



America's Brightest **ORANGE**

**Oklahoma State University
Committee for the Assessment of General Education
and
The Office of University Assessment and Testing
Annual Report, 2023**

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Executive Summary

The purpose of general education assessment is to provide information on students' achievement of the student learning objectives of the General Education program outcomes using an institutional portfolio process. In fall 2022 and spring 2023, student artifacts were gathered and in summer 2023, a faculty rater scored 142 critical thinking artifacts using the OSU Critical Thinking Rubric, and two faculty raters scored 300 written communication artifacts using the OSU Written Communication Rubric.

Key findings:

- The skills of critical thinking and written communication were assessed during the 2022-2023 academic year. The majority of students (61.3% and 82.6% in critical thinking and written communication respectively) **met or exceeded expectations** on both skills in terms of general education assessment.
- In critical thinking, students did well in the category of Explanation of issues and/or summary of the problem/question.
- In written communication, students did well in the category of Context of and Purpose for Writing.
- Comparisons with the results from the previous assessment could not be conducted because although written communication and critical thinking were assessed in 2014 and 2017, CAGE underwent a review of the rubric so the parameters with which these skills were assessed are different.
- The percentage of students meeting or exceeding expectations in critical thinking (61.3%) is lower compared to the percentage of students meeting or exceeding expectations in written communication (82.6%). There are a couple of possible reasons for this difference:
 - a) The critical thinking prompts were rated as less aligned with the rubric compared to the written communication prompts.
 - b) Fewer critical thinking artifacts were collected ($n = 142$) due to the difficulty of recruiting usable assignments.
- Inter-rater reliabilities are excellent for Critical Thinking (Cronbach's alpha = .934; $n = 142$) and good for Written Communication (Cronbach's alpha = .888; $n = 300$), suggesting that the OSU rubrics are reliable instruments to evaluate the student artifacts.

Recommendations:

- In assessing Critical Thinking and Written Communication, the artifact collection strategy will be modified. For the next cycle, a representative sample of artifacts will be randomly selected from all courses with General Education designation: D, S, H, or I.
- General Education assessment for each cycle will continue to be streamlined and will continue to integrate general education information into the Nuventive Improvement Platform system for ease of distribution and transparency of information. This will also make longitudinal comparisons and examination of trends much easier.



Assessment of general education is a critical aspect of our work to continuously improve our institution. 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 the 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 additional questions or comments.

Sincerely,

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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 <https://academicaffairs.okstate.edu/general-education/>

Four components are used to evaluate the general education program at OSU:

1. **Diversity** (student artifacts/interviews/surveys)
2. **Written Communication and Critical Thinking** (student artifacts)
3. **Professionalism and Ethics** (behavioral ratings/student artifacts)
4. **Information Literacy** (student artifacts)

OSU has been involved in the assessment of general education for more than 20 years. Three approaches are used to evaluate the general education program: institutional portfolios, review of general education course database, and college-, department-, and program-level approaches. 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 have been/will be developed in three areas that represent the overall goals of the general education program (letters in parentheses map portfolios and survey instruments to the goals above):

1. Written Communication (A, B, C, and D)
2. Critical Thinking (A, B, and D)
3. Diversity (A, E, and F)
4. Professionalism (C and F)
5. Ethics (D, E, and F)
6. Information Literacy (A, B, C, D, and F)

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 faculty members using OSU rubrics.

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 curricula, syllabi, instructional methodologies, general education course designations, or designation goals/criteria).

The Review Process and Reporting

The general education assessment process is organized by the faculty on the Committee for the Assessment of General Education (CAGE) and facilitated by staff in the Office of University Assessment and Testing (UAT). Students are informed about their possible participation in this assessment process in the Assessment section of the University Catalog¹. Each CAGE member communicated with their college faculty who taught the selected general education courses and encouraged them to participate in the assessment.

From the University Catalog, UAT staff selected courses with General Education designations D, S, I, and H that would potentially include artifacts to evaluate written communication and critical thinking. Instructors were contacted via email to invite them to participate in the General Education Assessment process and those who were interested allowed UAT staff to collect artifacts from Canvas. In 2023, two faculty reviewers took part in the general education assessment process. One reviewer was assigned to assess critical thinking and written communication ($n = 142$ artifacts and $n = 150$, respectively), while the other reviewer was assigned to assess written communication ($n = 150$ artifacts).

In the 2022-2023 academic year, 300 artifacts for the written communication assessment were chosen from the following courses: Fundamentals of Management, Health Issues in Diverse Populations, History of American Film, Oral Communications in Agricultural Sciences and Natural Resources, and Skyscrapers. Additionally, 142 artifacts were selected for the critical thinking assessment selected from the following courses: Educating Exceptional Learners, Introduction to Emergency Management, Marketing, and Sociology of Aging.

OSU Rubrics

Results from assessments using the OSU Critical Thinking Rubric and OSU Written Communication Rubric can be used to report student learning outcomes. The rubrics are scored on a scale of 1 (does not meet expectations) to 5 (exceeds expectations).

- **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.
- **Written Communication** is the development and expression of ideas in writing. Written communication involves learning to work in many genres and styles. It can involve working with many different writing technologies and mixing texts, data, and images. Written communication abilities develop through iterative experiences across the curriculum.

Results

¹ <http://registrar.okstate.edu/University-Catalog>



Key Findings: Critical Thinking

In critical thinking, five categories of the OSU Critical Thinking rubric and the overall student ratings were assessed. The five categories were:

- A. Explanation of issues and/or summary of problem/question
- B. Student's position (perspective, thesis/hypothesis)
- C. Use and assessment of supporting evidence
- D. Conclusions and related outcomes (implications and consequences)
- E. Assessment of the key assumptions and consideration of the influence of context

For the critical thinking assessment, reliability was tested by calculating Cronbach's Alpha. The resulting statistic suggested that the scale's reliability considering the 5 categories of the rubric and the overall score is "Excellent" (Cronbach's Alpha = .934; $n = 142$)

- Overall, 61.3% of the student artifacts were rated as '3,' '4,' or '5' ($n = 87$). In other words, the majority of students **met or exceeded expectations** in critical thinking artifacts.
- Below are the results for each rubric category:
 - * A. Explanation of issues and/or summary of problem/question:
81.6% of the students' artifacts were rated as '3,' '4,' or '5' ($n = 116$).
 - * B. Student's position (perspective, thesis/hypothesis):
63.3% of the students' artifacts were rated as '3,' '4,' or '5' ($n = 90$).
 - * C. Use and assessment of supporting evidence:
69.0% of the students' artifacts were rated as '3,' '4,' or '5' ($n = 98$).
 - * D. Conclusions and related outcomes (implications and consequences):
54.2% of the students' artifacts were rated as '3,' '4,' or '5' ($n = 77$).
 - * E. Assessment of the key assumptions and consideration of the influence of context:
54.9% of the students' artifacts were rated as '3,' '4,' or '5' ($n = 78$).

The complete distribution of artifact scores by rubric category is presented in Table 1.



Table 1. *Critical Thinking Artifact Scores by Rubric Category*

	SCORE: <i>n</i> (%)					<i>n</i>
	1	2	3	4	5	
A ²	2 (1.4%)	24 (16.9%)	59 (41.5%)	51 (35.9%)	6 (4.2%)	142
B	14 (9.9%)	38 (26.8%)	47 (33.1%)	33 (23.2%)	10 (7.0%)	142
C	1 (0.7%)	43 (30.3%)	51 (35.9%)	41 (28.9%)	6 (4.2%)	142
D	27 (19.0%)	38 (26.8%)	38 (26.8%)	34 (23.9%)	5 (3.5%)	142
E	16 (11.3%)	48 (33.8%)	50 (35.2%)	25 (17.6%)	3 (2.1%)	142
Overall	13 (9.2%)	42 (29.6%)	42 (29.6%)	39 (27.5%)	6 (4.2%)	142

The following table (table 2) shows the critical thinking artifact score distribution with frequencies (percentages) for class (freshmen, sophomores, juniors, and seniors), college (Ferguson College of Agriculture, College of Arts and Sciences, College of Engineering Architecture and Technology, College of Education and Human Sciences, Spears School of Business, and University College), and gender (male and female).

Table 2. *Critical Thinking Artifact Score Distribution*

	SCORE: <i>n</i> (%)					<i>n</i>
	1	2	3	4	5	
Class						
Freshman	0 (0.0)	5 (33.3)	6 (40.0)	3 (20.0)	1 (6.7)	15
Sophomore	9 (17.6)	14 (27.5)	13 (25.5)	12 (23.5)	3 (5.9)	51
Junior	1 (2.7)	13 (35.1)	13 (35.1)	9 (24.3)	1 (2.7)	37
Senior	3 (7.7)	10 (25.6)	10 (25.6)	15 (38.5)	1 (2.6)	39
College³						
AG	11 (13.3)	28 (33.7)	21 (25.3)	19 (22.9)	4 (4.8)	83
CAS	0 (0.0)	8 (38.1)	5 (23.8)	8 (38.1)	0 (0.0)	21
CEAT	0 (0.0)	5 (22.7)	11 (50.0)	5 (22.7)	1 (4.5)	22
CEHS	2 (16.7)	0 (0.0)	5 (41.7)	4 (33.3)	1 (8.3)	12
SSB	0 (0.0)	1 (33.3)	0 (0.0)	2 (66.7)	0 (0.0)	3
UC	0 (0.0)	0 (0.0)	0 (0.0)	1 (100)	0 (0.0)	1
Gender						
Female	6 (7.5)	24 (30.0)	26 (32.5)	23 (28.7)	1 (1.3)	80
Male	7 (11.3)	18 (29.0)	16 (25.8)	16 (25.8)	5 (8.1)	62
Overall	13 (9.1)	42 (29.6)	42 (29.6)	39 (27.5)	6 (4.2)	142

² A = Explanation of issues and/or summary of the problem/question; B = Student's position (perspective, thesis/hypothesis); C = Use of assessment of supporting evidence; D = Conclusions and related outcomes (implications and consequences); E = Assessment of the key assumptions and consideration of the influence of context.

³ Colleges: Colleges: AG = Ferguson College of Agriculture; CAS = College of Arts and Sciences; CEAT = College of Engineering Architecture and Technology; CEHS = College of Education and Human Science; SSB = Spears School of Business; UC = University College.



Key Findings: Written Communication

In written communication, five categories of the OSU Written Communication rubric and the overall student ratings were assessed. The five categories were:

- A. Explanation of issues and/or summary of the problem/question
- B. Student's position (perspective, thesis/hypothesis)
- C. Use and assessment of supporting evidence
- D. Conclusions and related outcomes (implications and consequences)
- E. Assessment of the key assumptions and consideration of the influence of context

For the written communication assessment, reliability was tested by calculating Cronbach's Alpha. The resulting statistic suggested that the scale's reliability considering the 5 categories of the rubric is and the overall score is "Good" (Cronbach's Alpha = .888; $n = 300$)

- Overall, 82.6% of the student artifacts were rated as '3,' '4,' or '5' ($n = 248$). In other words, the majority of students **met or exceeded expectations** in written communication artifacts.
- Below are the results for each rubric category:
 - Context of and Purpose for Writing:
89.4% of the students' artifacts were rated as '3,' '4,' or '5' ($n = 268$).
 - B. Content Development:
77.3% of the students' artifacts were rated as '3,' '4,' or '5' ($n = 232$).
 - C. Organization:
76.4% of the students' artifacts were rated as '3,' '4,' or '5' ($n = 229$).
 - D. Style and Mechanics:
78.4% of the students' artifacts were rated as '3,' '4,' or '5' ($n = 235$).
 - Sources and Evidence:
86.6% of the students' artifacts were rated as '3,' '4,' or '5' ($n = 259$).



The complete distribution of artifact scores by rubric category is presented in Table 3.

Table 3. *Written Communication Artifact Scores by Rubric Category*

	SCORE: <i>n</i> (%)					<i>n</i>
	1	2	3	4	5	
A ⁴	2 (0.7%)	30 (10.0%)	122 (40.7%)	131 (43.7%)	15 (5.0%)	300
B	10 (3.3%)	58 (19.3%)	124 (41.3%)	94 (31.3%)	14 (4.7%)	300
C	4 (1.3%)	67 (22.3%)	128 (42.7%)	89 (29.7%)	12 (4.0%)	300
D	14 (4.7%)	51 (17.0%)	129 (43.0%)	101 (33.7%)	5 (1.7%)	300
E ⁵	9 (3.0%)	31 (10.4%)	73 (24.4%)	139 (46.5%)	47 (15.7%)	299
Overall	7 (2.3%)	45 (15.0%)	115 (38.3%)	124 (41.3%)	9 (3.0%)	300

Table 4 shows the written communication artifact score distribution with frequencies (percentages) for class (freshmen, sophomore, junior, and senior), college (Ferguson College of Agriculture, College of Arts and Sciences, College of Engineering Architecture and Technology, College of Education and Human Sciences, College of Professional Studies, Spears School of Business, and University College), and gender (male and female).

Table 4. *Written Communication Artifact Score Distribution*⁶

	SCORE: <i>n</i> (%)					<i>n</i>
	1	2	3	4	5	
Class						
Freshman	1 (5.6)	1 (5.6)	8 (44.4)	7 (38.9)	1 (5.6)	18
Sophomore	0 (0.0)	15 (17.0)	35 (39.8)	38 (43.2)	0 (0.0)	88
Junior	2 (1.9)	18 (17.5)	42 (40.8)	38 (36.9)	3 (2.9)	103
Senior	3 (3.3)	11 (12.2)	30 (33.3)	41 (45.6)	5 (5.6)	90
College⁷						
AG	1 (1.0)	15 (15.2)	42 (42.4)	41 (41.4)	0 (0.0)	99
CAS	2 (5.7)	8 (22.9)	15 (42.9)	9 (25.7)	1 (2.9)	35
CEAT	0 (0.0)	1 (4.2)	8 (33.3)	12 (50.0)	3 (12.5)	24
CEHS	0 (0.0)	1 (4.2)	8 (33.3)	13 (54.2)	2 (8.3)	24
PS	0 (0.0)	1 (100)	0 (0.0)	0 (0.0)	0 (0.0)	1
SSB	3 (2.6)	19 (16.5)	42 (36.5)	48 (41.7)	3 (2.6)	115
UC	0 (0.0)	0 (0.0)	0 (0.0)	1 (100)	0 (0.0)	1
Gender						
Female	2 (1.4)	21 (14.5)	54 (37.2)	64 (44.1)	4 (2.8)	145
Male	4 (2.6)	24 (15.6)	61 (39.6)	60 (39.0)	5 (3.2)	154
Overall	6 (2.0)	45 (15.0)	115 (38.5)	124 (41.5)	9 (3.0)	299

⁴ A = Context of and Purpose for Writing; B = Content Development; C = Organization D = Style and Mechanics; E = Sources and Evidence.

⁵ One artifact was not included in the results in E due to an erroneous rating.

⁶ Demographic Information from one student was missing so it was not included in the analysis.

⁷ Colleges: 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; PS = College of Professional Studies; SSB = Spears School of Business; UC = University College.



Critical Thinking and Written Communication Artifact Collection

A call for student artifacts was sent to all instructors of courses identified as having some element of written communication or critical thinking; this was determined by examining the course content from the OSU Course Catalogue as well as targeting some Capstone and Senior courses and some courses with a General Education designation of 'D,' 'S,' 'H,' or 'I' since there are writing guidelines associated with these designations. Once the qualifying student artifacts were identified, the artifacts were anonymized and then provided to faculty raters. The distribution of artifacts submitted, rated, and used for analysis can be found in Tables 5 and 6.

Table 5. *Collection of Critical Thinking Artifacts*

College ⁸	Course Prefix and Number	Course Name	General Education Designation ⁹	Number of Artifacts Submitted ¹⁰	Number of Artifacts Rated ¹¹	Number of Artifacts in Analysis
AG	AGCM 3203	Oral Communications in Agricultural Sciences & Natural Resources	S	98	93	93
	ENGL 3453	History of American Film	H	9	7	6
CEAT	ARCH 4173	History and Theory of Skyscraper Design	H	21	21	21
CEHS	HLTH 3113	Health Issues in Diverse Populations	D	23	23	22
Total Number of Critical Thinking Artifacts:				151	144	142

Table 6. *Collection of Written Communication Artifacts*

College ¹²	Course Prefix and Number	Course Name	General Education Designation ¹³	Number of Artifacts Submitted ¹⁴	Number of Artifacts Rated	Number of Artifacts in Analysis
AG	AGCM 3203	Oral Communications in Agricultural Sciences & Natural Resources	S	98	97	97
CAS	ENGL 3453	History of American Film	H	9	9	9
CEAT	ARCH 4173	History and Theory of Skyscraper Design	H	21	21	21
CEHS	HLTH 3113	Health Issues in Diverse Populations	D	23	23	23
SSB	MGMT 3013	Fundamentals of Management	S	687	150	150
Total Number of Written Communication Artifacts:				838	300	300

⁸ Colleges: Colleges: AG = Ferguson College of Agriculture; CEAT = College of Engineering Architecture and Technology; CEHS = College of Education and Human Sciences.

⁹ Designations: D= Diversity, H = Humanities, S = Social and Behavioral Sciences.

¹⁰ Although many artifacts were submitted, not all could be used for rating because they did not align with the rubric

¹¹ Although many artifacts were rated, not all could be used in analysis due to their lack of applicability to the rubric

¹² Colleges: 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

¹³ Designations: D= Diversity, H = Humanities, S = Social and Behavioral Sciences

¹⁴ Although many artifacts were submitted, not all could be used for rating because they did not align with the rubric. In the case of MGMT, 150 artifacts were randomly selected across all sections.



Use of Results and Future Plans

In summary, most students either **met or exceeded expectations** in Critical Thinking. Specifically, students did well in the category of Explanation of issues and/or summary of problem/question. In terms of Written Communication, students **met or exceeded expectations**, particularly in the category of Context of and Purpose for Writing. Generally, seniors scored higher than freshmen in Written Communication, and similarly in Critical Thinking.

Assessment data collected from the general education assessment process will 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. We intend to utilize the results of the assessment process 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).

CAGE is discussing a method to assess more short-form artifacts of Written Communication, such as professional cover letters, memos, emails, etc. that is more representative of the writing tasks students will face within their careers. This new process will accompany the current method of assessing Written Communication and will be established before the next cycle in 2027.

Despite the interest of the committee in implementing a method/procedure and software for longitudinal data collection, student performance cannot currently be tracked based on student artifact ratings because different rubrics have been used, making comparison inadvisable. However, CAGE collaborated in meetings to develop the OSU Written Communication Rubric and the OSU Critical Thinking Rubric which is planned to be used during the next written communication and critical thinking assessment cycle in 2027, ideally, making student performance tracking across years possible.

Examining holistic results, conclusions could be drawn, across the years, that students tend to score sufficiently well in Critical Thinking, and somewhat better in Written Communication. This is one of the reasons why we are looking to adjust the method for assessing Written Communication to explore how students are doing in a shorter form of written communication.

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. During this meeting, the results of this assessment and plans will be discussed.

Finally, with the ongoing revision of General Education at OSU to further align with the new Strategic Plan, there is an expectation that the assessment of General Education will need to be evaluated to determine its relevance and alignment with the modified General Education system.

