Critical Thinking Overall Results
July 2021 | Prepared by Katie Burr, Ph.D., Associate Director of Assessment

Summary
In spring 2021, efforts to assess UGA’s General Education curriculum included the collection of student work(s) for evaluation. Among them, artifacts (N = 89) related to the Critical Thinking competency of General Education were solicited from faculty teaching courses mapping to the Critical Thinking competency.

Critical Thinking is defined by the AAC&U as “a habit of mind characterized by the comprehensive exploration of issues artifacts and events before accepting or formulating an opinion or conclusion” (YEAR). This definition includes behaviors that align closely to the abilities UGA’s General Education subcommittee identified as necessary for competency in Critical Thinking: Consider, and accommodate, and engage opposing points of view; Communicate for academic and professional contexts; Sustain a consistent purpose and point of view; Assimilate, analyze, and present a body of information; Analyze arguments; and Interpret inferences and develop subtleties of symbolic and indirect discourse.

Methods
Eighty nine artifacts were collected from a wide range of courses approved to meet the Critical Thinking competency, including advertising and public relations, romance languages, communications, cellular biology, and others. Artifacts were from upper division (300- and 4000-level courses). Artifacts varied in type and length from essays to exam responses to lab reports and were evaluated by a group of 12 faculty and graduate teaching assistant scorers virtually using the AAC&U’s VALUE rubric for Critical Thinking. All artifacts were evaluated by two scorers, allowing for interrater reliability.

Scorers used the AAC&U VALUE rubric developed specifically for Critical Thinking. The rubric includes categories in which scorers gave students a score of 4, 3, 2, or 1 depending on the amount of evidence presented within the artifact for each performance dimension (see below). Scorers could also assign a score of 0 if the artifact demonstrated no evidence of performance.

The following performance dimensions were developed by AAC&U to measure Critical Thinking:

- Explanation of Issues
- Evidence (selecting and using information to investigate a point of view or conclusion)
- Influence of context and assumptions
- Student’s position (perspective; thesis/hypothesis)
- Conclusions and related outcomes
Table 1. Summary of Data Analyzed for this Report

<table>
<thead>
<tr>
<th>89</th>
<th>Artifacts Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>89</td>
<td>Artifacts Scored</td>
</tr>
<tr>
<td>89</td>
<td>Artifacts double-scored by 2 reviewers</td>
</tr>
<tr>
<td>7</td>
<td>Assignments</td>
</tr>
<tr>
<td>Courses</td>
<td>ADPR 3110, ADPR 3515, ADPR 5990, ITAL 4040, COMM 3700, CBIO 3400</td>
</tr>
<tr>
<td>Sample</td>
<td>Purposive</td>
</tr>
</tbody>
</table>

Understanding the Data (from AAC&U VALUE)

- The data are descriptive in nature.
- The data are categorical – meaning that scores put work into categories that are labeled both numerically (4, 3, 2, 1) and linguistically (Capstone, Milestone, and Benchmark).
- The categories are purposefully arranged in a developmental order; in other words, there is an intentional progression from Benchmark (1) to Milestone (2), Milestone (3), and Capstone (4).
- However, while the data generated using a VALUE rubric are ordinal (i.e., there is a logical, progressive order to the categories presented on the rubric), the data are not reflective of a true scale with equal intervals between each score.

Results

This section provides a snapshot of overall student scores. Table 1 offers a rubric summary. Figure 1 shows the proportion of students who scored at each level from Capstone (4) to Milestones (3, 2) to Benchmark (1). Figure 2 shows the percentage of artifacts which demonstrated evidence of Critical Thinking within each performance dimension. Figure 3 shows the tabular results upon which the display in Figure 1 is based.

Table 1. Rubric Summary

<table>
<thead>
<tr>
<th>Rubric: Critical Thinking VALUE</th>
<th>Weight</th>
<th># Students</th>
<th>Min Score</th>
<th>Max Score</th>
<th>Avg Score</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explanation of issues</td>
<td>1.00</td>
<td>178</td>
<td>0.00</td>
<td>4.00</td>
<td>2.63</td>
<td>1.03</td>
</tr>
<tr>
<td>Evidence</td>
<td>1.00</td>
<td>178</td>
<td>0.00</td>
<td>4.00</td>
<td>2.42</td>
<td>1.07</td>
</tr>
<tr>
<td>Selecting and using information to investigate a point of view or conclusion</td>
<td>1.00</td>
<td>178</td>
<td>0.00</td>
<td>4.00</td>
<td>2.29</td>
<td>1.09</td>
</tr>
<tr>
<td>Influence of context and assumptions</td>
<td>1.00</td>
<td>178</td>
<td>0.00</td>
<td>4.00</td>
<td>2.28</td>
<td>1.13</td>
</tr>
<tr>
<td>Student's position (perspective, thesis/hypothesis)</td>
<td>1.00</td>
<td>178</td>
<td>0.00</td>
<td>4.00</td>
<td>2.22</td>
<td>1.14</td>
</tr>
<tr>
<td>Conclusions and related outcomes (implications and consequences)</td>
<td>1.00</td>
<td>178</td>
<td>0.00</td>
<td>4.00</td>
<td>2.22</td>
<td>1.14</td>
</tr>
</tbody>
</table>
Figure 1. Overall Score Results

<table>
<thead>
<tr>
<th>CRITICAL THINKING</th>
<th>4 (Capstone)</th>
<th>3 (Milestone)</th>
<th>2 (Milestone)</th>
<th>1 (Benchmark)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPLANATION OF ISSUES</td>
<td>28%</td>
<td>37%</td>
<td>29%</td>
<td>6%</td>
</tr>
<tr>
<td>EVIDENCE</td>
<td>21%</td>
<td>31%</td>
<td>38%</td>
<td>9%</td>
</tr>
<tr>
<td>INFLUENCE OF CONTEXT &amp; ASSUMPTIONS</td>
<td>17%</td>
<td>36%</td>
<td>32%</td>
<td>15%</td>
</tr>
<tr>
<td>STUDENT'S POSITION</td>
<td>11%</td>
<td>45%</td>
<td>29%</td>
<td>15%</td>
</tr>
<tr>
<td>CONCLUSIONS &amp; RELATED OUTCOMES</td>
<td>13%</td>
<td>35%</td>
<td>37%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Note: In cases where faculty gave different scores and the average resulted in a “half score” (e.g., 2.5), scores were rounded up (e.g., 2.5 is counted as a score of 3). This is congruent with VALUE’s asset-based philosophy and should be interpreted as students’ likelihood of demonstrating the highest performance thresholds based on faculty scoring expertise.

Figure 2. Evidence of Each Dimension

![Critical Thinking Graph](image-url)
Figure 3. Tabular Results

<table>
<thead>
<tr>
<th></th>
<th>Capstone</th>
<th>Milestones</th>
<th>Benchmark</th>
<th>Total with Evidence</th>
<th>Total without Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>(4, 3, 2, 1)</td>
</tr>
<tr>
<td>count</td>
<td>count</td>
<td>count</td>
<td>count</td>
<td>count</td>
<td>count</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Explanation of Issues</td>
<td>25</td>
<td>33</td>
<td>26</td>
<td>5</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>28%</td>
<td>37%</td>
<td>29%</td>
<td>6%</td>
<td>100%</td>
</tr>
<tr>
<td>Evidence</td>
<td>19</td>
<td>28</td>
<td>34</td>
<td>8</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>21%</td>
<td>31%</td>
<td>38%</td>
<td>9%</td>
<td>100%</td>
</tr>
<tr>
<td>Influence of Context and Assumptions</td>
<td>15</td>
<td>32</td>
<td>29</td>
<td>13</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>17%</td>
<td>36%</td>
<td>32%</td>
<td>15%</td>
<td>100%</td>
</tr>
<tr>
<td>Student’s Position</td>
<td>10</td>
<td>40</td>
<td>26</td>
<td>13</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>11%</td>
<td>45%</td>
<td>29%</td>
<td>15%</td>
<td>100%</td>
</tr>
<tr>
<td>Conclusions and Related Outcomes</td>
<td>12</td>
<td>31</td>
<td>33</td>
<td>13</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>13%</td>
<td>35%</td>
<td>37%</td>
<td>15%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Analysis & Considerations

Broadly, these data tell us how a group of students, mostly in 3000- and 4000-level courses, performed within the Critical Thinking competency in one semester. As illustrated in Figure 1, most students scored at a milestone level 3, with milestone level 2 being the next closest score. Encouragingly, the percentage of students scoring at a capstone level 4 increased from the first round of assessment which drew artifacts from entry-level courses. This suggests that student in upper division courses demonstrate stronger critical thinking skills, as evidenced by higher overall score results.