

General Education Assessment Report 2014-15 Results for Impact of Technology

Executive Summary

In May 2015, faculty assessed 80 written artifacts to determine the extent to which students were achieving the specified outcomes for general education in Impact of Technology courses. The outcome that received the highest ratings was students' ability to *describe the use and development of a given technology as a human and cultured activity*. The lowest rated outcome was students' ability to *express informed opinions about the cost/benefit relationship of a given technology, with considerations for development or controlled limitations*. Faculty raters recommended that faculty be encouraged to provide more opportunities for critical thinking within the course. Faculty raters also made recommendations related to general education course communication and the revision of the Impact of Technology outcomes.

A description of the methodology, results, and recommendations can be found in the full report below. Other information, such as the rubric, will be available on the Office of Institutional Effectiveness & Assessment's website: <https://tinyurl.com/geneduc>.

Impact of Technology Assessment Report

As part of Old Dominion University's general education requirement, students must complete the Impact of Technology requirement offered at the lower and upper division level. The Impact of Technology (T) way of knowing courses are taught across colleges. The criteria approved by Faculty Senate for T courses includes:

1. Describe the use and development of a given technology as a human and cultured activity
2. Understand and describe the components, mechanisms, and function of a technological system, such as information and communication, finance, energy production, industrial production, food production, international trade, transportation, education, etc.
3. Discuss the impact that a given technology may have on its users: how it may change users' conception of reality and what users' perceptions and biases are toward it
4. Understand and describe the potential consequences, both intended and unintended, of a given technology for individuals, nations, societies, and the environment
5. Express informed opinions about the cost/benefit relationship of a given technology, with considerations for development or controlled limitations
6. Understand and describe how technology has enabled the pace of change and interdependency that have accelerated globalization.
7. Describe the role of technology in defining ideas of progress and modernism.

Methodology

A rubric developed by faculty teaching T courses was used to assess Impact of Technology. In spring 2015, faculty were given the option to include two written assignments, "Impact on People" and "Impact on Field". These assignments align with the Impact of Technology outcomes and were developed by a committee of faculty who teach these courses. The two assignments were also approved by GEAC. Faculty were also given the option to identify an

artifact or series of artifacts that aligned with the Impact of Technology outcomes and embedded within the courses. The following courses were included in the assessment:

- COMM 372T New Media Technologies
- HIST 304T History of Medicine, Disease, and Health Technology
- HIST 389T Technology and Civilization
- POLS 350T Technology and War
- WMST 390T Women and Technology Worldwide
- IT 360T Principles of Information Technology
- STEM 110T Technology and Your World
- STEM 370T Technology and Society
- CS 300T Computers in Society

A two-day assessment summit was convened in May 2015, where four faculty read and rated a random sample of student artifacts from the courses. During the morning of the first day, a calibration session was conducted. First, faculty thoroughly reviewed and discussed the rubric and then independently applied the rubric to three sample artifacts. Raters shared their ratings and discussed any differences that arose after each “round” of rating. This discussion helped faculty come to a common understanding of what the student learning outcomes (SLO) meant and what to look for when rating the artifacts using the rubric’s scale: exceeds standard, meets standard, approaches standard, needs attention. Once individual ratings on a shared artifact did not differ by more than one point, raters were given a set of 40 artifacts to rate. The artifacts were read twice by faculty and scored using the rubric. If faculty ratings differed by more than 1 point on the majority (50% or more) of the outcomes, the artifact was sent to a third reader.

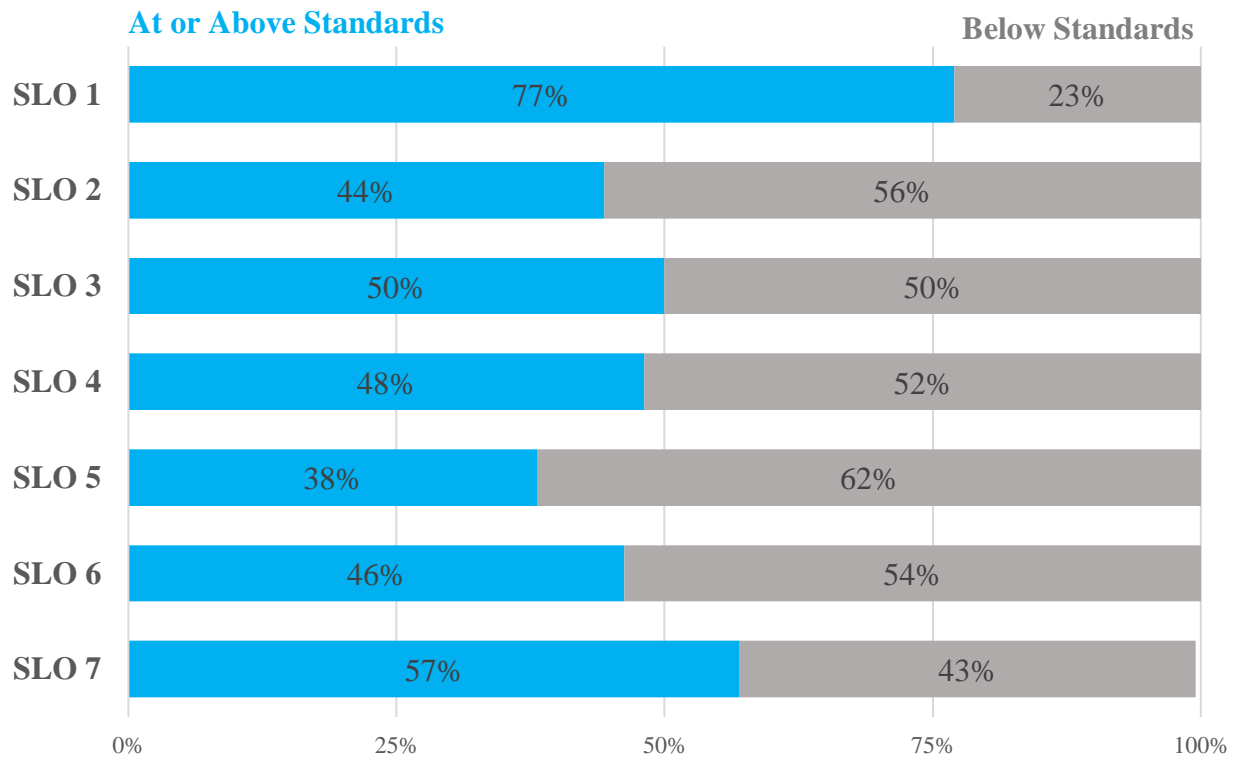
Three of the 80 artifacts reviewed required a third read due to discrepancies in ratings. A full description of the methodology, including inter-rater reliability data and the rubric, will be made available on the Office of Institutional Effectiveness & Assessment’s website:

<https://tinyurl.com/geneduc>.

Results

An overview of the findings by SLO is presented in Table 1. The Impact of Technology outcome related to *describing the use and development of a given technology as a human and cultured activity* received the highest ratings (SLO 1: 78% exceeds and meets standards; 22% approaches standards and needs attention). The lowest rated outcome was *expressing informed opinions about the cost/benefit relationship of a given technology, with considerations for development or controlled limitations* (SLO 5: 38% exceeds and meets standards; 62% approaches standards and needs attention).

Table 1. Impact of Technology Assessment Results



Faculty Rater Discussion and Recommendations

Discussion

At the end of the second day, faculty were asked to reflect upon the strengths and weaknesses of students. Faculty noted that students demonstrated an ability to address technological systems (SLO 2) and to describe human activity within technology (SLO 1). Student performance on their ability to address the cost/benefit relationships of technology (SLO 5) was weaker. Raters noted that most of the artifacts covered most of the SLOs albeit somewhat superficially. Overall, students seemed to repeat or focus on the factual content from their disciplinary focus. Little critical thinking was found in the artifacts.

Recommendations

Faculty raters identified the following recommendations to improve Impact of Technology learning and assessment:

- Improve the assessment process by informing faculty teaching the T courses about the requirements of the course along with the requirement to participate in general education assessment.
- Encourage and promote posting the Impact of Technology outcomes on the syllabus and distributing the general education rubric to faculty and students.

- Reduce the number of outcomes from seven to five by combining SLO 4 Consequences of Technology with SLO 5 Cost / Benefit Relationships of Technology, and SLO 6 Role of Technology in Globalization with SLO 7 Technology and Progress.
- Strengthen critical thinking pedagogy for faculty teaching T courses and provide greater critical thinking learning opportunities for students.

Faculty Senate Recommendations

The assessment report was shared with the Faculty Senate Committee A in 2015-2016 and no additional recommendations were made.