

Section 8: Assessment of General Education

From the Framingham State University General Education Review Report 2017-2018

Prepared by Subcommittee D of the University Curriculum Committee

Members:

- Jesse Marcum, PhD, Assistant Professor of Chemistry (Chair)
- Bartholomew Brinkman, PhD, Assistant Professor of English
- Mark Nicholas, PhD, Executive Director of Institutional Assessment
- Charles Sachs, PhD, Assistant Professor of Psychology

Section 8 – Assessment of General Education: Table of Contents

<u>Section</u>	<u>Page</u>
8 Assessment of General Education	1
8.1 The Gen Ed Assessment Plan.....	1
8.2 Developing Assessment Structure	1
8.3 Faculty Development in Gen Ed Objectives.....	2
8.4 Assessment of Student Learning.....	2
8.4.1 Overarching Objective: Critical Thinking	2
8.4.2 Objective 2: Written Communication	5
8.5 Recommendations for Next Gen Ed Assessment Cycle	6
8.6 Key Developments Related to Gen Ed	7

8 Assessment of General Education

8.1 The Gen Ed Assessment Plan

Framingham State University undertook the first systematic assessment of student learning in the Gen Ed program in 2012-13. The Gen Ed Assessment Plan,¹ established in 2011, outlined a schedule for evaluating all eleven Gen Ed learning objectives during the five-year cycle. Hence the primary goal of the Office of Institutional Assessment was to use the early years to develop assessment infrastructure and processes. Faculty at FSU chose to adopt a course-embedded assessment model and developed institutional adaptations of the VALUE (Valid Assessment of Learning in Undergraduate Education) rubrics as a basis for assessing student learning in Gen Ed.

8.2 Developing Assessment Infrastructure for Gen Ed

After two years of following the original Gen Ed Assessment Plan, six unique Gen Ed objectives had been studied (Table 7), and several lessons were learned: (1) well-articulated protocols for artifact collection, rubric development and testing, rater norming, and artifact scoring needed to be developed; (2) we needed institutional definitions for the learning objectives; (3) the number of faculty voluntarily participating in Gen Ed assessment needed to increase; and (4) assignment prompts needed to be better aligned with the Gen Ed objectives to build a valid sample for assessment. We learned from the first two years that an infrastructure for assessment needed to be set up in order for proper institutional use of assessment data to inform discussions about student learning.

Table 7. Gen Ed Assessment Activities - 2012-2017

Academic Year	GE Objective	Assessment Action
2012-2013	Critical Thinking	Piloted Rubric
	Written Communication	Piloted Rubric
	Quantitative Literacy	Piloted Rubric
2013-14	Locating, Evaluation, & Applying info	Piloted Rubric
	Social and Ethical Responsibility	Piloted Rubric
	Demonstrate Technological Competency	Piloted Rubric
2014-15	Critical Thinking	Assessed objective
	Written Communication	Assessed objective
	Human Diversity	Developed rubric
2015-16	Critical Thinking	Assessed objective
	Written Communication	Assessed objective
	Human Diversity	Piloted Rubric
2016-17	Civic Literacy	Developed rubric

¹ <https://www.framingham.edu/Assets/uploads/about-fsu/office-of-assessment/documents/gen-ed-assessment-plan.pdf>

At the beginning of Year 3 the Office of Institutional Assessment returned to assessing the Critical Thinking (CT) and Written Communication (WC) objectives, and these two objectives were assessed for the next two years of the cycle. Emphasis was placed on the assessment process (e.g., artifact collection and screening, reliability of rubrics, faculty development, processes for norming raters, and scoring) rather than assessing student learning in specific Gen Ed objectives. Concurrent with the assessment of CT and WC, rubrics for additional objectives were either developed or pilot tested by faculty. Each objective moved through a three-year process that began with rubric development, followed by rubric testing (piloting), and then assessment of the objective using the rubric (see model illustrated in Figure 14). Once an objective has been assessed, the timeline for future assessment can be determined based on institutional needs (e.g., In Figure 14, Objective A is reassessed in Year 5). Additionally, the number of objectives assessed or piloted in any given year varied depending on available resources.

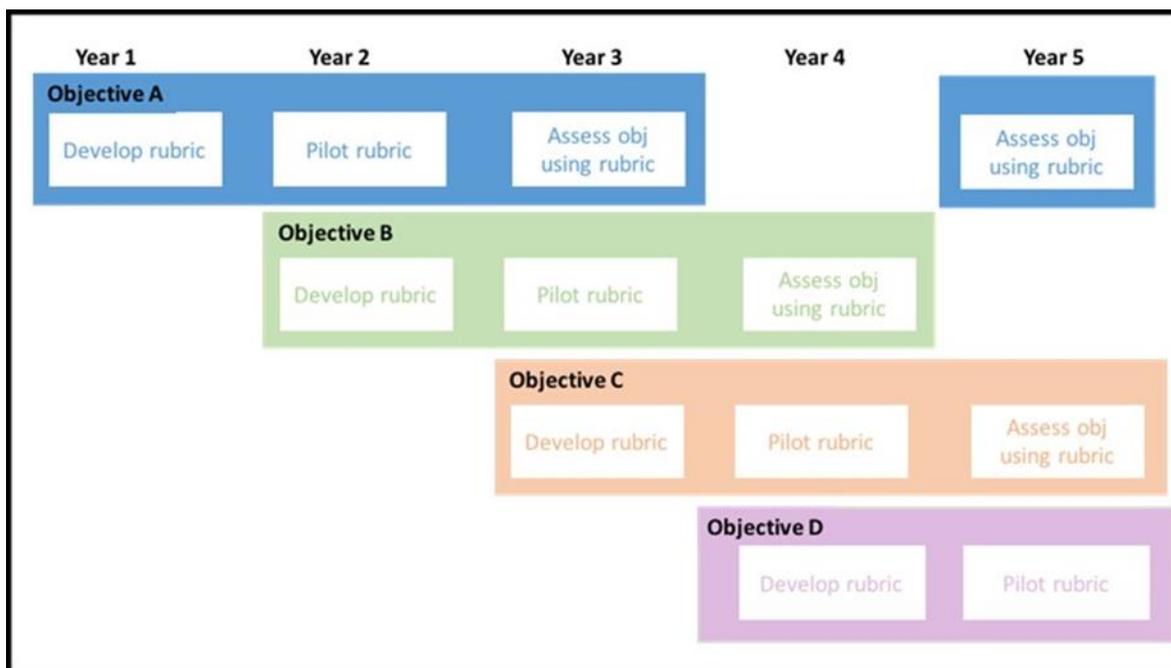


Figure 14. Model of the Gen Ed assessment cycle.

Development of the Gen Ed assessment process (including modifications to artifact collection, rubric development, the norming process, and scoring process) has always been data driven and/or motivated by feedback from the Assessment Advisory Group (AAG) and faculty raters. More detail about the assessment process and how the loop was closed each year can be found in the annual assessment reports for AY 2012-13,² 2013-14,³ 2014-15,⁴ and 2015-16.⁵

² <https://www.framingham.edu/Assets/uploads/about-fsu/office-of-assessment/documents/2012-2013-gen-ed-report.pdf>

³ <https://www.framingham.edu/Assets/uploads/about-fsu/office-of-assessment/documents/2013-2014-gen-ed-report.pdf>

⁴ <https://www.framingham.edu/Assets/uploads/about-fsu/office-of-assessment/documents/ge-report-2014-15.pdf>

⁵ <https://www.framingham.edu/Assets/uploads/about-fsu/office-of-assessment/documents/gen-ed-2015-2016-assessment-report.pdf>

8.3 Faculty Development in Gen Ed Objectives CT and WC

The Office of Institutional Assessment was successful in obtaining funding from the Davis Educational Foundation to fund faculty development focused on assignment design and creating assessment methods for objectives CT and WC. Over 70 faculty from FSU and our largest feeder school, MassBay Community College, participated in a two-semester sustained workshop series for each objective. These workshop series were led by faculty facilitators with input from academic tutors and were conducted with two cohorts of faculty. Faculty and staff at FSU have presented seven peer-reviewed conference presentations at national and international academic proceedings and published two papers in peer-reviewed journals on topics ranging from learning outcomes assessment and assignment design to faculty development in learning outcomes like critical thinking and written communication. A faculty researcher is currently investigating faculty perceptions of the Gen Ed program and its assessment. FSU also participated in the national 2016 Faculty Survey of Assessment Culture administered by the research team of Matthew Fuller at Sam Houston State University. The Office of Institutional Assessment intends to analyze results and identify areas for improvement.

8.4 Assessment of Student Learning

Critical Thinking (CT) and Written Communication (WC) were first assessed during AY 2012-13. During academic years 2014-15 and 2015-16, CT and WC were assessed again using the refined rubrics and assessment processes. The impact of the work done by the AAG and the Office of Institutional Assessment in the interim is evident in increased faculty participation and the six-fold increase in the sample size for both CT and WC (Table 8). It was also evident in the improved inter-rater reliability observed during those years.

Table 8. Sample sizes for CT and WC for 2012-13, 2014-15, and 2016-17.

	Critical Thinking	Written Communication
Year	N	N
AY 2012-13	18	24
AY 2014-15	122	193
AY 2015-16	148	149

In 2014-15, FSU also rated student work from seniors for CT and WC. For the purposes of analysis, seniors were defined as students that had already completed 75% of their degree. This provided FSU with a unique opportunity to compare CT and WC artifacts from the Gen Ed program (100 and 200 course levels) with work produced by senior students. Student artifacts for both Gen Ed and seniors were scored by the same set of FSU faculty raters using the FSU rubrics for CT and WC. This report presents results that compare student performance in Gen Ed courses with those sampled from seniors.

8.4.1 Overarching Objective: Critical Thinking

In 2014-15, the overall mean score for CT was 2.03 (SD = 0.72, N = 122) for Gen Ed artifacts and 2.7 (SD = 0.85, N = 90) for senior artifacts (Figure 15). Comparisons of the sub-component scores for Gen Ed show that students, on average, performed better at explaining the problem than either evaluating evidence or arriving at conclusions (Table 9).

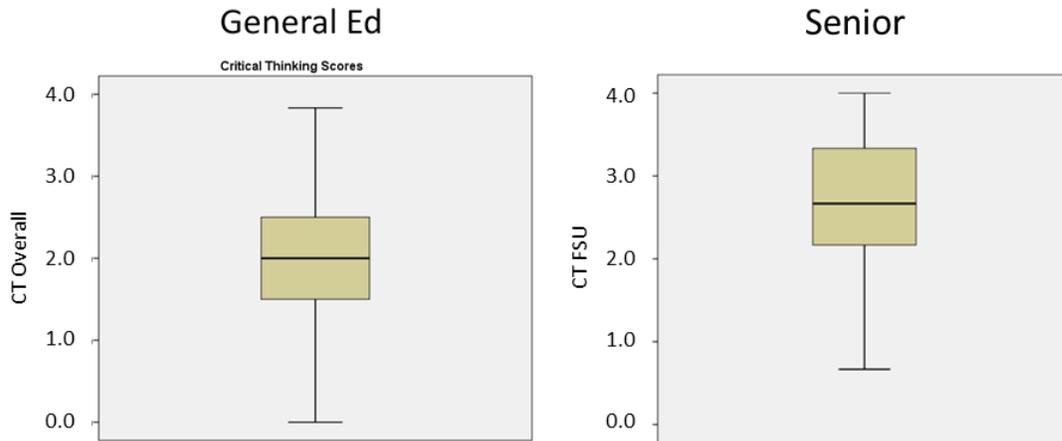


Figure 15. Distribution of scores for Critical Thinking for Gen Ed (left) and seniors (right) during AY 2014-15. For Gen Ed, mean = 2.03, SD = 0.72, N = 122. For seniors, mean = 2.7, SD = 0.85, N=90. In both graphs, the horizontal bar in the center of the box indicates the median score.

Table 9. Average scores for Critical Thinking during AY 2014-15 for Gen Ed artifacts.

Avg. Sub-component Scores for CT (N = 122)		
Rubric Components	Mean	Std. Deviation
CT Explains the Problem	2.47	0.73
CT Evaluation of Evidence	1.77	0.90
CT Arrives at Conclusion	1.84	0.85
CT Overall	2.03	0.72

In 2015-16, on a 4-point scale, the mean score for student performance for CT in Gen Ed was 2.02 (SD = 0.89, N = 148). Scores ranged from 0.5 to 4.0 (Figure 16) and the median score was 2.0. Comparisons of the sub-component scores indicated that students, on average, performed better at explaining the problem than either evaluating evidence or arriving at conclusions (Table 10).

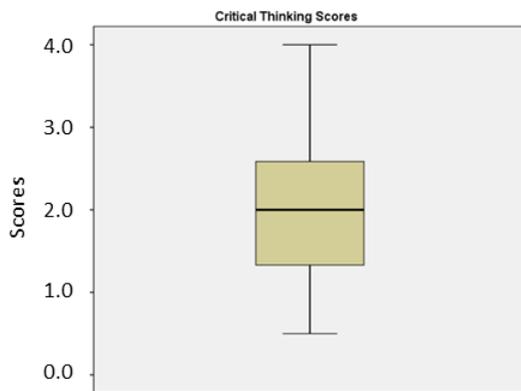


Figure 16. Distribution of scores for Critical Thinking for Gen Ed during AY 2015-16 (mean = 2.02, SD = 0.89, N = 148). The horizontal bar in the center of the box indicates the median score.

Table 10. Average sub-scores for Critical Thinking during AY 2015-16 for Gen Ed artifacts.

Avg. Sub-component Scores for CT (N = 148)	
Rubric Components	Mean
CT Explains the Problem	2.33
CT Evaluation of Evidence	1.64
CT Arrives at Conclusion	1.77
CT Overall	2.02

8.4.2 Objective 2: Written Communication

In 2014-15, the overall mean score for WC was 2.49 (SD = 0.67, N = 193) for Gen Ed artifacts and 3.08 (SD = 0.61, N = 100) for senior artifacts. Comparisons of the sub-component scores for WC for Gen Ed artifacts are shown in Table 11. The frequency distribution of scores was slightly positively skewed with 50% of the scores falling between 2 and 3 (median score 2.5; Figure 17). The mean score for WC for seniors was higher than for the Gen Ed artifacts (Figure 17).

Table 11. Average sub-scores for the Gen Ed artifacts collected for Written Communication during AY 2014-15.

Avg. Sub-component Scores for WC (N = 193)		
Rubric Components	Mean	Std. Deviation
WC Purpose	2.54	0.76
WC Development	2.46	0.71
WC Grammar, Mechanics & Style	2.47	0.71
WC Overall	2.49	0.67

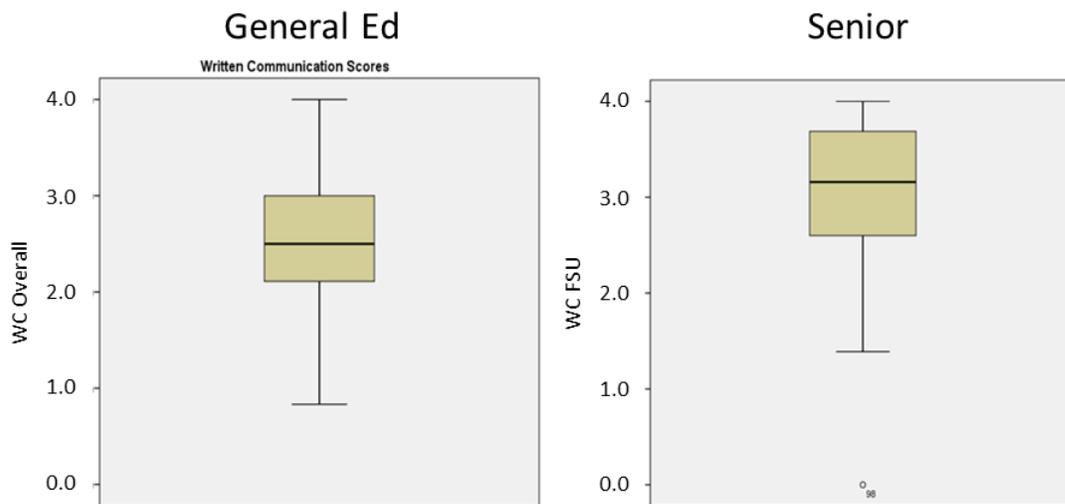


Figure 17. Distribution of score for Written Communication for Gen Ed (left) and for seniors (right) during AY 2014-15. Artifacts for both Gen Ed and seniors were scored by the same set of FSU faculty raters. For Gen Ed artifacts, mean = 2.49, SD = 0.67, N = 193. For senior artifacts, mean = 3.08, SD = 0.61, N=100. In both graphs, the horizontal bar in the center of the box indicates the median score.

In 2015-16, the overall mean score for student performance in WC was 2.38 (SD = 0.54, N = 149). The median was 2.33 with scores ranging from 1.17 to 3.83 (Figure 18). Means for sub-

component scores were 2.38 for purpose of the written work; 2.44 for development of the work; and 2.33 for grammar, mechanics, and style (Table 12).

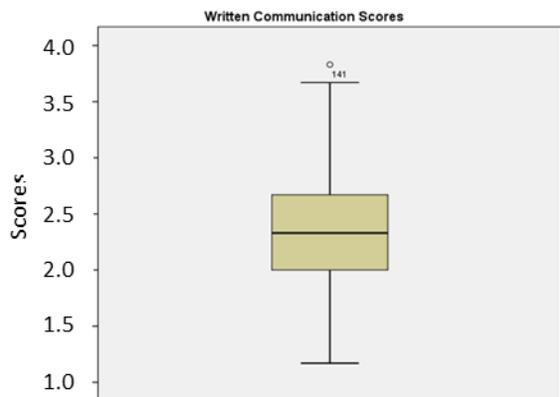


Figure 18. Distribution of scores for Written Communication for Gen Ed artifacts during AY 2015-16 (mean = 2.38, SD = 0.54, N = 149). The horizontal bar in the center of the box indicates the median score of 2.33.

Table 12. Average sub-scores for Written Communication for Gen Ed artifacts during AY 2015-16.

Avg. Sub-component Scores for WC (N = 149)	
Rubric Components	Mean
WC Purpose	2.38
WC Development	2.44
WC Grammar, Mechanics & Style	2.33
WC Overall	2.38

Based on the assessment results for AY 2014-15 and 2015-16, a mean CT score of 2.03 (SD = 0.72) and 2.02 (SD = 0.89) indicates that FSU students in the Gen Ed program were at various stages in developing their CT skills, but on average had surpassed the “Beginning” benchmark of the rubric. Similarly, a mean WC score of 2.49 (SD 0.67) and 2.38 (SD = 0.54) indicates that students’ writing skills fell between “Developing” and “Proficient” on the rubric for WC. The scores for both CT and WC are encouraging for the FSU Gen Ed program considering that the Gen Ed program is comprised of 100- and 200-level courses and is largely enrolled by underclassmen. Fifty percent of the scores fall within a single score for both WC and CT (between a 2 and 3 for WC, and between a 1.5 and 2.5 for CT). This indicates that about half of the students in the Gen Ed program are performing at or above the mean score for these objectives.

8.5 Recommendations for the Next Five-Year Gen Ed Assessment Cycle

The AAG reviewed the results of assessment of student learning and the assessment processes and made the following recommendations.

AAG Recommendation #1: Rethink the frequency of Gen Ed assessment cycles.

Having been through an entire cycle of Gen Ed annual assessment, we noticed what we call faculty fatigue both as participants and raters. This may have been true given the number of objectives we needed to assess each review cycle. This faculty fatigue may have been exacerbated by the fact that many faculty had also been participating in departmental and program assessment and the Multi-State

Collaborative in the last five years. Because faculty participation is critical to the assessment process, the AAG recommends:

- The Office of Institutional Assessment align key Gen Ed learning objectives with institutional objectives contained in the FSU Mission Statement/Core Values. Such a mapping will provide five overlapping objectives for assessment: Critical Thinking, Quantitative Reasoning, Effective Written Communication, Human Diversity, and Technology Competency. These objectives can provide a framework for the next cycle of Gen Ed and institutional assessment.
- Gen Ed assessment is conducted every other year, rather than annually. This will help keep the process manageable, retain faculty buy-in, and be more meaningful to institutional goals.

AAG Recommendation #2: Need for purposeful faculty development related to GE.

Faculty development in the Gen Ed curriculum and learning objectives are key to getting faculty buy-in and will facilitate effective assessment of student learning in the program. Hence, we propose that new programming be created collaboratively by the Center for Excellence in Learning, Teaching, Scholarship, and Service and the Office of Institutional Assessment in the following potential areas:

- Assignment design focused on Gen Ed objectives that will be assessed in the next cycle
- Pedagogical challenges and opportunities teaching Gen Ed courses (examples include how to communicate the value of the Gen Ed program to the major and how to manage content for disciplinary majors vs. non majors in Gen Ed courses)

AAG Recommendation # 3: Need for students to see the connection between Gen Ed and the academic major

Results from indirect assessment like surveys and qualitative focus groups indicate that students do not appreciate the value of taking Gen Ed courses and hence see it as a “waste of time.” There is need to explore ways to communicate the value of Gen Ed to students.

8.6 Key developments related to GE

- Over two years, the UCC worked with each department on campus to develop operational definitions for each of the eleven learning objectives.
- In 2015-16, the Executive Director of Institutional Assessment was nominated by the President to be a voting member on the University Curriculum Committee. This will help facilitate conversations around assessment when developing the curriculum.