Assessment of student learning – field application

Wednesday | 4:30pm-5:45pm | Beren Auditorium
Poster Session Part of Wednesday Poster Session

Authors

Lily Pfeifer, , University of Oklahoma Norman Campus

Lynn Soreghan, , University of Oklahoma Norman Campus

Michael Soreghan, , University of Oklahoma Norman Campus

Our research, Landscapes of Deep Time in the Red Earth of France (NSF International Research Experience for Students project), aims to mentor U.S. undergraduate science students from underserved populations (e.g. students of Native American heritage and/or first-generation college students) in geological research. During the first field season (June 2018) formative and summative assessments (outlined below) will be issued to assist in our evaluation of student learning. The material advancement of a student's sedimentological skillsets and self-efficacy development in research applications are a direct measure of our program's success.

(1) Immediately before and after the program, students will self-rank their competency of specific skillsets (e.g. data collection, lithologic description, use of field equipment) in an anonymous summative assessment.
(2) Formative assessments throughout the field season (e.g. describing stratigraphic section independently, oral and written communication of results) will assess improved comprehension of the scientific process.
(3) An anonymous attitudinal survey will be issued at the conclusion of the field season to shed light on the program's quality as a whole, influence on student desire to pursue a higher-level degree/career in STEM, and effectiveness of the program on aiding the development of participant confidence and self-efficacy in research design and application.

We discuss herein the results of first-year assessments with a focus on strategies for improvement. We expect each individual's outcomes to differ depending on his/her own characteristics and background. Furthermore, some of the most valued intentions of this experience are inherently difficult to measure (e.g., improved understanding of the scientific process, a stimulated passion to pursue a STEM career). We hope to address shortcomings in design; e.g. Where did we lose visibility on certain aspects of the learning experience? How can we revise the format and content of our assessment to better evaluate student participants and improve our program in subsequent years?

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