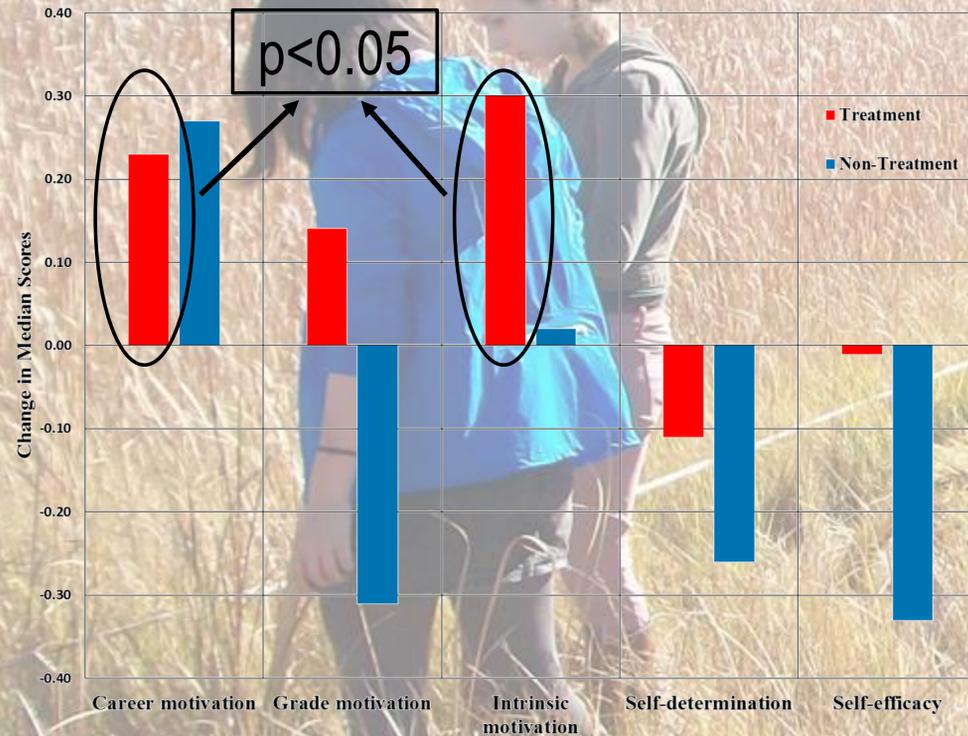


Introduction

This action research project examined the initial effects of an experiential learning intervention on students by instituting a long-term salt marsh research project at a New England private school. The field element of the research project included identification of salt marsh vegetation and measurement of soil salinity along a transect. Two first year high school biology classes were tested for student motivation towards learning biology, achievement in the relevant ecology unit and overall perception of the environment through pre- and post-intervention attitudinal surveys, summative evaluations, short answer essays, and teacher notes. The experimental group ($N=9$) studied the salt marsh ecology curriculum over a one month period and participated in two field days in the marsh while the control group ($N=15$) was only exposed to the curriculum in the classroom.

Research Question 1:

Does participation in field research affect the motivation of freshmen students in the study of biology?



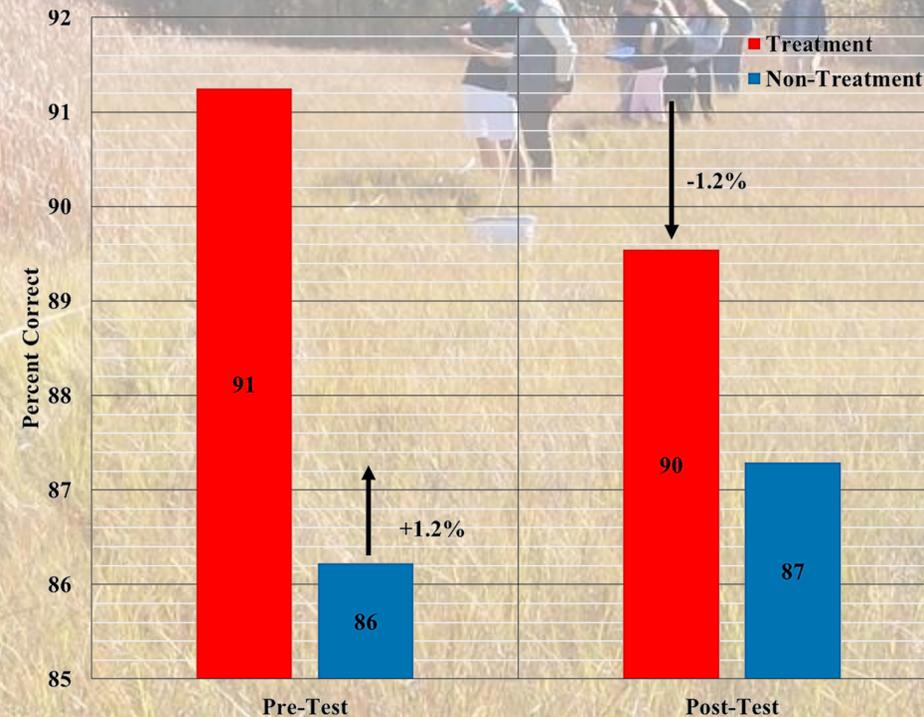
Probable

Field work had a significant effect on motivation and student enjoyment of science. The intrinsic increase has been correlated to career motivation and students who view science as fun and interesting may enjoy the reward of its pursuit later in life.

This provides a strong argument to make use of the immense natural classroom that the Governor's Academy campus affords.

Research Question 2:

Does participation in field research affect student achievement in biology?



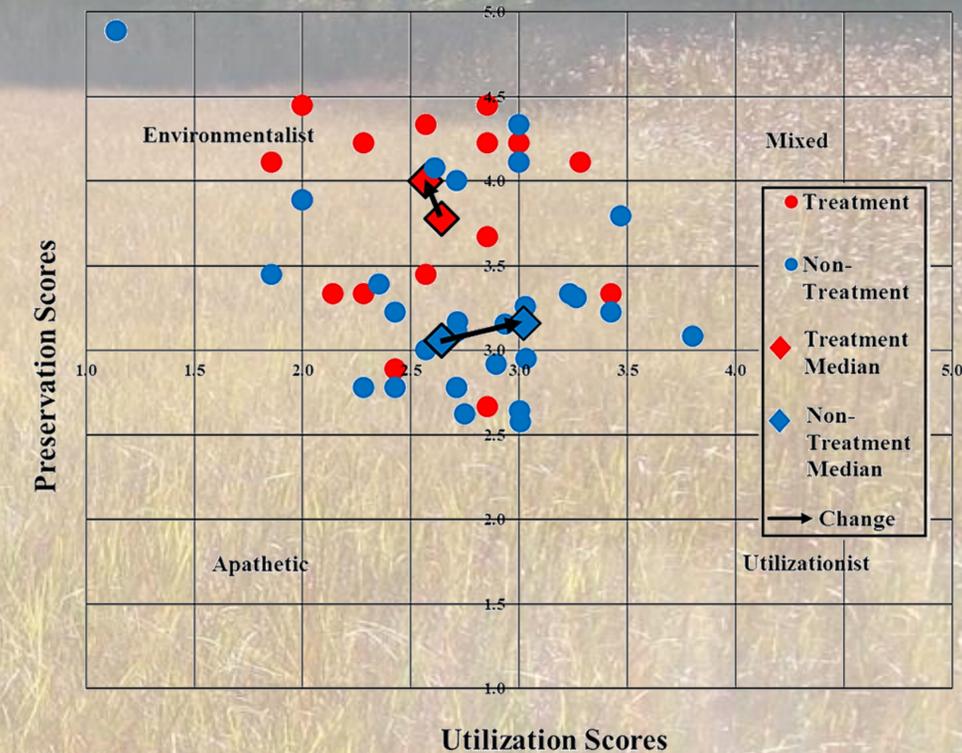
Inconclusive

The higher grades of the treatment group over the non-treatment group were not statistically significant.

This is attributed to the limited scope of the field work and the small sample size of the two classes. Two days of experiential learning, without a broader connection to the quarter wide curriculum, is not reason to expect a significant increase in academic achievement.

Research Question 3:

Does participation in field research affect student environmental perception?



Inconclusive

The treatment group had minor environmental gains but there was no difference between teaching methods when comparing the effects of environmental perspective.

However, when the geographic proximity of campus and local significance of salt marsh preservation is considered, outdoor classroom activities in the Parker River estuary should be considered a worthwhile endeavor.