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RESEARCH REPORT

Florida Forestry Teachers' Tour



Center for Public Issues Education
IN AGRICULTURE AND NATURAL RESOURCES

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Introduction

Each year the Florida Forestry Teachers' Tour brings 45 teachers from across the state to Fernandina Beach to visit a research forest, a privately-owned tree farm, a paper mill, a saw mill and a chemical lab that manufactures fragrances from tree by-products. They see all aspects forestry practices, from the planting and growing processes, to the mills and finally to the end products. Learning that over 5,000 products are made from trees, the teachers see how chemical by-products from the paper-making process are used in products like soap, fabrics and even food. They learn how the industry works hard to see that no part of a tree goes to waste (floridaforest.org, 2011).

Additionally, each year at the end of the teachers' tour, the participants are asked to complete an evaluation of the program that includes questions referring to their knowledge gained during the week, how they plan to use the information they learned and the evaluation gives them an opportunity to offer their suggestions for modifications for the next tour. Traditionally, the end of week evaluations are extremely positive with participants describing their experience as beneficial.

However, one area that the Florida Forestry Tour has not explored previously is measuring the change in participants in a quantitative manner. The Florida Forestry Tour representatives worked with the Center for Public Issues Education in Agriculture and Natural Resources to establish a baseline of the 2011 participants' knowledge, feeling and behaviors towards the Florida Forestry industry before their exposure to the tour. This report provides results from the pre-tests and post-tests. By quantitatively measuring these constructs using a pre-test/post-test procedure it will be possible to concretely determine the type of impact the Forestry Tour has on the participants.

Methodology

This pre-test was conducted with a quantitative survey method utilizing a researcher-developed questionnaire. The questionnaire asked participants nine questions with three questions measuring their current knowledge of the forestry industry, three questions measuring their current attitudes of the forestry industry and three questions measuring any behaviors they have that relate to the forestry industry. The instrument was purposively kept short in length as to not overwhelm participants and to expedite the end of the week evaluation component. All of the questions were 5-point Likert-type scales .

The post-test was delivered at the last session of the Florida Forestry Teachers' Tour. The post-test was collected at the end of the session. Data from the post-test was entered by the researchers.

Results

A total of 47 surveys were collected in the pre-test and a total of 42 surveys were collected during the post-test.

Knowledge Questions

(PRE-TEST) Currently, how knowledgeable are you about the Florida forestry industry?

Answer	Response	%
No knowledge at all	17	36%
2	23	49%
3	7	15%
4	0	0%
Very knowledgeable	0	0%
Total	47	100%

85% of respondents reported having no knowledge to little knowledge of the Florida forestry industry. None of the respondents reported being “knowledgeable” or “very knowledgeable” of the industry. The mean score of this question is 1.7 which indicates the average teacher on this tour has “no knowledge” of the forestry industry.

(POST-TEST) Currently, how knowledgeable are you about the Florida forestry industry?

Answer	Response	%
No knowledge at all	0	0%
2	1	2%
3	7	17%
4	24	59%
Very knowledgeable	9	22%
Total	41	100%

Following the teachers' tour, 81% of respondents reported being knowledgeable or very knowledgeable regarding the Florida forestry industry. Following the tour, the mean score for this position was raised from a 1.7 to a 4.0 indicating a significant increase in the level of self-reported teacher knowledge. The mean score of 4.0 suggests the average teacher leaving the forestry tour was “knowledgeable” about the forestry industry.

(PRE-TEST)To what degree do you believe the Florida forestry industry is involved in natural resources conservation efforts?

Answer	Response	%
No involvement	0	0%
2	5	11%
3	16	34%
4	18	38%
Highly involved	8	17%
Total	47	100%

All of the respondents believed to a certain degree that the forestry industry was involved in the natural resources conservation efforts. The mean score of this question is 3.6 which indicates the average teacher on this tour believes the Florida forestry industry is “involved” in natural resources conservation efforts.

(POST-TEST) To what degree do you believe the Florida forestry industry is involved in natural resources conservation efforts?

Answer	Response	%
No involvement	0	0%
2	0	0%
3	0	0%
4	5	12%
Highly involved	37	88%
Total	42	100%

This post-test table indicates that following the tour, the majority of respondents (n=37, 88%) believe that the Florida forestry industry is highly involved in natural resources conservation efforts. Only 17% (n=8) believed that the forestry industry was highly involved in natural resources conservation efforts prior to the tour. Additionally, the mean score of this table was raised from 3.6 on the pre-test to 4.9 out of 5 on the post-test. The mean score of 4.0 suggests the average teacher leaving the forestry tour was “knowledgeable” about the forestry industry.

(PRE-TEST) To what extent would you consider the Florida forestry industry to be a sustainable industry?

Answer	Response	%
Not sustainable at all	0	0%
2	4	9%
3	12	26%
4	20	43%
Extremely Sustainable	10	22%
Total	46	100%

65% of the respondents believe that the forestry industry is “sustainable” or “extremely sustainable.” Only 4% respondents fell on the “not sustainable” side of the spectrum. The mean score of this question is 3.7 indicating that the average teacher on this tour considers the forestry industry to be “sustainable.”

(POST-TEST) To what extent would you consider the Florida forestry industry to be a sustainable industry?

Answer	Response	%
Not sustainable at all	0	0%
2	0	0%
3	0	0%
4	7	17%
Extremely Sustainable	35	83%
Total	42	100%

The post-test indicates that a 100% of respondents believe the forestry industry to be “sustainable” or “extremely sustainable”. This represents a 35% increase from the pre-test. Additionally, the mean score for this question was raised from a 3.7 to a 4.8.

Feeling Questions

(PRE-TEST) How important do you believe the forestry industry is to the overall state economy?

Answer	Response	%
Not at all Important	0	0%
2	0	0%
3	16	36%
4	17	39%
Extremely Important	11	25%
Total	44	100%

64% of respondents felt the forestry industry was “important” or “extremely important” to the overall state’s economy. The mean score of this question is 3.8 indicating that the average teacher on this tour believes the forestry industry is “important” to the overall state economy.

(POST-TEST) How important do you believe the forestry industry is to the overall state economy?

Answer	Response	%
Not at all Important	0	0%
2	0	0%
3	2	5%
4	10	24%
Extremely Important	30	71%
Total	42	100%

95% of respondents felt the forestry industry was “important” or “extremely important” to the overall state’s economy. This represents a 31% increase from the pre-test results. Additionally, the mean score for this question was raised from a 3.8 to a 4.7.

(PRE-TEST) How much do you personally value the forestry industry?

Answer	Response	%
None at all	0	0%
2	3	7%
3	11	24%
4	19	42%
A Great Deal	12	27%
Total	45	100%

69% of respondents indicated that they place a high personal value on the forestry industry. The mean score of this question is 3.8 indicating that the average teacher on this tour values the forestry industry a “good deal”.

(POST-TEST) How much do you personally value the forestry industry?

Answer	Response	%
None at all	0	0%
2	0	0%
3	0	0%
4	7	17%
A Great Deal	35	83%
Total	42	100%

Following the tour, 100% of respondents indicated that they personally value the forestry industry a “good deal” or a “great deal.” This is a 31% increase from the pre-test results. The mean score for this question was raised one full point from a 3.8 to a 4.8.

(PRE-TEST) In your opinion, how much of an impact does the forestry have on your everyday life?

Answer	Response	%
None at all	0	0%
2	7	15%
3	15	33%
4	12	26%
A Great Deal	12	26%
Total	46	100%

26% of respondents indicated that they believe the forestry industry has a “great deal” of impact on their everyday lives. The mean score of this question is 3.6 indicating that the average teacher on this tour believes the forestry industry impacts their everyday life a “good deal”.

(POST-TEST) In your opinion, how much of an impact does the forestry have on your everyday life?

Answer	Response	%
None at all	0	0%
2	0	0%
3	1	2%
4	3	7%
A Great Deal	38	90%
Total	42	100%

Following the teachers tour, 90% of respondents indicated that they believed the forestry industry had a “great deal” of impact on their everyday life. This is a 64% increase from the pre-test. Additionally, the mean score from this question was raised more than one full point from a 3.6 to a 4.8.

Behavioral Questions

(PRE-TEST) How frequently does your teaching curriculum incorporate forestry or forestry-related examples and/or activities?

Answer	Response	%
Never	2	4%
Rarely	21	46%
Sometimes	17	37%
Quite Often	5	11%
Very Often	1	2%
Total	46	100%

50% of respondents indicated that they either “never” or “rarely” incorporate forestry or forestry-related examples into their curriculum or activities. The mean score of this question is 2.6 indicating that the average teacher on this tour “sometimes” incorporates forestry or forestry-related examples in their curriculum.

(POST-TEST) How frequently does your teaching curriculum incorporate forestry or forestry-related examples and/or activities?

Answer	Response	%
Never	0	0%
Rarely	0	0%
Sometimes	6	15%
Quite Often	20	49%
Very Often	15	37%
Total	41	100%

Following the teachers tour, 86% of teachers indicated that they plan to incorporate forestry or forestry-related examples and/or activities “quite often” or “very often.” This is 74% increase from the teachers who indicated they used forestry-related examples prior to the tour. Additionally, the mean score of this question increased more than two full points from a 2.6 to 4.2.

(PRE-TEST) How frequently do you discuss forestry-related careers with your students?

Answer	Response	%
Never	7	16%
Rarely	20	44%
Sometimes	17	38%
Quite Often	1	2%
Very Often	0	0%
Total	45	100%

60% of respondents indicated that they either “never” or “rarely” discuss forestry-related careers with their students. The mean score of this question is 2.2 indicating that the average teacher on this tour “rarely” discusses forestry-related careers with students.

(POST-TEST) After completing the teachers' tour, how frequently do you plan to discuss forestry-related careers with your students?

Answer	Response	%
Never	0	0%
Rarely	0	0%
Sometimes	8	19%
Quite Often	19	45%
Very Often	15	36%
Total	42	100%

Following the teachers' tour, 81% of the teachers indicated that they expected to discuss forestry-related careers “quite often” or “very often” with their students. This is a 79% increase from the pre-test. Additionally, the mean score for this question increased two points from 2.2 to a 4.2.

(PRE-TEST) How frequently do you share forestry-related information with friends and family?

Answer	Response	%
Never	3	7%
Rarely	22	48%
Sometimes	17	37%
Quite Often	4	9%
Very Often	0	0%
Total	46	100%

55% of respondents indicated that they either “never” or “rarely” share forestry-related information with friends and family. The mean score of this question is 2.4 indicating that the average teacher on this tour “rarely” shares forestry-related information with friends and family.

(POST-TEST) After completing the Forestry Teachers' Tour, how frequently do you expect to share forestry related information with friends and family?

Answer	Response	%
Never	0	0%
Rarely	0	0%
Sometimes	4	10%
Quite Often	16	38%
Very Often	22	52%
Total	42	100%

Following the teachers' tour, 90% of teachers expected to share forestry-related information “quite often” or “very often” with their family and friends. This number represents a 81% increase from the pre-test results. Additionally, the mean score of this question increased from 2.4 to 4.4.

Findings

- Mean scores for each question were increased in each area, knowledge, feeling and attitude. This finding indicates that following the teachers' tour, the teachers felt more knowledgeable about the Florida forestry industry, had stronger positive feelings towards the industry and had a more positive attitude towards the industry.
- The largest increase from pre-test to post-test was the teachers' self-reporting of knowledge gained during the tour. The pre-tests results indicated that 0% of teachers felt they were "knowledgeable" or "very knowledgeable" about the Florida forestry industry. Following the tour, there was an 81% increase in teachers' who felt "knowledgeable" or "very knowledgeable."
- Other increases were as follows:
 - 71% increase (17% pre-test to 88% post-test) in the number of teachers who indicated that the Florida forestry industry was "highly involved" in the natural resources conservation efforts.
 - 64% increase (26% pre-test to 90% post-test) in the number of teachers who indicated that the Florida forestry industry indicated their everyday life a "great deal".
 - 61% increase (22% pre-test to 83% post-test) in the number of teachers who indicated that the Florida forestry industry was an "extremely sustainable" industry.
 - 56% increase (27% pre-test to 83% post-test) in the number of teachers who indicated that they personally valued the Florida forestry industry a "great deal."
 - 52% increase (0% pre-test to 52% post-test) in the number of teachers who indicated that they planned to share forestry-related information with friends and family "very often."
 - 46% increase (25% pre-test to 71% post-test) in the number of teachers who indicated that the Florida forestry industry was "extremely important" to the state's overall economy.
 - 36% increase (0% pre-test to 37% post-test) in the number of teachers who indicated that they planned to discuss forestry-related careers with their students "very often."
 - 35% increase (37% pre-test to 37% post-test) in the number of teachers who indicated that they planned to incorporate forestry and forestry-related examples into their curriculum.