An Analysis of

Social Organization and Policy (SOAP)

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Executive Summary

We conducted a study to assess the effectiveness of the new Social Organization and Policy (SOAP) curriculum. We compared students who were treated with these materials with students who used the traditional Low Option Social Studies (LOSS) curriculum to see if there was any difference in either their attitudes toward Social Studies or their Social Studies content knowledge.

We found that the SOAP curriculum had a positive effect on both their attitude toward Social Studies and their Social Studies content knowledge. Further, we found a high correlation between students' attitude toward Social Studies and their Social Studies content knowledge.

Introduction

In this report we analyze the results of research to determine the effectiveness of the new Social Organization and Policy (SOAP) curriculum compared to the traditional curriculum of the Low Option Social Studies (LOSS) program. For this research, we randomly selected sixty students and divided them into two groups with equal distribution of genders. For fifteen weeks, one group was treated with the SOAP materials while the other was treated with the LOSS materials.

We designed this study to answer the following two research questions:

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

To address these questions, we formulated the following hypotheses:

1. There will be no statistically significant difference in attitudes toward Social Studies between the students treated with SOAP materials and those treated with LOSS materials.
2. There will be no statistically significant difference in Social Studies content knowledge between the students treated with SOAP materials and those treated with LOSS materials.

We utilized a post-test only control group design to determine the effects. Students' attitudes toward Social Studies were measured using a 23-point Social Studies Attitude Scale, while their content knowledge was measured using the 100-point California Social Studies Assessment test. We also recorded students' problem-solving and reading scores from the STAR test.

Descriptive Statistics

We calculated descriptive statistics based on the students' scores on the social studies attitude, social studies content, reading, and problem solving tests.

Social Studies Attitude

SS attitude	
Mean	17.28
Standard Error	0.47
Median	18.00
Mode	18.00
Standard Deviation	3.65
Sample Variance	13.29
Kurtosis	-0.60
Skewness	-0.36
Range	14.00
Minimum	9.00
Maximum	23.00
Sum	1037.00
Count	60.00
Confidence Level (95.0%)	0.94

The total group had a mean score of 17.28 out of a possible 23.00, with a standard deviation of 3.65 points on the test. The median score of the total group was 18.00, as was the mode.

The minimum score for the total group was 9.00, while the maximum score was 23.00. This range suggests a wide variability in the students' attitudes toward social studies.

Overall the scores of the 60 students were distributed with a negative skew. The distribution is fairly flat, with a kurtosis less than 3.

Social Studies Content

SS content	
Mean	83.38
Standard Error	2.00
Median	85.00
Mode	100.00
Standard Deviation	15.47
Sample Variance	239.36
Kurtosis	-0.53
Skewness	-0.63
Range	55.00
Minimum	45.00
Maximum	100.00
Sum	5003.00
Count	60.00
Confidence Level (95.0%)	4.00

The total group had a mean score of 83.38 out of a possible 100.00, with a standard deviation of 15.47 points on the test. The median score of the total group was 85.00, and the mode was 100.00.

The minimum score for the total group was 45.00, while the maximum score was 100.00 (out of a possible 100). This range suggests a wide variability in the students' knowledge of social studies content.

Overall the scores of the 60 students were distributed with a negative skew. The distribution is fairly flat, with a kurtosis less than 3.

Reading

Reading	
Mean	2.02
Standard Error	0.08
Median	2.00
Mode	2.00
Standard Deviation	0.65
Sample Variance	0.42
Kurtosis	-0.55
Skewness	-0.02
Range	2.00
Minimum	1.00
Maximum	3.00
Sum	121.00
Count	60.00
Confidence Level (95.0%)	0.17

The total group had a mean score of 2.02 out of a possible 3.00, with a standard deviation of 0.65 points on the test. The median score of the total group was 2.00, and the mode was also 2.00.

The minimum score for the total group was 1.00, while the maximum score was 3.00.

Overall the scores of the 60 students were distributed with only a slight negative skew. The distribution is fairly flat, with a kurtosis less than 3.

Problem Solving

Prob. Solv	
Mean	8.12
Standard Error	0.18
Median	8.00
Mode	8.00
Standard Deviation	1.39
Sample Variance	1.94
Kurtosis	-0.75
Skewness	-0.22
Range	5.00
Minimum	5.00
Maximum	10.00
Sum	487.00
Count	60.00
Confidence Level (95.0%)	0.36

The total group had a mean score of 8.12 out of a possible 10.00, with a standard deviation of 1.39 points on the test. The median score of the total group was 8.00, and the mode was also 8.00.

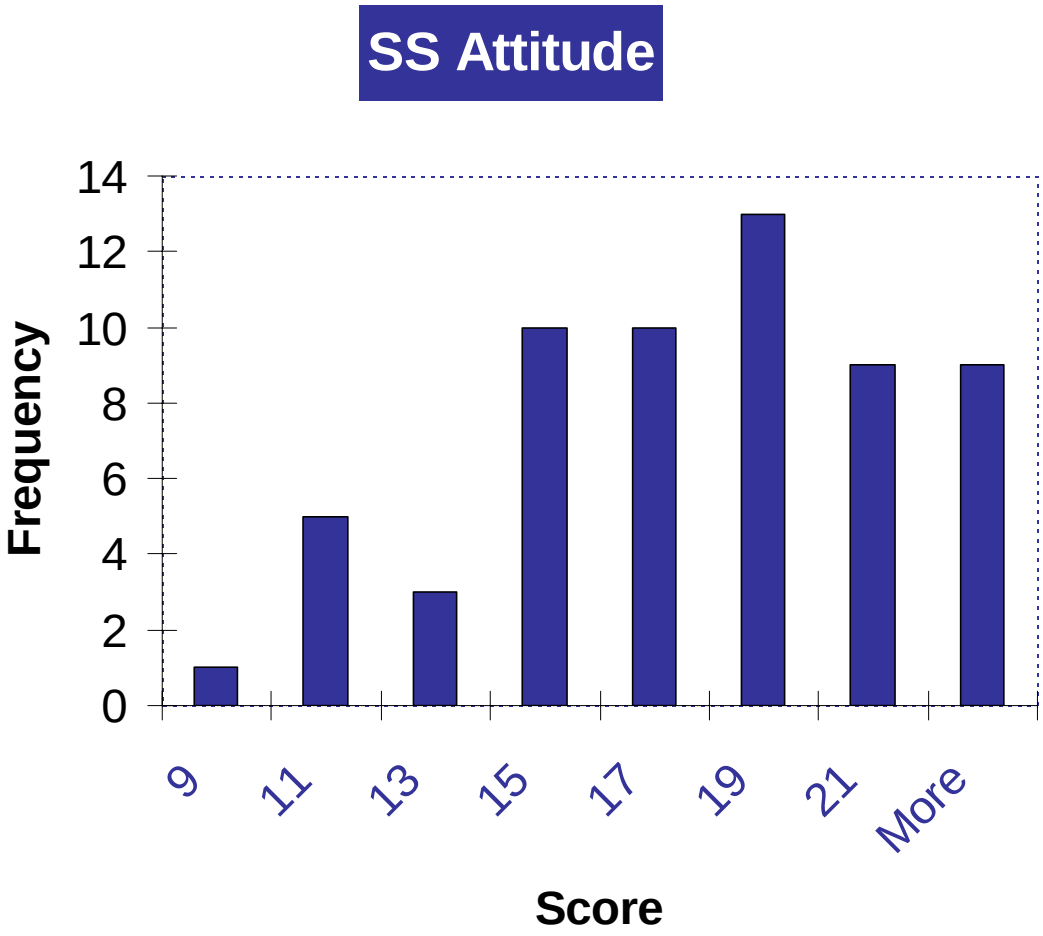
The minimum score for the total group was 5.00, while the maximum score was 10.00.

Overall the scores of the 60 students were distributed with only a slight negative skew. The distribution is fairly flat, with a kurtosis less than 3.

Distribution of Scores

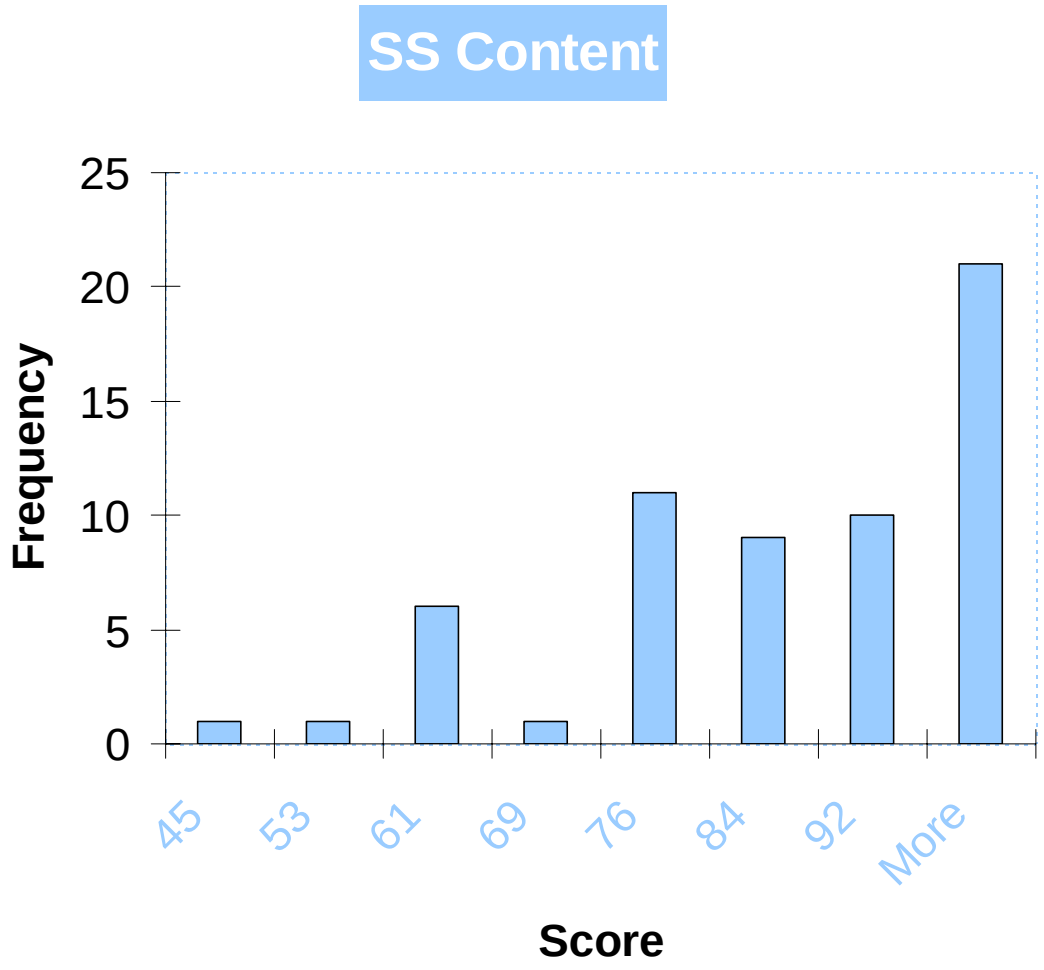
Below are histograms based on the students' scores on the social studies attitude, social studies content, reading, and problem solving tests.

Social Studies Attitude



The frequency distribution of the Social Studies attitude test scores of the total group shows a unimodal distribution with a mode of 18, which is identical to the median a very close to the mean. The curve of the graph is skewed in a negative direction with prominent peaks clustered around the mode. Additionally, the histogram shows the wide variation of scores on the test, with several outlyers.

Social Studies Content

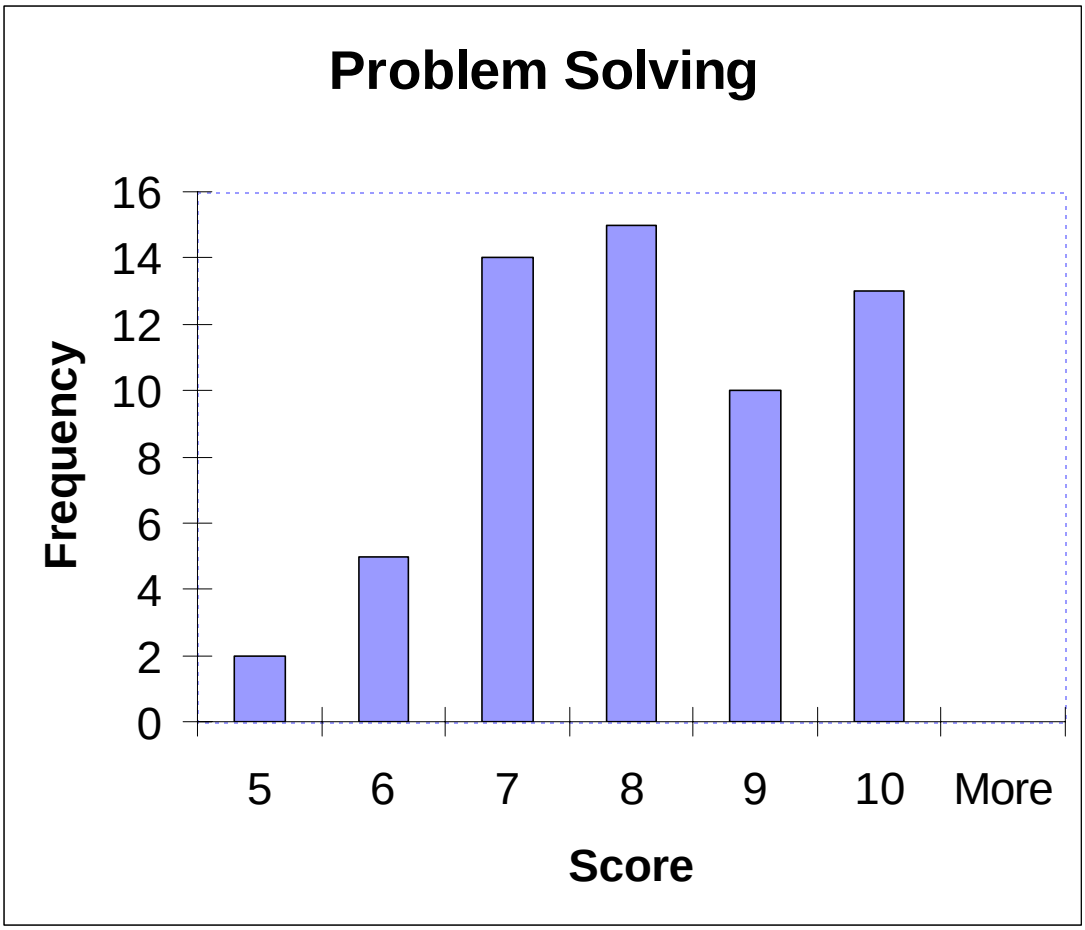


The frequency distribution of the Social Studies content test scores of the total group shows a unimodal distribution with a mode greater than 92, indicating that many of the students have mastered the content. The mode is significantly higher than the median and mean. The curve of the graph is skewed in a negative direction. Additionally, the histogram shows the wide variation of scores on the test, with many outlyers.

Reading

The frequency distribution of the Reading test scores of the total group shows a unimodal distribution with a mode of 2.00. The well-defined peak is very close in value to the mean and median. Additionally, the histogram shows the wide variation of scores on the test.

Problem Solving



The frequency distribution of the Problem Solving test scores of the total group shows a unimodal distribution with a mode of 8.00, which is very close in value to the mean and median. Additionally, the histogram is skewed in a negative direction and shows the wide variation of scores on the test.

Analysis of Variance (ANOVA)

Below is an analysis of variance for the Social Studies attitudes and Social Studies content test scores.

Social Studies Attitudes

SS attitudes
Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Experimental	30	579	19.30	7.80
Control	30	458	15.27	10.82

ANOVA

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

In the analysis of variance for the Social Studies attitudes test scores, there were 30 students in the experimental (SOAP) group and 30 students in the control (LOSS) group. With the confidence level set at .05, an F-ratio 26.20 was computed. Since the computed F-ratio is greater than the critical F-ratio, the results are statistically significant at the 95% level. Therefore we reject the null hypothesis that there is no statistically significant difference in attitudes toward Social Studies between the students treated with SOAP materials and those treated with LOSS materials.

Social Studies Content Knowledge

SS content
Anova: Single Factor

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Experimental	30	2710	90.33	131.20
Control	30	2293	76.43	255.84

ANOVA

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

In the analysis of variance for the Social Studies content knowledge test scores, there were 30 students in the experimental (SOAP) group and 30 students in the control (LOSS) group. With the confidence level set at .05, an F-ratio 14.98 was computed. Since the computed F-ratio is greater than the critical F-ratio, the results are statistically significant at the 95% level. Therefore we reject the null hypothesis that there is no statistically significant difference in Social Studies content knowledge between the students treated with SOAP materials and those treated with LOSS materials.

Correlation Matrix

Finally, we calculated a correlation matrix to determine whether there is relationship between the students' social studies attitude, content knowledge, reading ability, and problem solving ability.

	SS attitude	*SS content*	*Reading*	*Prob. Solv*
SS attitude	1.00			
SS content	0.95	1.00		
Reading	0.08	0.06	1.00	
Prob. Solv	0.82	0.83	0.19	1.00

Social Studies content knowledge is well correlated with Social Studies attitude. Further, problem solving was well correlated with both Social Studies attitude and Social Studies content knowledge. Reading was poorly correlated with all variables.

Summary

We found that there is a statistically significant difference in the attitude toward Social Studies between the experimental group and the control group. The experimental group scored on average approximately 4 points higher than the control group (19.30 to 15.27 out of a possible 23.00). Likewise we found a statistically significant difference between the two groups in their Social Studies content knowledge. The experimental group scored on average approximately 14 points higher than the control group (90.33 to 76.43 out of 100.00). We also found a high correlation between Social Studies attitude and content knowledge.