



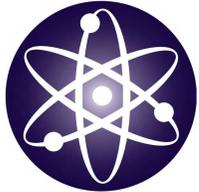
STEM ENRICHMENT EDUCATION FOR ELEMENTARY SCHOOL AGE CHILDREN CREATES INTEREST TOWARDS STEM CAREER CHOICES



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Introduction



Science, Technology, Engineering and Mathematics (STEM) education has become an essential and important enrichment program for elementary school children. Early STEM exposure through grades K-8 has been found to increase interest towards pursuing career choices and environmental awareness.

The need for future STEM career professionals in US is more than ever critical with the country ranking below other nations in producing trained employees capable of addressing the continued demand for technological advancements. The US Federal Government has put out a call for more STEM educational programs. The National Science Foundation (NSF) supported 3-week long summer camp held at Montclair State University welcomed economically diverse students from the Kearny School District and invited them to participate in a series of hands-on STEM activities, at no cost. Students participated in interactive presentations from campus scientists and were taken on field trips to Stokes Forest, Sussex, New Jersey. We conducted pre and post surveys to identify preferences and motivators for STEM before and after the camp. We also assessed the environmental awareness of the students before and after the field trip to the Stokes forest.

Objective

The objective of the study was to assess the impact of the STEM Summer camp field trip on students' response to environmental threats and concerns.

Method

To assess the impact of Stem Summer Camp Field Trip on student's response to environmental issue, we carried out a survey before and after the trip. The survey allowed us to record the changes in students' behavior towards environment



Results

Table 1: Summary of Respondents

Ethnicity	Respondents (%)
Asian	14.29
Black/African American	7.94
Caucasian	1.59
Hispanic/Latin American	55.56
Native Hawaiian/other	1.59
Other/Prefer not to answer	19.05
Grade	Respondents (%)
6	21.31
7	32.79
8	45.90
Age (in years)	Respondents (%)
10	4.84
11	24.19
12	33.87
13	35.48
14	1.61

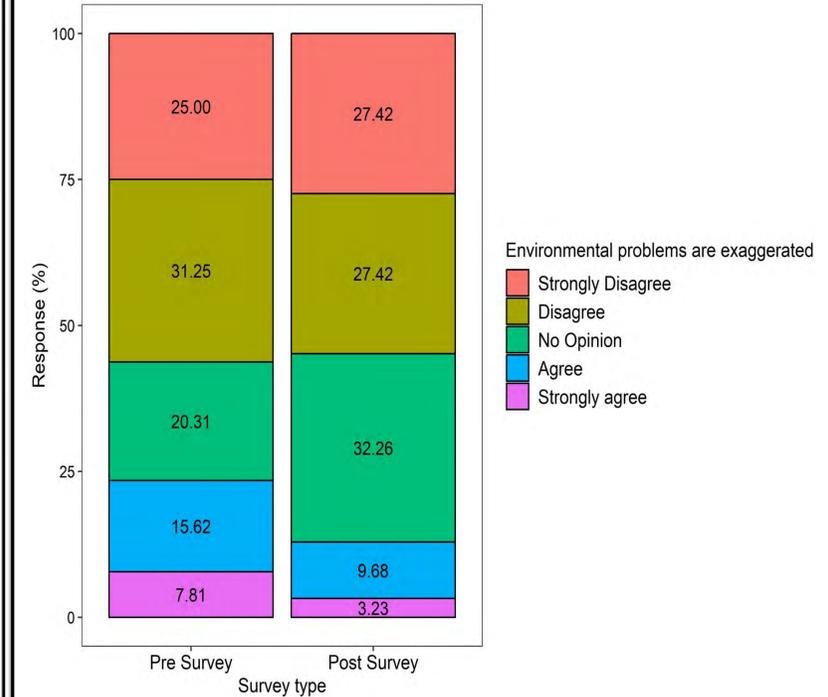


Figure 1: Change in students' attitude towards environmental problems after the Stem summer field trip

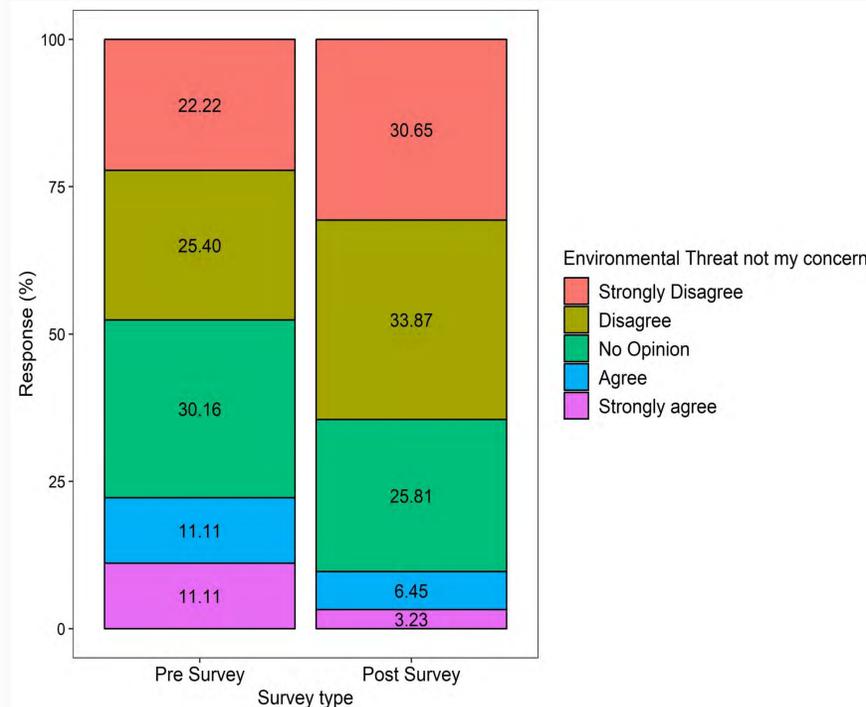


Figure 1: Change in students' attitude towards environmental threats after the Stem summer field trip

Conclusion

- ❖ Field trip had a noticeable effect on students' awareness towards environmental problems
- ❖ More student believed that they should be concerned to environmental threats
- ❖ Less students believed that environmental problems were exaggerated

Future Work

- ❖ Survey data analysis and assessment of impacts of summer camp on students.
- ❖ Assess changes in attitudes to and preference transformations, if any, towards pursuing a STEM degree and/or career.
- ❖ Identifying opportunities for improving future iterations of the summer camp and innovative means to engage a wider array of NJ-based communities.

Acknowledgement