DeAnza College

SLO Assessment Cycle for GEO 1

Physical Geography SLO Modified: [05/24/2010]

Purba Fernandez's Team Members:

Outcomes:

Outcome 1: Statement Modified: [10/22/2010]

Demonstrate understanding of the scientific method by identifying theories, evidence and hypotheses to explain earth processes and the impact of humans on the environment.

Assessment Cycle Records:

Outcome 1: Assessment Planning Modified: [05/24/2010]

Assessment Strategy Used:
Quarter: Spring 2010
Assessors: Fernandez, Purba (GEO)
Assessment Tools: Papers/Essays
Sections being assessed: 01, 02

Outcome 1: Reflect & Enhance Modified: [06/18/2010]

Number of people involved in Phase III: 1

Changes:

Methods:
The assessment for this SLO was an assignment with a series of questions which required students to use the concepts of the theory of plate tectonics to identify types of plate boundaries, describe the boundary interactions, explain the processes involved and analyze the landforms and ocean floor formations that resulted from these processes. The students had to refer to their class discussion notes, textbook readings, atlas and course packet maps and they had to read an online article published by the US Geological Survey. The assignment questions included specific examples of plate boundary interactions. The assignment was worth 50 points, which was 10% of the overall course grade.

I handed out to the students a rubric with a detailed description of grading criteria in advance. Among the grading criteria was the requirements that students be able to locate the specific plate boundaries on a map, identify the type of plate boundary and describe the direction of plate movement along with an analysis of resultant landforms and ocean floor formations.

Summary:
The average score for both the sections assessed (total of 87 students between the 2 sections, since a couple of students dropped out) was 40.9 out of 50 points, which is a B- grade. My target for this SLO was a B grade for the class. 49% of the students scored a A- or higher grade; 4 students earned a perfect score; 8 students or 9% received a D or F grade. Out of the 9%, 4 students failed to submit the assignment altogether.

Most of the students were able to identify the boundary types and describe the landforms. Prior to the assignment, we had practiced with several examples in class. Students were able to correlate the maps with the concepts. The students who did not get a passing grade had not used the maps to locate the plate boundaries and hence did not have a sense of plate boundaries. A few student had a general idea of plate boundary interactions, but had not paid attention to the specifics.

Enhancement (Part I):
I do not have any particular recommendations for this SLO except that I will continue to use this format since it seems to be fairly successful. Prior to completing the take-home assignment, students would have practiced with examples in class, individually and in small groups using atlas and course packet maps.

Enhancement (Part II):

Outcome 2: Statement Modified: [10/22/2010]

Explain the causes of seasonal changes and differentiate between seasons in the Northern and Southern Hemispheres.

Outcome 2: Assessment Planning Modified: [05/24/2010]

Assessment Strategy Used:
Quarter: Spring 2010
Assessors: Fernandez, Purba (GEO)
Assessment Tools: Exams
Sections being assessed: 01, 02

Outcome 2: Reflect & Enhance Modified: [06/02/2010]

Number of people involved in Phase III: 1

Changes:

Methods:
In order to determine the extent to which students understand the role of factors that control seasonal changes, I included a diagram question on the 1st Mid-Term exam. Prior to the exam, students had studied the diagram in class and discussed the differences in the way sunlight falls on the two hemispheres. We had used a computer animation in class, we drew the diagram on the board (the students in their note books) and I used a globe to demonstrate the latitudinal differences in daylight hours. Students were asked to practice the diagram before their exam. The study guide for the exam included the diagram question, so students were aware that they would have to draw and label the diagram on their test.

Summary:
The average score for the 2 sections combined (a total of 89 students) was 8.6 out of 10 points, which would be a B grade. My goal was an average of B or higher. 10 students out of 89 (11%) scored a D or F on this question, while 46% scored the full 10 points, while another 13% scored 9 out of 10 points. The high scoring students had clearly practiced the diagram and had become familiar with the interactions of the different factors.

Recommendation: 1. Allow for more time during the class period for students to discuss and practice the diagram. 2. Include a practice worksheet in the course packet of materials so that students can have a framework as a guide.

Enhancement (Part I):
No recommendations for this SLO.

Enhancement (Part II):

Outcome 3: Statement Modified: [10/22/2010]

Synthesize and apply weather and climate variables.

Outcome 3: Assessment Planning Modified: [05/24/2010]

Assessment Strategy Used:
Quarter: Spring 2010
Assessors: Fernandez, Purba (GEO)
Assessment Tools: Papers/Essays
Sections being assessed: 01, 02

Outcome 3: Reflect & Enhance Modified: [06/02/2010]

Number of people involved in Phase III: 1

Changes:

Methods:
The assessment for this SLO was an assignment with a series of questions which required students to define, describe and analyze weather variables and patterns. Each question was assigned a point weight and the total number of points for the assignment was 55, which is 11% of the course grade. Included in the set of questions were climate graphs, where students were required to read the graph, understand the trends, describe the trends and patterns and analyze what temperature factors contributed to the particular pattern for that particular weather station (city).

I handed out to the students a rubric with a detailed description of grading criteria in advance. Among the grading criteria was the requirement that students be able to identify the principal temperature control factors for that particular city, based on its location.

Summary:
The average score for both the sections assessed (total of 89 students) was 41.8 out of 55 points, which is a C grade. My target for this SLO was a B- grade for the class. 51% of the students scored a B- or higher grade; 6% earned a perfect score; 11% received a D or F grade. Out of the 11%, 4% failed to submit the assignment altogether.

In most cases, the students were able to describe the patterns and trends in the graphs, but many fell short when it came to identifying the key variables responsible for those patterns. This step requires analysis, so it seems that students need more practice with graphs. Some students had difficulty with the basic arithmetic operations as they needed to calculate temperature changes. These difficulties could be addressed if the class was accompanied by a Physical Geography lab where students had the opportunity to work in groups on a regular basis.

Enhancement (Part I):
Practice worksheet and/or group activity during class time where each group is assigned a climate graph. This would allow students to share their knowledge and analytical skills.

Enhancement (Part II):
Detailed comments on each paper is necessary to provide feedback to students and that makes it very time-consuming. Given the range of basic skills and reading and writing abilities amongst our students, the individualized attention necessary to reduce the success rates gaps amongst our targeted and non-targeted groups demands a smaller class size. Ideally, lecture classes should be supplemented by smaller discussion groups and lab settings. Even with group activities in class, realistically, there is not enough time to allow for practice sessions in class.

[Number of Outcomes for GEO 1: **3**]