



Oklahoma State University
America's Brightest **ORANGE**

**Oklahoma State University
Committee for the Assessment of General Education
and
University Assessment and Testing
2020 Annual Report**

Committee for the Assessment of General Education (CAGE)

Bridget Miller, Ph.D., (Chair), College of Education and Human Sciences
Jon Comer, Ph.D., (Vice-Chair) College of Arts and Sciences
Melanie Bayles, Ph.D., Ferguson College of Agriculture
Terry Collins, Ph.D., College of Engineering, Architecture and Technology
Carol Johnson, Ph.D., Spears School of Business

University Assessment & Testing (UAT)

Ryan Chung, Ph.D., Director
Kelva Hunger, Ph.D., Assistant Director, Assessment & Analysis
Kaitlynn Holcomb, B.S., Assessment Specialist
Robin Fitzgerald, B.A., Assessment Specialist
Paola Sainz Sujet, B.S., Assessment and Analysis Student Assistant

Contents

Executive Summary	4
Overview	6
Introduction.....	6
Artifact Analysis	7
Assessment Administration	7
Analyses and Findings	8
Reliability	8
Difference Tests.....	8
Key Findings	9
Overall Implications and Future Direction	12
AAC&U Information Literacy VALUE Rubric – OSU Modified.....	13



Tables and Figures

Table 1. Distribution of Information Literacy Artifacts	10
Table 2. Student Demographics Associated with Information Literacy Artifacts, 2020	10
Table 3. Information Literacy Artifact Score – Breakdown of “Overall” Rating Category, 2020 ..	11
Table 4. Information Literacy Artifact Scores for Each Rubric Category, 2020.....	11



Executive Summary

In the 2019-2020 academic year, OSU evaluated Information Literacy as a general education outcome. The assessment of Information Literacy was accomplished by evaluating written student artifacts by means of a modified version of the AAC&U's Information Literacy VALUE Rubric (for more information about the rubric, please refer to the rubric at the end of the document).

Key Findings:

- In total, 138 student artifacts were assessed using a slightly modified version of the Information Literacy VALUE Rubric by two teams of two reviewers per team.
 - Overall, 90.6% of student artifacts were rated as Milestones (Milestone-2: 53.6%, $n = 74$ and Milestone-3: $n = 51$, 37.0%), and 0.0% of student artifacts were rated as Capstone ($n = 0$). In other words, the majority of students met or partially met expectations in diversity artifacts.
 - Below are the results for each rubric category:
 - A. Determine the Extent of Information Needed:
 - 2.2% of the students' artifacts were rated as Capstone-4 ($n = 3$), 47.8% of the artifacts were rated as Milestone-3 ($n = 64$), 47.0% of the artifacts were rated as Milestone-2 ($n = 63$), and 3.0% of the artifacts were rated as Benchmark-1 ($n = 4$).
 - B. Evaluate Information and its Sources Critically:
 - 0.7% of the students' artifacts were rated as Capstone-4 ($n = 1$), 45.7% of the artifacts were rated as Milestone-3 ($n = 63$), 45.7% of the artifacts were rated as Milestone-2 ($n = 63$), and 7.9% of the artifacts were rated as Benchmark-1 ($n = 11$).
 - C. Use Information Effectively to Accomplish a Specific Purpose:
 - 1.5% of the students' artifacts were rated as Capstone-4 ($n = 2$), 35.5% of the artifacts were rated as Milestone-3 ($n = 49$), 49.2% of the artifacts were rated as Milestone-2 ($n = 68$), and 13.8% of the artifacts were rated as Benchmark-1 ($n = 19$).
 - D. Access and Use Information Ethically and Legally:
 - 1.5% of the students' artifacts were rated as Capstone-4 ($n = 2$), 24.6% of the artifacts were rated as Milestone-3 ($n = 34$), 50.7% of the artifacts were rated as Milestone-2 ($n = 70$), and 23.2% of the artifacts were rated as Benchmark-1 ($n = 32$).

Recommendations:

- University Assessment and Testing will be communicating information to college instructors through the CAGE college representatives, as well as the library. Future artifacts will represent a variety of fields and disciplines.
- There has been discussion from the Information Literacy artifact review subcommittee about further modification of the Information Literacy VALUE Rubric and possibly creating our own OSU rubric. Also, initiating a more active promotion of solid Information Literacy assignments will be cultivated by the library.



Assessment of general education is a critical aspect of our work to continuously improve our institution through various collaborations and initiatives. We are fortunate that Oklahoma State University provides substantial resources to assess students' learning and to consider ways in which learning might be improved. Our challenge moving forward is clear: to make the most of this investment by using these results to make meaningful changes to our programs.

Thank you for your time and support of general education assessment. Please let us know if you have any questions or comments at assessment@okstate.edu.

Sincerely,

Ryan Chung, Ph.D.
Director
University Assessment and Testing
Oklahoma State University



Overview

Introduction

General Education at Oklahoma State University (OSU) is intended to:

- A. Construct a broad foundation for the student's specialized course of study,
- B. Develop the student's ability to read, observe, and listen with comprehension,
- C. Enhance the student's skills in communicating effectively,
- D. Expand the student's capacity for critical analysis and problem solving,
- E. Assist the student in understanding and respecting diversity in people, beliefs, and societies, and
- F. Develop the student's ability to appreciate and function in the human and natural environment.

Full details of the General Education program can be found at:

<http://academicaffairs.okstate.edu/content/general-education>

Oklahoma State University has assessed general education for more than 10 years. Three approaches have typically been used to evaluate the general education program: institutional portfolios, review of the general education course database, and college-, department-, and program-level approaches (i.e. exams, surveys, capstone projects, artifact analysis, etc.). This report focuses on OSU's use of institutional portfolios to assess the general education program. Institutional portfolios provide direct evidence of student achievement of the overall goals of general education. Institutional portfolios are currently in use in four areas that represent the overall goals of the general education program. For the 2019-20 academic year, Information Literacy was assessed, which was the first year of the new four-year cycle. The current four-year cycle is as follows:

Current/Upcoming Cycle

1. **2019-20 | Information Literacy** (student artifacts)
2. **2020-21 | Diversity** (student artifacts/survey)
3. **2021-22 | Professionalism and Ethics** (student artifacts)
4. **2022-23 | Written Communication and Critical Thinking** (student artifacts)

Recognizing that these goals cannot be achieved only through the completion of courses with general education designations, student artifacts are collected from courses across campus that reveal students' achievement in each institutional portfolio area. These student artifacts are then assessed by a panel of OSU faculty members using rubrics, each of which has a different number of categories used in the scoring process.

In 2020, for the review of Information Literacy artifacts, OSU utilized a modified version of the AAC&U's Information Literacy VALUE Rubric. Artifacts rated with the VALUE rubrics can receive ratings of: Benchmark (1), Milestone (2 or 3), or Capstone (4).



Artifact Analysis

Assessment Administration

A partnership with the OSU Library was formed with UAT for completion of the Information Literacy General Education cycle. OSU Library contacted instructors they work closely with and who they thought might have an assignment eligible for artifact review. Student artifacts were collected by UAT and the library and compiled for review by the facilitator. UAT and the facilitator examined the assignment prompts of these artifacts to determine if they aligned with the modified AAC&U Information Literacy VALUE Rubric. Once the qualifying student artifacts were identified, the artifacts were split between two teams of two faculty raters (four in total). All reviewers and the facilitator were experienced faculty who have served as previous general education reviewers or library staff who were considered topic experts. The distribution of artifacts submitted, rated, and used for analysis can be found in Table 1.

Because this was a pilot year of assessment on Information Literacy, artifacts were collected by the library who used their partnership with instructors they have worked with previously. Instructors of target courses were solicited for participation in submitting student artifacts to be used in the Information Literacy artifact review. Instructors were given information on what type of assignment we would be able to use, the rubric used to review, instructions on how the artifacts were to be collected, and assurance that the artifacts would be anonymized and in no way identifiable back to the student. UAT is in the process of working with a subcommittee that includes the 2019-20 faculty raters, some members from CAGE, and representatives from the library on developing an institutional Information Literacy rubric, that is fitting for OSU and could yield better, more robust results. In short, since this is the first time we have administered this process (pilot), we will modify the process based on what we have learned such as broadening the scope and range of courses from more diverse colleges that we acquire artifacts from.

In the assessment of Information Literacy artifacts, we used a slightly modified version of the Information Literacy VALUE Rubric. The rubric contains a four-point rating scale: Capstone (4), Milestones (3) and (2), and Benchmark (1). The student artifacts were assessed excluding one category, "Access Needed Information," because it was determined that it would not be possible to know the search strategies used by the student. The four categories used were:

- A. Determine the Extent of Information Needed,
- B. Evaluate Information and its Sources Critically,
- C. Use Information Effectively to Accomplish a Specific Purpose, and
- D. Access and Use Information Ethically and Legally

For more information about the above four categories or to view the Information Literacy VALUE rubric, please refer to:

https://uat.okstate.edu/assessment/files/genedreports/rubric_infolit_modified.pdf.



Analyses and Findings

Reliability

Reliability was tested by calculating Cronbach's Alpha. The resulting statistic suggested that the scale's reliability is "Good" (Cronbach's Alpha = 0.849; $n = 134$).

Difference Tests

The Mann-Whitney U and Kruskal Wallis tests were performed to test for differences among information literacy artifact scores based on gender, race, college, and classification. No statistical differences were found based on gender or classification.

Results are below.

Race:

- In the rubric category, "C. Use Information Effectively to Accomplish a Specific Purpose," scores of white students ($Mdn = 2.00$) were higher than those of students of color ($Mdn = 2.00$). A Mann-Whitney U test indicated that this difference was statistically significant with a small effect size, $U = 1,408.5$, $p = 0.035$, $r = 0.18$.
- In the rubric category, "E. OVERALL," scores of white students ($Mdn = 2.00$) were higher than those of students of color ($Mdn = 2.00$). A Mann-Whitney U test indicated that this difference was statistically significant with a small effect size, $U = 1,392.5$, $p = 0.025$, $r = 0.19$.

College:

- In the rubric category, "B. Evaluate Information and its Sources Critically," scores of students associated with the College of Education and Human Sciences ($Mdn = 3.00$) were higher than those of students associated with University College ($Mdn = 2.00$). A Kruskal-Wallis test indicated that this difference was statistically significant with a small effect size, $H(5) = 12.37$, $p = 0.030$, $\eta^2 = 0.06$.
- In the rubric category, "E. OVERALL," scores of students associated with the Spears School of Business ($Mdn = 3.00$) were higher than those of students associated with University College ($Mdn = 2.00$). Additionally, scores of students associated with the College of Education and Human Sciences ($Mdn = 2.50$) were higher than those of students associated with University College ($Mdn = 2.00$). A Kruskal-Wallis test indicated that this difference was statistically significant with a moderate effect size, $H(5) = 14.90$, $p = 0.011$, $\eta^2 = 0.08$.



Key Findings

Overall, 90.6% of student artifacts were rated as Milestones (Milestone-2: 53.6%, $n = 74$ and Milestone-3: 37.0%, $n = 51$), and 0.0% of student artifacts were rated as Capstone ($n = 0$). In other words, the majority of students met or partially met expectations in diversity artifacts.

Below are the results for each rubric category:

A. Determine the Extent of Information Needed:

- 2.2% of the students' artifacts were rated as Capstone-4 ($n = 3$), 47.8% of the artifacts were rated as Milestone-3 ($n = 64$), 47.0% of the artifacts were rated as Milestone-2 ($n = 63$), and 3.0% of the artifacts were rated as Benchmark-1 ($n = 4$).

B. Evaluate Information and its Sources Critically:

- 0.7% of the students' artifacts were rated as Capstone-4 ($n = 1$), 45.7% of the artifacts were rated as Milestone-3 ($n = 63$), 45.7% of the artifacts were rated as Milestone-2 ($n = 63$), and 7.9% of the artifacts were rated as Benchmark-1 ($n = 11$).

C. Use Information Effectively to Accomplish a Specific Purpose:

- 1.5% of the students' artifacts were rated as Capstone-4 ($n = 2$), 35.5% of the artifacts were rated as Milestone-3 ($n = 49$), 49.2% of the artifacts were rated as Milestone-2 ($n = 68$), and 13.8% of the artifacts were rated as Benchmark-1 ($n = 19$).

D. Access and Use Information Ethically and Legally:

- 1.5% of the students' artifacts were rated as Capstone-4 ($n = 2$), 24.6% of the artifacts were rated as Milestone-3 ($n = 34$), 50.7% of the artifacts were rated as Milestone-2 ($n = 70$), and 23.2% of the artifacts were rated as Benchmark-1 ($n = 32$).

Analysis tables follow.



Table 1. Distribution of Information Literacy Artifacts

College ¹	Course Prefix and Number	Course Name	Number of Artifacts Submitted	Number of Artifacts Rated	Number of Artifacts Included in Analysis
CAS	ENGL1113	Composition I	299	58	58
	HIST1483	U.S. History to 1865	64	36	36
	POLS3983	Courts and Judicial Process	44	44	44
Total Number of Information Literacy Artifacts:			407²	138	138

Note: ¹Colleges: CAS = College of Arts and Sciences

²Although many artifacts were submitted, not all could be used for rating because they did not align with the rubric or did not fit page length criterion.

Table 2. Student Demographics Associated with Information Literacy Artifacts, 2020

		2020 # of artifacts (% of total) ²
Class	Freshman	78 (56.5%)
	Sophomore	9 (6.5%)
	Junior	14 (10.1%)
	Senior	33 (23.9%)
	Total	<i>n</i> = 134
College ¹	AG	16 (11.6%)
	CAS	47 (34.1%)
	CEAT	9 (6.5%)
	CEHS	22 (16.0%)
	SSB	24 (17.4%)
	UC	16 (11.6%)
Total	<i>n</i> = 134	
Gender	Female	72 (52.2%)
	Male	62 (44.9%)
	Total	<i>n</i> = 134
OSU GPA	<2.0	3 (2.2%)
	2.0 to 2.49	5 (3.6%)
	2.50 to 2.99	27 (19.6%)
	3.00 to 3.49	37 (26.8%)
	3.50 to 4.00	61 (44.2%)
	Missing	4 (2.9%)
Total	<i>n</i> = 134	

Note: ¹Colleges: AG = Ferguson College of Agriculture; CAS = College of Arts and Sciences; CEAT = College of Engineering, Architecture and Technology; CEHS = College of Education and Human Sciences; SSB = Spears School of Business; UC = University College

²Four students could not be linked to demographic data.



Table 3. Information Literacy Artifact Score – Breakdown of “Overall” Rating Category, 2020

Class	SCORE: <i>n</i> (%)				<i>N</i>
	Benchmark	Milestones		Capstone	
	1	2	3	4	
Freshman	6(7.7)	46(59.0)	26(33.3)	0(0.0)	78
Sophomore	1(11.1)	6(66.7)	2(22.2)	0(0.0)	9
Junior	0(0.0)	7(50.0)	7(50.0)	0(0.0)	14
Senior	5(15.2)	12(36.4)	16(48.5)	0(0.0)	33
College¹					
AG	1(6.3)	11(68.8)	4(25.0)	0(0.0)	16
CAS	5(10.6)	21(44.7)	21(44.7)	0(0.0)	47
CEAT	1(11.1)	6(66.7)	2(22.2)	0(0.0)	9
EHS	0(0.0)	11(50.0)	11(50.0)	0(0.0)	22
SSB	1(4.2)	11(45.8)	12(50.0)	0(0.0)	24
UC	4(25.0)	11(68.8)	1(6.3)	0(0.0)	16
Gender					
Male	7(11.3)	33(53.2)	22(35.5)	0(0.0)	62
Female	5(6.9)	38(52.8)	29(40.3)	0(0.0)	72
Total²	12(9.0)	71(53.0)	51(38.1)	0(0.0)	134

Note: ¹Colleges: AG = Ferguson College of Agriculture; CAS = College of Arts and Sciences; CEAT = College of Engineering, Architecture and Technology; CEHS = College of Education and Human Sciences; SSB = Spears School of Business; UC = University College

²Four students could not be linked to demographic data.

Table 4. Information Literacy Artifact Scores for Each Rubric Category, 2020

Rubric Category	SCORE: <i>n</i> (%)				<i>N</i>
	Benchmark	Milestones		Capstone	
	1	2	3	4	
A ^{1,2}	4 (3.0)	63 (47.0)	64 (47.8)	3 (2.2)	134
B	11 (7.9)	63 (45.7)	63 (45.7)	1 (0.7)	138
C	19 (13.8)	68 (49.2)	49 (35.5)	2 (1.5)	138
D	32 (23.2)	70 (50.7)	34 (24.6)	2 (1.5)	138
Overall³	13 (9.4)	74 (53.6)	51 (37.0)	0 (0.0)	138

Note: ¹A = Determine the Extent of Information Needed; B = Evaluate Information and its Sources Critically; C = Use Information Effectively to Accomplish a Specific Purpose; D = Access and Use Information Ethically and Legally

²Although 138 artifacts were rated, 4 artifacts could not be used in analysis due to their lack of applicability to category A of the rubric.

³“Overall” was another category the reviewers rated; it is not a total or average of the previous table scores.



Overall Implications and Future Direction

- Assessment data collected from the general education assessment process has been and will continue to be shared broadly (both internally and publicly) to encourage discussion and consideration of additional curricular, programmatic, and/or assessment changes that may result in improvement to the general education assessment program and/or to student achievement of the general education goals.
- Specifically, the General Education Advisory Council (GEAC), the Committee for the Assessment of General Education (CAGE), and the Assessment and Academic Improvement Council (AAIC) meet together once per year to discuss general education assessment results, consider needed changes, and provide recommendations for improvement.
- Assessment data from the general education assessment process are used in three main ways:
 1. to implement improvement initiatives (e.g., faculty, staff, and instructor professional development; modification of assessment processes),
 2. to monitor recent curricular changes, and
 3. to consider and discuss additional modifications to the general education program (e.g., modifying general education curriculum, syllabi, instructional methodologies, general education course designations, or designation goals/criteria).
- We will be communicating information to college instructors through the CAGE college representatives, as well as the library. Future artifacts will represent a variety of fields and disciplines.
- There has been discussion from the Information Literacy artifact review subcommittee about further modification of the Information Literacy VALUE Rubric and possibly creating our own OSU rubric. Also, an initiation of the promotion of solid Information Literacy assignments will be cultivated by the library.



INFORMATION LITERACY VALUE RUBRIC – OSU MODIFIED

for more information, please contact value@aacu.org



The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success. In July 2013, there was a correction to Dimension 3: Evaluate Information and its Sources Critically.

Definition

The ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand. -
Adopted from the National Forum on Information Literacy

Framing Language

This rubric is recommended for use evaluating a collection of work, rather than a single work sample in order to fully gauge students' information skills. Ideally, a collection of work would contain a wide variety of different types of work and might include: research papers, editorials, speeches, grant proposals, marketing or business plans, PowerPoint presentations, posters, literature reviews, position papers, and argument critiques to name a few. In addition, a description of the assignments with the instructions that initiated the student work would be vital in providing the complete context for the work. Although a student's final work must stand on its own, evidence of a student's research and information gathering processes, such as a research journal/diary, could provide further demonstration of a student's information proficiency and for some criteria on this rubric would be required.

