruments, question by question, and tally how many people gave each type of response.

**By Computer:** After you have assigned numbers to potential responses, input the responses into the computer. Set up your spreadsheet allowing each column to represent one survey item and each row to represent one person's form. Start each row with the survey's ID number. You can even set up a data entry screen that looks like your printed form! (Be aware that using a "0" for a blank answer may cause your calculations to be inaccurate. Some programs, such as Excel, will read the "0" as a number and include it when it calculates an average. However, Excel does ignore non-numeric responses. For a review of various software, see page 10.)

**A tally by hand would look like the following:**

<i>Question 3.</i>		<b><u>Tally</u></b>
<i>Satisfied with the service provided</i>	<i>Yes</i>	
	<i>No</i>	
	<i>Blank</i>	

**A data entry screen for coded questions might look like the following:**

<b><i>Survey ID</i></b>	<b><i>Questions</i></b>			
	<b><i>3. Satisfied Service</i></b>	<b><i>4. Improved Quality</i></b>	<b><i>5. Increased Knowledge</i></b>	<b><i>6. Overall Satisfaction</i></b>
001	4	2	3	4
002	<blank>	<blank>	2	3
003	3	3	<blank>	3
004	3	4	3	4
005	2	3	3	2

## **Qualitative Data**

To begin to organize data for content analysis, you must determine the categories you want to use. Read through your organized responses. Decide whether you want to use any *pre-determined* categories or if you want to use *emergent* categories. Identify your categories. It may help to write a brief description of what each category should contain. Remember to include an “other” category.

**Pre-determined categories** are selected before the data comes back. They may be selected based on their importance to your program, or because they are included in the question generating the responses. For example, responses to “Explain why you did or did not enjoy this event,” could be placed in “Enjoyed” or “Did not enjoy” categories.

**Emergent categories** are determined after several readings of the data. For example, if you ask students “What did you like about your tutor?” you may need to read through the complete set of answers for this question several times before categories such as “Consistency” or “Friendliness” appear.

### ***Categories with descriptions might look like the following:***

**Level of quality:** These responses refer to the overall quality of the service learning experience, planning age appropriateness, etc.

**The work experience:** These responses refer to the practical work/application of the service learning experience.

**Interest/involvement:** These responses refer to the engagement of students in the activity.



### ***It's Your Turn***

Using the Sample Surveys (pages 23-32), determine a coding system for the responses to question 4. Record your categories in the space provided on the practice worksheet (page 21).

## Software for Handling Your Quantitative Data

Data collection is an integral part of an evaluation effort. Depending on your evaluation methodology, data can come in a variety of forms. Survey data are typically numerical or “quantitative,” whereas focus group data are always descriptive or “qualitative.” The following discusses software for handling your quantitative data.

Data management and analysis software perform four basic functions: data entry, data management, data analysis, and reporting. Data entry involves inputting the information from surveys or interviews into a computer application. Data management involves manipulating the data: sorting, indexing, subsetting, grouping, creating new variables from existing ones, etc. Data analysis involves converting the data into intelligible information such as averages, frequency tables, sums, and other statistics. Finally, data reporting involves formatting the digested data into tables, charts, and graphs that can be used in reports.

There are various types of software that perform the four functions described above, but each has its strength in a specific area. Some software packages are better suited for handling quantitative data, whereas others work best for qualitative data. Below is a summary of the main classes of quantitative software that can assist you in managing your evaluation data.

**Category ratings are:**

**Good \*\*\***

**OK \*\***

**Poor \***

### Databases

**Ease of use \*\***  
**Data entry \*\*\***  
**Data management \*\*\***  
**Data analysis \***  
**Data reporting, text \*\*\***  
**Data reporting, graph \***

Databases are excellent for entering and managing data. (They can handle tons of data). They can also generate polished tabular (text) reports. Their data analysis capability is limited to counts, means, and sums, which may be enough for most purposes. Databases are a bit more complex to use than spreadsheets, but usability has been improving in newer versions. Databases come in two types: “industrial strength” (Oracle, Informix, Dbase, FoxPro) and “user-friendly” (Access, Approach, Paradox, Filemaker Pro). It’s better to go

with “user-friendly” databases, which still provide plenty of data management power.

### Spreadsheets

Spreadsheets are easy to use. They work well for data entry and data analysis if your dataset is not too large. They have limited data management capability (sorting, etc.), but they have excellent graphing and charting features. Charts created with spreadsheets can be exported to word processors and included in reports. Popular spreadsheets include Lotus 123, Excel, and Quattro Pro.

**Ease of use \*\*\***  
**Data entry \*\***  
**Data management \***  
**Data analysis \*\***  
**Data reporting, text \***  
**Data reporting, graph \*\*\***

### Statistical

**Ease of use \*\***  
**Data entry \***  
**Data management \*\*\***  
**Data analysis \*\*\***  
**Data reporting, text \*\***  
**Data reporting, graph \*\***

These include packages like SAS and SPSS that are excellent for basic as well as high level statistical analysis. These packages excel in data management, but data entry can be a bit cumbersome. One strategy is to use a database for data entry and then export the data to a statistical program for data analysis. New versions of statistical packages include interactive user interfaces that can eliminate the need for programming, a huge plus for usability. On the negative side, these packages can be expensive, although there are inexpensive packages in the market with limited features.

## Step 4

### ***Tabulating Your Data***

Conduct the type of analysis you chose for each item. Four common types of analysis used with quantitative data are: frequencies, percent distributions, means, and change from pre-tests to post-tests. Most computer programs for statistical data analysis have functions for tabulating automatically. Conduct a content analysis for qualitative data with open-ended items.

### ***Quantitative Data***

#### ***Calculating a Frequency***

Frequencies tell how often a particular answer was selected. Frequencies can be calculated for any level of data. To calculate a frequency, take one item that you have coded for data analysis. Tally by hand, or use a computer program to count how many times each answer was selected.

#### ***1. Take one question that you have coded for data analysis.***

##### ***Example:***

How would you rate the quality of the service provided?	( <input type="checkbox"/> 4) Great ( <input type="checkbox"/> 3) Good ( <input type="checkbox"/> 2) So-so ( <input type="checkbox"/> 1) Awful <b>Blank = 0</b>
---	---

##### ***Raw Data***

	ID	Answer
How would you rate the quality of the service provided?	001	( <input checked="" type="checkbox"/> ) Great ( <input type="checkbox"/> ) Good ( <input type="checkbox"/> ) So-so ( <input type="checkbox"/> ) Awful
	002	( <input type="checkbox"/> ) Great ( <input checked="" type="checkbox"/> ) Good ( <input type="checkbox"/> ) So-so ( <input type="checkbox"/> ) Awful
	003	( <input checked="" type="checkbox"/> ) Great ( <input type="checkbox"/> ) Good ( <input type="checkbox"/> ) So-so ( <input type="checkbox"/> ) Awful
	004	( <input checked="" type="checkbox"/> ) Great ( <input type="checkbox"/> ) Good ( <input type="checkbox"/> ) So-so ( <input type="checkbox"/> ) Awful
	005	( <input type="checkbox"/> ) Great ( <input type="checkbox"/> ) Good ( <input checked="" type="checkbox"/> ) So-so ( <input type="checkbox"/> ) Awful

**2. Tally by hand, or use a computer program to count how many times each answer was selected.**

**Example:** If you have 5 surveys completed.

***By Hand***

Tally	Total
Great ///	3
Good /	1
So-So /	1
Awful	0
Blank	0

***By Computer***

ID	Questions		
	1	2	3
001		1	
002		2	
003		1	
004		1	
005		3	
<b>Frequencies:</b>			
Great (Code= 1)		3	
Good (Code= 2)		1	
So-So (Code= 3)		1	
Awful (Code=4)		0	
Blank (Code=0)		0	



***It's Your Turn***

Using the Sample Surveys (pages 23-32), the practice worksheet (page 21), and the coded responses you created on the blank sample survey (page 22), calculate the frequency for the responses to question 6.

## Calculating A Percent Distribution

Percent distributions, or percentages, tell what proportion of respondents selected a particular answer. Since percentages reflect the number of times each answer would be selected out of 100 responses, they can be used to help put your data in perspective. These are particularly useful when you have a large number of responses.

To calculate Percent Distribution, calculate the Frequencies as described on page 11. Calculate the total number of responses (n). Then divide the Frequency for each question (F) by the total number of responses (n). Move the decimal point two places to the right and add a percent sign (%). Your percentages should add up to 100%; however, if you round to two decimal places, they may add up to 99 or 101.

### Example:

How would you rate the quality of the service provided? (1) Great (2) Good (3) So-so (4) Awful  
Blank = 0

**1. Calculate the Frequencies as described above.**

**2. Calculate the total number of Responses** (see n in this example).

**3. Divide the Frequency for each response (F) by the total Number of Responses (n).**

Move the decimal point two places to the right and add a percent sign (%).

**Formula:**  
 $\% = F/n$

Frequencies:	Question		
	1	2	3
Great (Code= 1)		65	
Good (Code= 2)		20	
So-So (Code= 3)		15	
Awful (Code=4)		3	
Blank (Code=0)		12	
Number Responses (n)		115	

### Example:

Great:	$65/115 = .56 = 56\%$
Good:	$20/115 = .17 = 17\%$
So-so:	$15/115 = .13 = 13\%$
Awful:	$3/115 = .03 = 3\%$
Blank:	$12/115 = .10 = 10\%$

**Note:** Percentages should add up to 100%; however, if you round to two decimal places, as above, they may add up to 99 or 101.



### It's Your Turn

Using the Sample Surveys (pages 23-32), the practice worksheet (page 21), and the coded responses you created on the blank sample survey (page 22), calculate the percent distribution for the responses to question 7.

## Calculating a Mean

The mean is the average response given. A mean can be used when you want to describe the group as a whole. To calculate a mean, add up all the responses you got for the question. Divide the total by the Number of responses (n).

### 1. Add up all the responses you got for the question.

**Example:**

Please rate the service on a scale of 1-10, where 10 is excellent and 1 is poor.	_____ = the number they write Exclude "0" where 0= Blank.
--	--

ID	Question 3
001	10
002	10
003	8
004	8
005	5
<b>Total=</b>	<b>41</b>
Number of Responses	5

### 2. Divide the total by the Number of Responses.

**Example:**

Total =41
n=5
$41/5= 8.5$
The Mean, or Average rating, for this question = 8.5



### **It's Your Turn**

Using the Sample Surveys (pages 23-32) and the practice worksheet (page 21), calculate the mean for the responses to question 1-3.

## Analyzing Pre-Post Data

The way you write the “standard of success” in your objective will determine how you analyze your pre-post data. Consider the following examples for a tutoring program.

**Example A:** The letter grades of tutored students will increase by an average of  $\frac{1}{2}$  grade per semester.

**Example B:** 80% of tutored students will increase their letter grades by  $\frac{1}{2}$  or more per semester.

Each statement requires different information to be collected and different data analysis. Example A requires that the “average” (mean) letter grade increase by  $\frac{1}{2}$  grade or better when all students are grouped together. Example B requires that the percentage of students who increase their letter grades by  $\frac{1}{2}$  grade or more be greater than 80%. Example B therefore requires an additional piece of information, individual gains, while the first does not. In order to compute individual gain scores, you need to match each student's pre and post measures. (Note: It is always better to compute individual gain scores, when possible. However, an average increase can be computed in the absence of individual gain scores.)

**Example A:** “The letter grades of tutored students will increase by an average of  $\frac{1}{2}$  grade per semester.”

The difference between the first semester average and the second semester average is .44 letter grades; therefore, the objective was not quite attained. Please note that the grades here are not paired by individual student. However, the students taking the pre-test should be the same as the students taking the post-test. If you are not sure if the same students are taking the pre-test and the post-test you may want to get some help from a statistician to analyze your data.

First Semester		Second Semester	
D	=1	C	=2
D+	=1.5	D-	=.7
C	=2	B	=3
B	=3	B+	=3.5
C+	=2.5	B	=3
<b>Total</b>	<b>=10</b>	<b>Total</b>	<b>=12.2</b>
<b>n</b>	<b>=5</b>	<b>n</b>	<b>=5</b>
<b>Mean</b>	<b>=2</b>	<b>Mean</b>	<b>=2.44</b>

**Example B:** “80% of tutored students will increase their letter grade by at least  $\frac{1}{2}$  grade per semester.”

The preferred method of looking at pre-post data is to match each student's pre and post test scores. For this example, 4 out of 5 students gained  $\frac{1}{2}$  letter grades. The percentage of students gaining  $\frac{1}{2}$  letter grade ( $\% = F/n$ ) is 80%; therefore, the objective was attained.

	First Semester		Second Semester		Difference Pre-Post	.5 letter grade gain?
Ann	D	=1	C	=2	+1	Yes
Bob	D+	=1.5	D-	=.7	-.8	No
Chris	C	=2	B	=3	+1	Yes
Dot	B	=3	B+	=3.5	+1.5	Yes
Ed	C+	=2.5	B	=3	+1.5	Yes



## *Qualitative Data*

### **Classify the Data**

Place each data unit (e.g., responses to a question, paragraph, sentence, word) in one of the categories you identified. Each unit should be in at least one category. It may be useful to give a friend or co-worker your list of categories and your organized data and see if they classify the answers in the same way you did. They probably won't match completely, but if your analysis looks completely different, you may want to describe your categories better, or choose new categories.

### **Units classified into categories might look like the following:**

**Level of quality:** These responses refer to the overall quality of the service learning experience, planning age appropriateness, etc.

*The obvious planning of each detail was good. First, the lesson given on planting bulbs was interesting and on a level that primary students could understand. Second, the students had planned the planting session very well. Each adult worked with 3-4 students. Great hands on project for students.*

**The work experience:** These responses refer to the practical work/application of the service learning experience.

*The whole experience, especially group work to beautify our school. Students seeing how they can apply what they learn in class in everyday life.*

**Interest/involvement:** These responses refer to the engagement of students in the activity.

*The involvement of all students in a common activity.  
The excitement of the students in an assignment.*

**Other:** None



### **It's Your Turn**

Using the Sample Surveys (pages 23-32), classify the responses to question 4 according to the categories you recorded on the practice worksheet (page 21).

## ***Reduce the Volume of Text (But Don't Lose the Information)***

There are several ways to reduce the amount of text within each category. You can use a count, a composite, or a short paragraph.

### ***Count the Responses***

Count the number of responses placed in each category, then report the number of responses along with the category description you have created.

### ***Create a Composite Response***

Create “composite” responses that reflect the content of all the responses in each category. Use these composite responses along with the count of all responses in each category to report your data.

### ***Write a Short Paragraph***

For more complex or extensive data, you may want to write a short paragraph describing the contents of each category. These can be reported with, or without, a count of the individual responses.

## ***Reduced responses to the question “What did you like best about this project?” might look like the following:***

*1 person mentioned the level of quality of the project, including the overall quality of the service learning experience, planning age appropriateness, etc.*

*2 people mentioned the practical work experience applicability of the project.*

*2 people mentioned interest/involvement of students in the activity.*



### ***It's Your Turn***

Using the Sample Surveys (pages 23-32), count the responses to question 4 you classified into your categories. Record your findings in the space provided on the practice worksheet (page 21).

## Step 5

### ***Transferring Your Information***

Transfer the information to a copy of the original instrument. For quantitative data, record the frequencies or percentages for each response. For qualitative data, present the categories you developed, summary of comments and the number of responses by category for each question.



#### ***It's Your Turn***

Using the information from your practice worksheet (page 21), transfer your analysis findings to your blank Sample Survey (page 22).

# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
<b>8. Organization of the project</b> (3+3+4+4+5+5+5+5+5+5)/10=44/10 Mean=4.4	1	2	3 	4 	5 / / /
<b>9. Student participation</b> (3+3+4+4+5+5+5+5+5+5)/10=44/10 Mean=4.4	1	2	3 	4 	5 / / /
<b>10. Benefit to the community</b> (4+4+5+5+5+5+5+5+5+5)/10=48/10 Mean=4.8	1	2	3	4 	5 / / / /
<b>11. Briefly describe the work that was completed:</b> Property Cleanup       Vacant Lot Cleanup   Sidewalk cleanup					
<b>12. For how long did you participate in this activity? 5.7 hours</b> (3+6+8+blank+blank+3+6+8+blank+blank)/6=34/6 Mean=5.7 hours					
<b>13. How did you hear about this project? (Check all that apply.)</b>					
Newspaper 4 or 40%	Someone told me 3 or 30%	Saw it in person 9 or 90%	Spoke with the team members 2 or 20%		
<b>14. I feel my knowledge of community service after participating in this activity is (Check only one):</b>					
Better than 6 or 60%	Worse than 0	The same as it was 4 or 40%			

## Step 6

### ***Checking Your Plan***

Go back and check the data analysis plan you created in Step 1. Did you conduct the analysis the way you planned? Compare individual answers from pre and post-tests, or compare results from your clients and from a control group.

## Practice Worksheet

Analysis    Workspace	
<b>Quantitative Data</b>	
Frequency (Question 7)	
Percent Distribution (question 6)	
Mean (Question 1)	
Mean (Question 2)	
Mean (Question 3)	
<b>Qualitative Data (Content Analysis)</b>	
Category 1:	
Description:	
Responses and Count	
Category 2:	
Description:	
Responses and Count	
Category 3:	
Description:	
Responses and Count	
Category 4:	
Description:	
Responses and Count	

# Sample Survey (BLANK)

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
<b>1. Organization of the project</b>	1	2	3	4	5
<b>2. Student participation</b>	1	2	3	4	5
<b>3. Benefit to the community</b>	1	2	3	4	5
<b>4. Briefly describe the work that was completed:</b>					
<b>5. For how long did you participate in this activity? ____ hours</b>					
<b>6. How did you hear about this project? (Check all that apply.)</b>					
Newspaper	Someone told me	Saw it in person	Spoke with the team members		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>7. I feel my knowledge of community service after participating in this activity is (Check only one):</b>					
Better than	Worse than	The same as it was			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
1. Organization of the project	1	2	3	4	5
2. Student participation	1	2	3	4	5
3. Benefit to the community	1	2	3	4	5
4. Briefly describe the work that was completed:					
<p><b>Cleaned up dead grass and weeds from the property of an older person.</b></p>					
5. For how long did you participate in this activity? <u>3</u> hours					
6. How did you hear about this project? (Check all that apply.)					
Newspaper	Someone told me	Saw it in person	Spoke with the team members		
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
7. I feel my knowledge of community service after participating in this activity is (Check only one):					
Better than	Worse than	The same as it was			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			



# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
<b>1. Organization of the project</b>	1	2	3	4	5
<b>2. Student participation</b>	1	2	3	4	5
<b>3. Benefit to the community</b>	1	2	3	4	5
<b>4. Briefly describe the work that was completed:</b>					
Garbage removed from vacant lots in the neighborhood.					
<b>5. For how long did you participate in this activity? <u>  6  </u> hours</b>					
<b>6. How did you hear about this project? (Check all that apply.)</b>					
Newspaper	Someone told me	Saw it in person	Spoke with the team members		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
<b>7. I feel my knowledge of community service after participating in this activity is (Check only one);</b>					
Better than	Worse than	The same as it was			
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
1. Organization of the project	1	2	3	4	5
2. Student participation	1	2	3	4	5
3. Benefit to the community	1	2	3	4	5

4. Briefly describe the work that was completed:

**Clean up lawn waste from group home for handicapped**

5. For how long did you participate in this activity? 8 hours

6. How did you hear about this project? (Check all that apply.)

Newspaper

Someone told me

Saw it in person

Spoke with the team members

7. I feel my knowledge of community service after participating in this activity is (Check only one);

Better than

Worse than

The same as it was

# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
1. Organization of the project	1	2	3	4	5
2. Student participation	1	2	3	4	5
3. Benefit to the community	1	2	3	4	5
4. Briefly describe the work that was completed:					
<i>Clean up of sidewalks and lots</i>					
5. For how long did you participate in this activity? ____ hours					
6. How did you hear about this project? (Check all that apply.)					
Newspaper	Someone told me	Saw it in person	Spoke with the team members		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
7. I feel my knowledge of community service after participating in this activity is (Check only one);					
Better than	Worse than	The same as it was			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
<b>1. Organization of the project</b>	1	2	3	4	5
<b>2. Student participation</b>	1	2	3	4	5
<b>3. Benefit to the community</b>	1	2	3	4	5
<b>4. Briefly describe the work that was completed:</b>					
<i>Removed yard waste from property of a mentally and physically disabled low-income person.</i>					
<b>5. For how long did you participate in this activity? ____ hours</b>					
<b>6. How did you hear about this project? (Check all that apply.)</b>					
Newspaper <input type="checkbox"/>	Someone told me <input type="checkbox"/>	Saw it in person <input checked="" type="checkbox"/>	Spoke with the team members <input type="checkbox"/>		
<b>7. I feel my knowledge of community service after participating in this activity is (Check only one):</b>					
Better than <input checked="" type="checkbox"/>	Worse than <input type="checkbox"/>	The same as it was <input type="checkbox"/>			

# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
1. Organization of the project	1	2	3	4	5
2. Student participation	1	2	3	4	5
3. Benefit to the community	1	2	3	4	5
4. Briefly describe the work that was completed:					
<p><b>Removed solid waste from property of a mentally and physically disabled low-income person.</b></p>					
5. For how long did you participate in this activity? <b>3</b> hours					
6. How did you hear about this project? <i>(Check all that apply.)</i>					
Newspaper	Someone told me	Saw it in person	Spoke with the team members		
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
7. I feel my knowledge of community service after participating in this activity is <i>(Check only one):</i>					
Better than	Worse than	The same as it was			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
<b>1. Organization of the project</b>	1	2	3	4	5
<b>2. Student participation</b>	1	2	3	4	5
<b>3. Benefit to the community</b>	1	2	3	4	5
<b>4. Briefly describe the work that was completed:</b>					
Vegetation and moss removed from several sidewalks					
<b>5. For how long did you participate in this activity? <u>  6  </u> hours</b>					
<b>6. How did you hear about this project? (Check all that apply.)</b>					
Newspaper	Someone told me	Saw it in person	Spoke with the team members		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
<b>7. I feel my knowledge of community service after participating in this activity is (Check only one);</b>					
Better than	Worse than	The same as it was			
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
1. Organization of the project	1	2	3	4	5
2. Student participation	1	2	3	4	5
3. Benefit to the community	1	2	3	4	5
4. Briefly describe the work that was completed:					
<b>Clean up of garbage and debris</b>					
5. For how long did you participate in this activity? <b>8</b> hours					
6. How did you hear about this project? (Check all that apply.)					
Newspaper	Someone told me	Saw it in person	Spoke with the team members		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
7. I feel my knowledge of community service after participating in this activity is (Check only one);					
Better than	Worse than	The same as it was			
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			

# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
<b>1. Organization of the project</b>	1	2	3	4	5
<b>2. Student participation</b>	1	2	3	4	5
<b>3. Benefit to the community</b>	1	2	3	4	5
<b>4. Briefly describe the work that was completed:</b>					
<i>Clean up of yard and overgrown brush</i>					
<b>5. For how long did you participate in this activity? ____ hours</b>					
<b>6. How did you hear about this project? (Check all that apply.)</b>					
Newspaper	Someone told me	Saw it in person	Spoke with the team members		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<b>7. I feel my knowledge of community service after participating in this activity is (Check only one);</b>					
Better than	Worse than	The same as it was			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			



# Sample Survey

## Project Survey

Please complete the following and return it to the school office by 3:00 p.m. Friday.

*Circle an appropriate response*

*Please rate the following regarding the success of the project you participated in:*

	Poor				Excellent
8. Organization of the project	1	2	3	4	5
9. Student participation	1	2	3	4	5
10. Benefit to the community	1	2	3	4	5
11. Briefly describe the work that was completed:					
<i>Removed a large accumulation of solid waste from property of a mentally and physically disabled low-income person.</i>					
12. For how long did you participate in this activity? ____ hours					
13. How did you hear about this project? (Check all that apply.)					
Newspaper <input type="checkbox"/>	Someone told me <input type="checkbox"/>	Saw it in person <input checked="" type="checkbox"/>	Spoke with the team members <input type="checkbox"/>		
14. I feel my knowledge of community service after participating in this activity is (Check only one):					
Better than <input checked="" type="checkbox"/>	Worse than <input type="checkbox"/>	The same as it was <input type="checkbox"/>			

## Glossary of Evaluation Analysis Terms

<b><i>Cleaning Data</i></b>	The process of excluding from analysis forms or individual responses that are substantially incomplete, or don't make sense.
<b><i>Coding Instruments</i></b>	The process of converting responses to numbers for data entry.
<b><i>Content analysis</i></b>	A process used to organize open-ended, unstructured information. (qualitative data)
<b><i>Data Analysis</i></b>	The process of putting together qualitative and/or quantitative information to derive answers to questions.
<b><i>Database</i></b>	Computer software that can be used for data entry, analysis and retrieval. Data is entered line by line, where each line contains the information for one filled instrument.
<b><i>Emergent categories</i></b>	Categories in a content analysis determined after reading the raw data.
<b><i>Frequency</i></b>	The number of times a given response occurs.
<b><i>Instrument</i></b>	A device for recording, indicating, measuring, or collect information referred to measure your objective. (e.g. a survey, a checklist, interview protocol)
<b><i>Mean</i></b>	The average of numeric responses or scores. Obtained by dividing the total of all responses to an item by the number of responses obtained.
<b><i>Percent Distribution</i></b>	The proportion of respondents selecting each response.
<b><i>Pre/Post Tests</i></b>	An instrument administered at two or more points in time, used to capture gains over that period of time.
<b><i>Pre-determined categories</i></b>	Categories in a content analysis determined before data is collected.
<b><i>Qualitative Data</i></b>	Data that comes from open ended questions, in the form of words. These may be written or recorded.
<b><i>Quantitative Data</i></b>	Data which are provided in the form of numbers, or can be converted to numeric form. This type of data usually comes from structured instruments where respondents are required to select a response or provide a numeric response. This may also include test scores.
<b><i>Raw data</i></b>	All of the data collected from the instruments before they are analyzed.
<b><i>Response</i></b>	The individual answer selected or given to a question.
<b><i>Spreadsheet</i></b>	Computer software that allows data arranged in a grid format. Allows for easy data entry and basic analysis.