

General Education Report

Critical Thinking and Problem Solving

February 3, 2021

Summary

The Department of Classical Studies within the College of Arts and Sciences supports three minor programs at Howard University. Their courses are taken by a variety of students in undergraduate programs. These courses provide the University with opportunities for undergraduate students to explore Critical Thinking and Problem Solving.

Context

Howard University General Education 21 (HUGE 21) is a set of 21 general education learning outcomes decided by faculty in 2017. The outcomes are met through curricular and co-curricular student experiences including classes and coursework, high-impact learning opportunities, student activities, employment, and alternative experiences. Each semester, Howard University looks at student work or data related to students' experiences and determines the degree to which students have met one or more of these outcomes.

Outcomes are measured on a rotating basis across all undergraduate schools and colleges. Of the 21 outcomes, 6 (Critical Thinking and Problem Solving, Written Communication, Oral Communication, Quantitative Literacy, Information Literacy, and African Diaspora Awareness) are measured every other year, and the other 15 (Creative Thinking, Ethical Reasoning, Inquiry and Analysis, Qualitative Literacy, Technology, Arts and Humanities, Social Sciences and Historical Awareness, Intercultural Knowledge and Foreign Language Competency, Science and Environmental Consciousness, Physical and Mental health, Teamwork, Entrepreneurship and Financial Literacy, Civic Knowledge and Engagement, Foundation and Skills for Life-Long Learning, and Integrative and Applied Learning) are assessed at least once each 7-year cycle.

In instances where the outcome is measured by extant data, the Office of Institutional Research and Assessment (IRA) partners with a department, faculty member, or staff member to analyze data and report on a chosen general education outcome. In other cases, IRA partners with programs and units to identify how to capture data related to a chosen outcome.

In order to measure "Critical Thinking," IRA requested extant data from the Classics Department in the College of Arts and Sciences.

Critical Thinking and Problem Solving

According to HUGE 21, the Critical Thinking and Problem Solving outcome will be met if

A Howard graduate will be able to understand and evaluate problems and issues, gather relevant evidence, make appropriate assumptions and come to a logical conclusion or summary that is based on existing evidence and assumptions. With regard to problem solving, a Howard graduate will be able to define a problem identify strategies, propose

hypotheses and solutions, evaluate potential alternative solutions, implement solutions and evaluate outcomes.

The Association of American Colleges and Universities (AAC&U) explains that critical thinking is a “habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion” (n.d.). Critical thinking has been explored as both a generalizable outcome as well as a contextualized outcome in different academic disciplines.

Artifacts

The Department of Classics serves undergraduate students throughout the University through several open enrollment courses. In an effort to understand the impact of this department, and the degree to which Howard students are exposed to Critical Thinking through its courses, the Office of Institutional Research and Assessment (IRA) conducted a pilot assessment of artifacts produced in CLAS 112 (Law and Politics of the Ancient World).

The first artifact was an in-class written examination that asked students to discuss in detail the origins and structure of sophistic education, both in itself and in its relation to the education used in the archaic community. Eighteen artifacts were assessed. The second artifact asked students to understand how rhetorical strategies were for the purposes of propaganda in a presidential election cycle. Seventeen of these artifacts were assessed. Overall, a total of 35 artifacts were assessed.

Methodology

In the summer of 2020, the Office of Institutional Research and Assessment recruited faculty volunteers to participate in a pilot assessment of collected artifacts. Faculty volunteers were given a gift card for their participation. Each volunteer assessed four artifacts using the AAC&U VALUE Rubric for Critical Thinking. Scores were entered into a Qualtrics survey and then analyzed by IRA.

Each artifact was assessed by a faculty volunteer using the five dimension Critical Thinking AAC&U VALUE Rubric. The five dimensions are explanation of issues, evidence, influences of context and assumptions, student’s position, and conclusions and related outcomes. These dimensions were assessed on a four-point scale: 1-Benchmark, 2-Milestone, 3-Milestone, and 4-Capstone.

Due to the COVID-19 pandemic a traditional norming exercise was not completed. Faculty were given email instructions with a number to call should they have any problems.

Results

The tables below shows the distribution of scores across the artifacts.

Explanation of Issues			
	Artifact A	Artifact B	Overall
1.00-1.99	41.18%	44.44%	42.86%
2.00-2.99	58.82%	44.44%	51.43%
3.00-3.99	0.00%	11.11%	5.71%
4.00	0.00%	0.00%	0.00%

Evidence			
	Artifact A	Artifact B	Overall
1.00-1.99	52.94%	33.33%	42.86%
2.00-2.99	41.18%	66.67%	54.29%
3.00-3.99	5.88%	0.00%	2.86%
4.00	0.00%	0.00%	0.00%

Influence of Context and Assumptions			
	Artifact A	Artifact B	Overall
1.00-1.99	17.65%	22.22%	20.00%
2.00-2.99	70.59%	61.11%	65.71%
3.00-3.99	11.76%	16.67%	14.29%
4.00	0.00%	0.00%	0.00%

Student's Position			
	Artifact A	Artifact B	Overall
1.00-1.99	17.65%	11.11%	14.29%
2.00-2.99	76.47%	61.11%	68.57%
3.00-3.99	5.88%	27.78%	17.14%
4.00	0.00%	0.00%	0.00%

Conclusions and Related Issues			
	Artifact A	Artifact B	Overall
1.00-1.99	11.76%	5.56%	8.57%
2.00-2.99	82.35%	61.11%	71.43%
3.00-3.99	5.88%	33.33%	20.00%
4.00	0.00%	0.00%	0.00%

As a score of 2 or higher was Milestone or Capstone, the table below shows what percentage of students met an average score of 2 or higher on each dimension.

Overall Results	
Dimension	% of students scoring 2.00 (average) or greater
Explanation of Issues	57.14%
Evidence	57.14%
Influence of Context	80.00%
Student's Position	85.71%
Conclusions and Related Issues	91.43%

Implications

The data shows that students may need additional support in both explaining issues related to a problem and identifying evidence. Students scored well on the other three dimensions, with particular acuity in concluding and identifying related issues.

Suggested Improvements

As a pilot, this assessment was a test of students' abilities to think critically and an experiment in what a faculty-graded assessment opportunity would look like at Howard. Moving forward, it is important to consider this work a baseline pilot and build on both process and preparation. The following improvements should be made regarding process:

- Better prepare assessment volunteers with both the rubric and the assignment
- Create a norming opportunity where faculty can co-assess artifacts for alignment
- Select an assignment that is better suited to the instrument and provides more artifacts as 35 is a rather low n
- Institute an "agreement" process where artifacts that receive significantly different scores are considered by a third rater.

The following actions could be taken to improve critical thinking in Howard students:

- Assign students to assess context and surrounding issues of a proposed problem
- Encourage students to work in groups to identify evidence that could be used to better understand an issue.

References

Association of American College & Universities (n.d.). *Critical thinking VALUE rubric*.
<https://www.aacu.org/value/rubrics/critical-thinking>