IMPACTS OF EXPERIENTIAL LEARNING ON HIGH SCHOOL ENVIRONMENTAL SCIENCE STUDENTS' FEELINGS OF BIOPHILIA AND LEARNING

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Introduction: This action research study took place at Kamehameha Schools Hawaii Campus in an Environmental Science class with students in 9-12 grades. Students participated in a bioremediation,reforestation project and a hike.

Overall research question: "How do place-based activities influence student attitudes to nature and learning?"

Subquestion 1: How does participation in place-based projects impact students' sense of stewardship?

Subquestion 2: Do place-based activities improve student understanding of importance of soil and water conservation in healthy ecosystems?

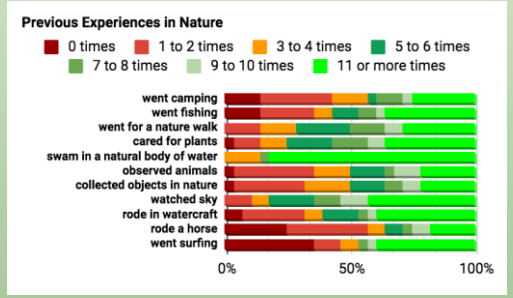
Subquestion 3: Is student understanding of Hawai'i island rainforest restoration and succession improved after reforestation activities and hiking?

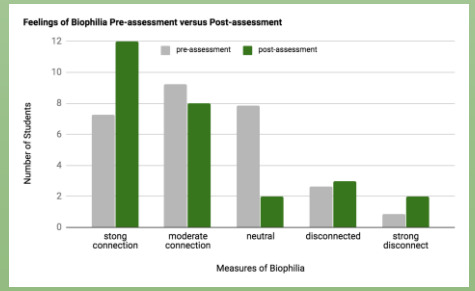
Questions	Data Collection Instruments		
Sub-question 1:	Attitudes Towards Nature Survey	Attitudes Towards Nature Parent Survey	Halema'uma'u Hike Reflection
Sub-question 2:	*STIP	Bioremediation Reflection	Drawing Vegetation, Soil and Water
Sub-question 3:	*STIP	Halema'uma'u Succession Model	Knowledge of'ʻōhiʻa

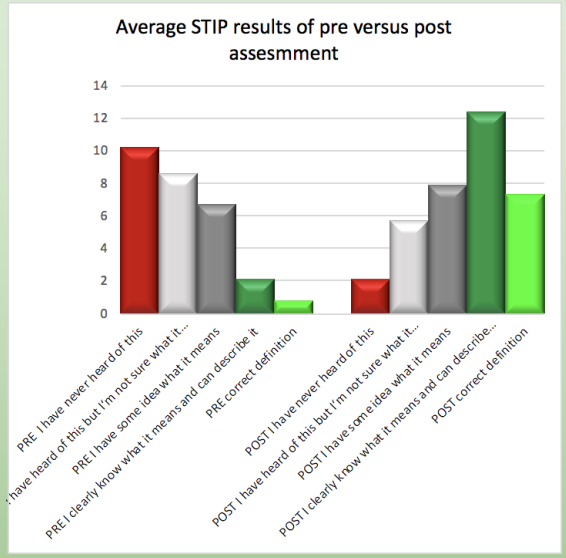
*(Scientific Terminology Inventory Probe)

Methodology: Twenty eight students participated in a reforestation project, bioremediation project and a hike. Analysis of the following was completed: quizzes, formative drawings, STIPs, student and parent surveys and student reflections.

DATA







Conclusions: Seventy percent of students in the study enrolled in the semester course. During the class biophilic feelings increased for five students to strongly connected. Disconnected and strongly disconnected feelings also increased during the class for two students. Improvements could be made to increasing student connections to nature. Student learning was indicated in STIP pre-post data for most terms. Further improvements could be made to enhance student learning.