

Geology Students' Ability to Produce and Interpret a Geological Cross-Section

Geology BS - College of Natural Sciences and Mathematics

Step 1: Student Learning Outcome

Produce and interpret a geological cross-section.

Step 2: Methods and Measures

Direct Measure: Students collect data over three weekends and construct a geological map based on the data in a Capstone project (GEOL 380). Based on their map, students construct a cross-sectional view and write a report to explain their interpretation of the area's geological history.

Indirect Measure: Students self-evaluate their learning and self-assess in GEOL 380. Students are asked to rate themselves as, Very Well, Somewhat Well, Not Very Well, and Not At All on questions such as the following;

- Can you produce a geological cross-section?
- How confident are you in your geological interpretation of your cross-section?
- Could you explain what a geological cross-section is to your non-geologist roommate/friend?

Step 3: Criteria for Success

Direct Measure: 80% of the students earn a "C" or better.

Indirect Measure: 80% of the students score a 9 or better out of a high score of 12.

Step 4: Results

Direct Measure: GEOL 380 Marble Mountain's project: 94% of students (n=20) earned a 73% (C) or better. Assessment was met and successful for this direct measurement.

Indirect Measure: All GEOL 380 students surveyed their learning: 74% of students (n=20) earned a 9 or higher. Assessment was not met and thus unsuccessful for this indirect measurement. Students are not confident in their abilities; however their grades reflect proficiency.

Step 5: Improvement Actions

The program indicated that to boost students' confidence level, professors will provide timely and more detailed comments to the students on all course projects. To help gauge students' perception, the GEOL 380 survey will be administered mid-semester and the professor will adjust assignments accordingly.