

Running Head: ANALYSIS OF SOAP

An Analysis of Social Organization and Policy (SOAP) and Low Option Social Studies (LOSS)

Curriculum Programs

Rachel M. Daniels

San Jose State University

### Executive Summary

This report summarizes a study that compared Social Organization and Policy (SOAP) curriculum with the traditional Low Option Social Studies (LOSS) curriculum. The study used an experimental group of 30 students and a control group of 30 students. The treatment period lasted for 15 weeks and assessments were conducted at the end of that time period. Students were also assessed in the areas of problem solving and reading. An analysis of the data proved that treatment with SOAP curriculum brought about a statistically significant difference in Social Studies Attitude and Social Studies Content Knowledge. The students who used the SOAP curriculum had higher scores.

## An Analysis of Social Organization and Policy (SOAP) and Low Option Social Studies (LOSS) Curriculum Programs

This report is an analysis of data from a post-test only control group design study conducted to determine the effectiveness of the Social Organization and Policy (SOAP) curriculum when compared to the Low Option Social Studies (LOSS) program. In this design, the SOAP group is the experimental group and the LOSS group (traditional program) is the control group. The study was designed to address the following two research questions:

1. Is there a difference in Social Studies attitudes (as measured by the 23-point attitude scale) between the mean scores of students treated with SOAP materials and those treated with LOSS materials?
2. Is there a difference in Social Studies content knowledge (as measured by the 100-point social studies content test) between the mean scores of students treated with SOAP materials and those treated with LOSS materials?

The treatment used by the researcher was the SOAP (experimental) materials which were compared with the existing LOSS (Low Option Social Studies) materials that the school had been using. Two groups were created with thirty students randomly assigned to each group (60 students total) and the groups were treated for 15 weeks using either the SOAP or LOSS materials.

The instruments used in the study included the 23-item Social Studies Attitude Scale for measuring student's social studies attitudes and the Social Studies Assessment Test (100 points) used to measure the two groups social studies achievement or content knowledge. In addition, the student's problem-solving and reading scores from the STAR test (a California standardized test) were recorded as part of the study.

### Descriptive Statistics

Descriptive statistical data was collected in four areas; Social Studies Attitudes, Social Studies Content, Reading and Problem-Solving. This data is reported in the tables that follow.

**Table 1.***Social Studies Attitudes Data*

<i>Social Studies attitudes</i>	
Mean	17.28
Standard Error	0.47
Median	18
Mode	18
Standard Deviation	3.65
Sample Variance	13.29
Kurtosis	-0.60
Skewness	-0.36
Range	14
Minimum	9
Maximum	23
Sum	1037
Count	60
Confidence Level(95.0%)	0.94

Table 1 shows that in social studies attitudes, the total group had a mean score of 17.28, and a standard deviation of 3.65. The median score as well as the mode for Social Studies attitudes was 18. The minimum score for the social studies attitudes was 9 with a maximum score of 23. These scores reflect a range of 14 which indicates a wide variability in social studies attitudes scores.

**Table 2.***Social Studies Content Data*

<i>Social Studies content</i>	
Mean	83.38
Standard Error	2.00
Median	85
Mode	100
Standard Deviation	15.47
Sample Variance	239.36
Kurtosis	-0.53
Skewness	-0.63
Range	55
Minimum	45
Maximum	100
Sum	5003
Count	60
Confidence Level(95.0%)	4.00

In social studies content knowledge, the mean score was 83.38 and there was a median score of 85. The mode was 100 and the standard deviation was 15.47. There was a minimum score of 45 and a maximum score of 100 which represents a range of 55. This range reflects a wide variability in scores.

**Table 3.***Reading Data*

	<i>Reading</i>
Mean	2.02
Standard Error	0.08
Median	2
Mode	2
Standard Deviation	0.65
Sample Variance	0.42
Kurtosis	-0.55
Skewness	-0.02
Range	2
Minimum	1
Maximum	3
Sum	121
Count	60
Confidence Level(95.0%)	0.17

The reading scores show a mean score of 2.02 with a median and mode score of 2. The standard deviation was 0.65 and there is a range of 2 (minimum score of 1 and maximum score of 3).

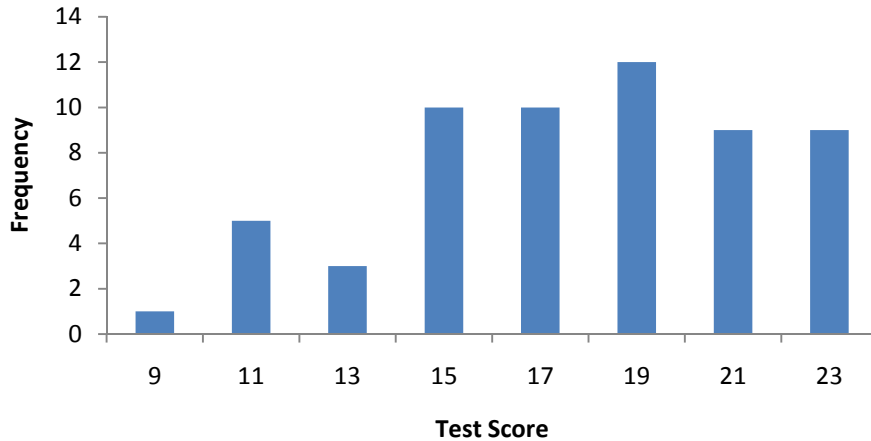
**Table 4.***Problem Solving Data*

<i>Problem Solving</i>	
Mean	8.12
Standard Error	0.18
Median	8
Mode	8
Standard Deviation	1.39
Sample Variance	1.94
Kurtosis	-0.75
Skewness	-0.22
Range	5
Minimum	5
Maximum	10
Sum	487
Count	60
Confidence Level(95.0%)	0.36

The problem solving scores show a mean of 8.12, a median and mode of 8, and a standard deviation of 1.39. The range of scores was 5 with the minimum score of 5 and the maximum score of 10.

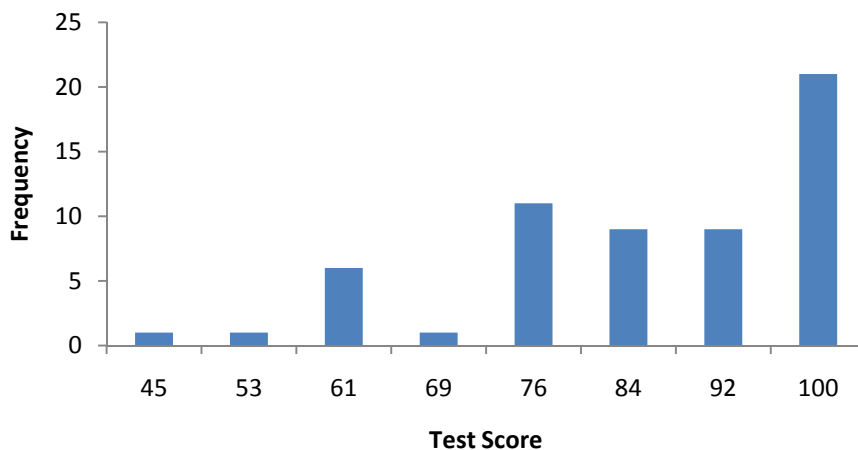
## Visually Presenting Data

A histogram showing the social studies attitudes scores for the total group of participants is shown in Figure 1, below. In this figure, there is a unimodal distribution of test scores with a mean score of 18. This data represents a negatively skewed distribution with a wide variation of scores.



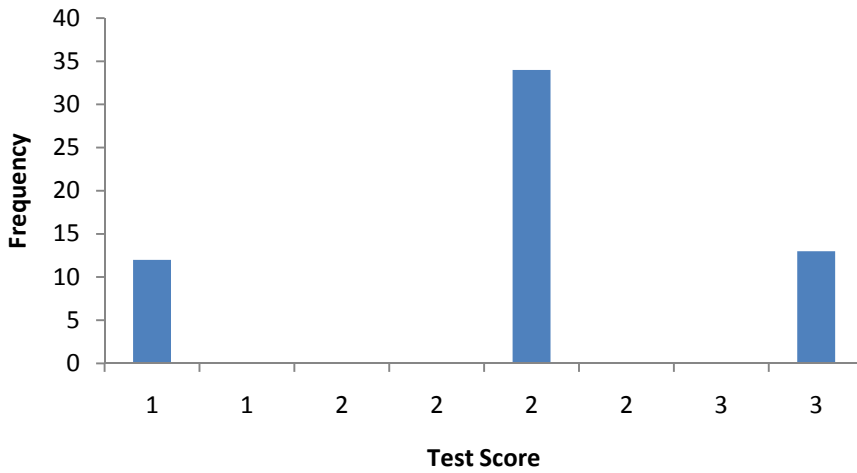
*Figure 1. Social Studies Attitudes Histogram*

Figure 2 is a histogram showing the social studies content knowledge scores for the study participants. In this histogram, there is a negatively skewed distribution of scores. The mode is 100 and there is a unimodal distribution. Again, there is a wide variation in scores on the test.



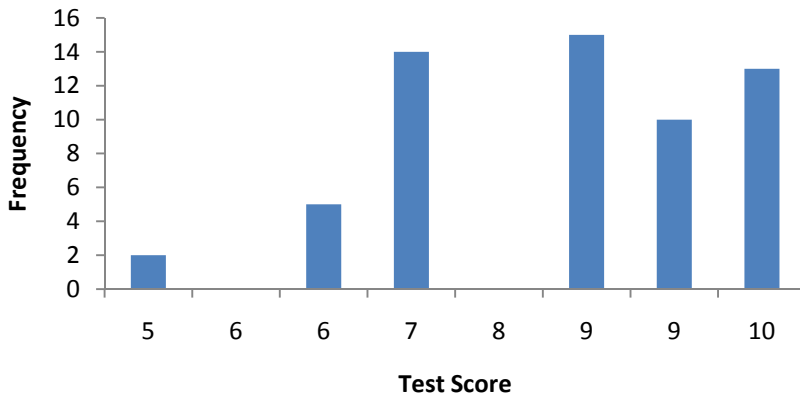
*Figure 2. Social Studies Content Histogram*

This histogram shows the data for the reading scores for the study group.



**Figure 3. Reading Histogram**

The reading histogram represents a bell curve or normal distribution. The mode is 2 and represents a unimodal distribution.



**Figure 4. Problem Solving Histogram**

Figure 4 is a histogram showing the data for the problem-solving scores for the total group. In this figure, the distribution of scores is negatively skewed. The mode (most frequent score) is 9.

## Comparative Statistics (Analysis of Variance)

A single factor analysis of variance was performed in order to address the research questions. The results of the ANOVA are shown in the tables below.

**Table 5.***ANOVA of Social Studies Attitude*

SUMMARY						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>		
Experimental	30	579	19.3	7.80		
Control	30	458	15.27	10.82		

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	244.02	1	244.02	26.20	0.00	4.01
Within Groups	540.17	58	9.31			
Total	784.18	59				

This ANOVA addresses the following research question:

Is there a difference in social studies attitudes (as measured by the 23-point attitude scale) between the mean scores of students treated with SOAP materials and those treated with LOSS materials?

There were 30 students in the experimental group and 30 students in the control group. The data in Table 5 shows that the computed F-ratio is 26.20 and the critical F-ratio is 4.01. Since the computed F-ratio is greater than the critical F-ratio, the results are statistically significant at the 95% level. Therefore, using the SOAP materials made a difference in social studies attitudes.

In order to answer the second research question, another ANOVA was conducted. This research question states:

Is there a difference in social studies content knowledge (as measured by the 100-point social studies content test) between the mean scores of students treated with SOAP materials and those treated with LOSS materials?

The results of this ANOVA are shown in Table 6 below.

**Table 6.**  
*ANOVA of Social Studies Content Knowledge*

SUMMARY						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>		
Experimental	30	2710	90.33	131.20		
Control	30	2293	76.43	255.84		

ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	2898.15	1	2898.15	14.98	0.00	4.01
Within Groups	11224.03	58	193.52			
Total	14122.18	59				

An analysis of variance was performed. The control and experimental groups each had 30 students in them. The analysis shows that the computed F-ratio is 14.98 and the critical F-ratio is 4.01. This means that the results are statistically significant since the computed F-ratio is greater than the critical F-ratio. Therefore, the treatment of using SOAP made a difference in social studies content knowledge.

### Probing Statistics (Correlational Data)

In order to determine if there was a relationship between the student's social studies attitude, social studies content knowledge, reading ability, and problem solving ability, a correlational matrix was created. This correlational data will help to identify areas for future research.

**Table 7.**

#### *Correlation Matrix*

	<i>SS Attitudes</i>	<i>SS Content</i>	<i>Reading</i>	<i>Problem Solving</i>
Social Studies Attitudes	1			
Social Studies Content	0.95	1		
Reading	0.08	0.06	1	
Problem Solving	0.82	0.83	0.19	1

Table 7 shows that there is a strong positive relationship between social studies content and social studies attitude ( $r=0.95$ ) and there is also a strong positive relationship between problem solving and social studies attitude ( $r=0.82$ ). The correlation between problem solving and social studies content is also a strong positive relationship. These areas provide opportunities for future research.

### Summary

This study proved that students showed a statistically significant improvement in scores when they were treated with the SOAP curriculum materials rather than the traditional LOSS materials. This improvement was true for the areas of Social Studies Attitudes and Social Studies Content Knowledge.