PROGRAM ASSESSMENT REPORTING

2015-2016

Indiana University Kokomo

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Learning Outcome

Briefly describe the learning outcome(s) you are reporting on for this cycle. If you have submitted a full copy of your program assessment plan to the Director of Assessment, you may use your numbering system from that document to identify the learning outcome of interest (i.e., We are reporting on learning outcome 2.4, Writing Effectively, described on page 7 of our assessment plan). You may also note specific components of learning outcomes in your description.

We are reporting on goal #3: Students will understand basic principles of the biological sciences OR the physical sciences OR the mathematical sciences OR informatics. For Biology, we are reporting on Component #2: Explain biodiversity. For Physical Sciences, we are reporting on Component #2: Explain the interaction of the forces of nature, such as electromagnetism, gravity, and nuclear forces; and Component #3: Explain the unifying principle of plant tectonics and how it related to the origin of Earth' physical phenomena, including rocks, volcanoes, and earthquakes.

Assessment Date(s)

If you have previously assessed that/those learning outcome(s), when did that assessment occur, and what was your main conclusion from that assessment? What change(s) did you implement in teaching, curriculum, or other aspects of your program to address any weaknesses your assessment revealed?

Method of Measurement

Briefly describe how you measured student learning on the program learning outcome(s) you noted, in this cycle. Also, describe the course(s) or setting(s) where the assessment took place. For example, quizzes/tests/exams (or selected questions on quizzes/tests/exams), written papers, or presentations from specific courses, or standardized tests given at specific points in the program, are common student artifacts that are used in learning assessment.

Learning outcomes for Biology (BIOL-L105) were assessed using selected questions on quizzes and exams. Learning outcomes for Physical Sciences were assessed using a pre- and post-course assessment tool for Component #2 (PHYS-P221) and by selected questions on an exam for Component #3 (GEOL-G133).

Student Sample

Briefly describe the student sample (i.e., sample size, typical year in college at time of enrollment) to aid interpretation.

For Biology, there were 9 BIPH students overall, most of them being first year students. For the Physical Science courses, there were 3 students in Physics and 6 students in Geology. In both classes, the students were generally 2nd a€“ 4th year students.

Quantitative Results

Please report the quantitative findings resulting from your data analysis. For example, you might report the percentage of students who met an acceptable level of performance, or average student performance on a particular measure, or the percentile rank achieved by a group of students in comparison to a larger pool (such as on a standardized assessment tool).

Results for Biology
A result of 70% or above is considered acceptable performance.
BIPH students (N=9)
Question A from exam 3 : 53.6%
Question B from exam 3 : 67.9%
Question C from exam 4 : 53.6%
Question D from quiz 7 : 91.7%
Question E from quiz 7 : 100%
All students (N=87)
Question A from exam 3 : 63.3%
Question B from exam 3 : 86.4%
Question C from exam 4 : 59.7%
Question D from quiz 7 : 78.7%
Question E from quiz 7 : 76.7%
Results for Physics

Student	Pre	Post	
BIPH1		5	16
BIPH2		11	NA
BIPH3		4	7
Number of Students		29	22
Mean		11.07	16.59
Median	10	15	
Standard Deviation	6.04	7.10	
Maximum score	25	30	
Minimum score	3	7	

Results for Geology
Exam 1: Explain plate tectonics
Question 20: 83.3% answered correctly
Question 33: 83.3% answered correctly
Exam 2: Relate plate tectonics to rocks, volcanoes, and earthquakes.
Question 2: 83.3% answered correctly
Question 3: 100% answered correctly
Average Score for all assessment data collected to assess the chosen Learning Outcome was 87.5%

Interpretation

Please state your interpretation of these findings, and your Action Plan for future improvement of student learning.

For Biology, BIPH students are scoring below their peers on exam questions, although the sample size is small. The questions I chose address misconceptions many students have about the nature of biodiversity. Clearly, more emphasis needs to placed on clearing up these misconceptions, possibly by restructuring the lab activity associated with this topic.

Actions

Are there actions that IU Kokomo can take to support implementation of your Action Plan? Are there institutional challenges that your program faces that will make improvement of student learning on this outcome difficult? If so, you can describe those challenges and needs here.

For the Biology course, class size is becoming an issue. Enrollment in the fall semester has exceeded 60 students in recent years making personalized interactions more of a challenge. This fall (2017) we will be offering 2 lecture sections as a way to bring down the average class size, although this may lead to staffing issues in the future if enrollments grow.

Sharing

Please describe how you have shared these findings (for example, with current and prospective students, faculty, specific accrediting bodies, or other relevant parties).
If you have not yet shared your findings, please describe your plan for dissemination.

We will be holding a meeting with the associated faculty to share the results and plan our assessment activities for the upcoming cycles.

Comments

If you have other comments about assessment to share with the Committee, please do so here.

Consultation

Do you wish for the Director of Assessment, Dr. Julie Saam (jsaam@iuk.edu), to consult with your faculty regarding this result? That is, are you wishing for assistance at this time with your next steps?

No