Review of General Education Courses

Academic Year 2014-2015

Assessment Committee

General Education Category II: Science and Technology

Learning Outcomes:

After completing a Category II GE course, successful students will be able to do ALL of the following:

1. Demonstrate an understanding of fundamental laws of science OR principles underlying design and operation of technology.
2. Demonstrate an understanding of natural phenomena, related to the course discipline, that surround and influence our lives.
3. Be able to do ONE OR MORE of the following:
   a. Describe how scientists within the course discipline approach and solve problems.
   b. Apply scientific knowledge/theoretical models used in the course discipline to solve problems and draw conclusions using qualitative and/or quantitative analysis of data and concepts.
   c. Explain the scope and limitations of scientific inquiry and the scientific method as evidenced in the course discipline.

Process:

In Fall 2014, the Assessment Committee sent a memo to every instructor teaching a GE Category II course to submit a report answering the following questions:

a. Identify your name, GE course, and number of students enrolled.

b. To what extent does your current course outline and course assignments correspond with the learning outcomes for your GE course?

c. Summarize the extent to which you felt students successfully met the learning outcomes. Please also provide a percentage of how many students successfully met each outcome. For example, 80% of students achieved learning outcome 1, 70% of students achieved learning outcome 2, 60% of students achieved learning outcome 3, etc.

d. Based on the results, please describe how you plan to use the results to improve the course.

Requests were sent to 46 instructors, and reports were received from 17 instructors, for an overall response rate of 37%.

Methods Used to Assess Courses:

In the vast majority of GE II courses, instructors identified questions on their midterm and/or final exams corresponding to the learning outcomes for the category. Due to large class sizes in GE II courses, these exams tended to be multiple-choice. Instructors calculated the percentage of students answering the relevant exam questions correctly.

Assessment Results:

Learning Outcome #1- The percentage of students successfully meeting this outcome ranged from 63% to 95%, with an average percentage of 79%.

Learning Outcome #2- The percentage of students successfully meeting this outcome ranged from 60% to 95%, with an average percentage of 78%.

Learning Outcome #3- The percentage of students successfully meeting this outcome ranged from 50% to 95%, with an average percentage of 77%.

How Results Will Be Used to Improve Courses:

Based on assessment results, instructors identified a variety of strategies for improving GE II courses. These strategies include:

-Spend more lecture time focusing on the learning outcomes

-Incorporate more active teaching techniques (e.g. pre-lecture quizzes, worksheets)

-Spend more lecture and/or discussion time on the concepts students struggle with

-Use clicker questions to facilitate understanding

- Make more explicit to the students what the learning outcomes are for the course

-Experiment with incorporating inquiry-based learning into discussion sections and encourage field trips

Summary:

Instructors reported that their course outline and objectives correspond closely with the learning outcomes for the category. Moreover, among the courses sampled, most students

successfully met the learning outcomes for the category. Instructors identified a variety of strategies for improving their GE courses.

General Education Category III: Social and Behavioral Sciences

Learning Outcomes:

After completing a course in this category, successful students should be able to:

1. Demonstrate knowledge and understanding of the theories, sources, and interpretations of human behavior and organization (e.g., individual, societal and/or institutional).

2. Do at least one of the following:
    a. Demonstrate an understanding of contemporary and historical perspectives on individual or collective human behavior (e.g., individual, social movements and/or institutions).
    b. Understand and explain the scientific/interpretive methods used in the acquisition of knowledge and the testing of competing theories, in the social and/or behavioral sciences.

Process:

In Fall 2014, the Assessment Committee sent a memo to every instructor teaching a GE Category III course to submit a report answering the following questions:

a. Identify your name, GE course, and number of students enrolled.

b. To what extent does your current course outline and course assignments correspond with the learning outcomes for your GE course?

c. Summarize the extent to which you felt students successfully met the learning outcomes. Please also provide a percentage of how many students successfully met each outcome. For example, 80% of students achieved learning outcome 1, 70% of students achieved learning outcome 2, 60% of students achieved learning outcome 3, etc.

d. Based on the results, please describe how you plan to use the results to improve the course.

Requests were sent to 51 instructors, and reports were received from 24 instructors, for an overall response rate of 47%.

Methods Used to Assess Courses:

In the vast majority of GE III courses, instructors identified questions on their midterm and/or final exams corresponding to the learning outcomes for the category. Due to large class sizes in GE III courses, these exams tended to be multiple-choice. Instructors calculated the percentage of students answering the relevant exam questions correctly.

Assessment Results:

Learning Outcome #1- The percentage of students successfully meeting this outcome ranged from 70% to 95%, with an average percentage of 82%.

Learning Outcome #2- The percentage of students successfully meeting this outcome ranged from 60% to 95%, with an average percentage of 81%.

How Results Will Be Used to Improve Courses:

Based on assessment results, instructors identified a variety of strategies for improving GE III courses. These strategies include:

-Incorporate materials into lecture to stimulate deeper thinking about the concepts

-Refine assessments so they more directly align with learning outcomes

-Increase the number of examples of applying theory to real world examples in lecture

-Offer more activities that ask the students to apply the theory to what they are reading and viewing, to come up with specific examples of the application

-Emphasize discussion of topics students find challenging

-Additional use of formative assessments

-Make GE learning outcomes more explicit to students

-Add questions to exams reflecting concepts students find challenging

-Develop more homework and examination questions that ask students to explicate precisely the way(s) in which their proposed solution to a given problem is appropriate and/or the way(s) in which alternative solutions would fail. This method would by definition place additional work on teaching assistants

-Incorporate longer essay questions on the exam

-Students found the selected textbook challenging—spend more time working with students
-More detailed feedback to students on written assignments

-Adopted real-time in-class software to better gage which students are grasping the material and which students are falling behind

-Introduce mandatory discussion sections to allow smaller groups of students to work on challenging concepts

- Incorporate additional practice exercises

-Establish an online message board where students could anonymously convey their questions.

-Expand explicit reference to the theories underlying each substantive topic

-Increase TA monitoring of students who are not accessing the coursework on a regular basis.

-Instructor to record video introductions to the lectures to increase visible presence on site.

-Increase TA office hours for students to receive individual help on computer lab homework problems.

-Provide optional additional homework problems to help students master the concepts.

-Employ iClicker technology to increase students engagement and increase attendance at lectures

-Augment existing podcasts that cover topics students find challenging

Summary:

Instructors reported that their course outline and objectives correspond closely with the learning outcomes for the category. Moreover, among the courses sampled, most students successfully met the learning outcomes for the category. Instructors identified a variety of strategies for improving their GE courses.