**Cardinal Core Assessment of Social & Behavioral Sciences and Historical Perspectives (Academic Year 2023-24)**

**Cardinal Core Program (Effective Summer 2018)**

The Cardinal Core program at the University of Louisville prepares students to do the advanced work needed for their baccalaureate degrees and prepares them to contribute to society throughout their lives through their professional work and civic engagement. The program emphasizes the development of key intellectual skills relevant to any career path: critical thinking, quantitative reasoning, effective communication, and the understanding of historical, social, and cultural diversity. Students will develop these intellectual skills in the following content areas of Arts and Humanities, Historical Perspectives, Oral Communication, Quantitative Reasoning, Social and Behavioral Sciences, Natural Sciences, Written Communication, and the competency area of Diversity in the United States and Globally. Upon completion of the program, students will be prepared to analyze complex problems and evaluate possible courses of action in an environment characterized by diversity and the need for sustainable solutions.

**Assessment Administration**

The assessment of student learning outcomes is a national expectation in higher education. Section 8.2.b of the Southern Association of Colleges and Schools Commission on Colleges' (SACSCOC) accreditation standards requires that the institution identify student learning outcomes for collegiate-level general education competencies in its undergraduate degree programs, assess the extent to which it achieves these outcomes, and provide evidence of seeking improvement based on analysis of the results. Further, the Kentucky Council on Postsecondary Education (CPE) states that "All Kentucky public universities and KCTCS colleges are expected to assess, in accordance with SACSCOC Principles of Accreditation and based upon nationally accepted standards, the student learning outcomes associated with their general education programs, indicate a relationship to the faculty-generated Statewide General Education Student Learning Outcomes, and provide evidence of ongoing assessment that ensures comparability for transfer purposes on a three-year cycle."

The Cardinal Core Curriculum Committee (CCCC) is charged with continued oversight of the assessment of student learning outcomes across the Cardinal Core curriculum to support the continuous improvement of the Cardinal Core program in alignment with SACSCOC and CPE requirements. The assessment operates on a three-year cycle, in which samples of student work are collected from at least two content areas each academic year and assessed by a panel of trained faculty. In 2023-24, the program's overarching competencies of critical thinking, effective communication (written), and understanding of historical, social, and cultural diversity were assessed in the Social & Behavioral Sciences (SB) and Historical Perspective (SBH) content areas. The CCCC has designated the American Association of Colleges & Universities (AAC&U) Critical Thinking VALUE Rubric, the AAC&U Written Communication VALUE

Rubric, and the University of Louisville's Cardinal Core Diversity Rubric as the instruments to measure these competency areas.

The University of Louisville Outcomes, Kentucky Statewide Outcomes, and the rubric measures used to assess courses in the Social & Behavioral Sciences and Historical Perspective content areas are provided below.

**University of Louisville Social & Behavioral Sciences Learning Outcomes**

Social & Behavioral Sciences are concerned with understanding human behavior, human interactions, human environment, and the related social structures and forms. Students who satisfy this requirement will demonstrate that they are able to do all of the following:

1. Apply knowledge and theories and analyze evidence via qualitative and/or quantitative research methods that are utilized in the field.
2. Identify how different fields of inquiry conceptualize diversity and the dynamics of social inequalities.
3. Represent and critically respond to multiple points of view on cultural issues as expressed in different historical, social, and cultural contexts.
4. Use critical thinking and reasoning skills such as making inferences, evaluating assumptions, and assessing limitations of knowledge claims.
5. Communicate effectively in speech and writing, while respecting others' contributions, through proper citation appropriate to the discipline.

**University of Louisville Historical Perspective Learning Outcomes**

Historical Perspective is concerned with understanding change over time. Courses addressing this requirement cover a broad body of historical knowledge and compare different societies and cultures. Students who satisfy this requirement will demonstrate that they are able to do all of the following:

1. Demonstrate the ability to use primary sources to answer a question about historical causality or change over time.
2. Demonstrate the ability to understand and contrast alternative historical interpretations of events.
3. Demonstrate the ability to understand the importance of changing context and to understand events in different cultural contexts.
4. Communicate effectively in writing and use citation appropriate to the discipline.

**Statewide Social & Behavioral Sciences Student Learning Outcomes**

1. Demonstrate knowledge of at least one area of the social and behavioral sciences.
2. Apply knowledge, theories, and research methods, including ethical conduct, to analyze problems pertinent to at least one area of the social and behavioral sciences.
3. Understand and demonstrate how at least one area of the social and behavioral sciences conceptualizes diversity and the ways it shapes human experience.

4. Integrate knowledge of at least one area of the social and behavioral sciences into issues of personal or public importance.
5. Communicate effectively using the language and terminology germane to at least one area of the social and behavioral sciences.

**Rubric Measures**

*AAC&U Critical Thinking VALUE Rubric*

(CT1) Explanation of issues
(CT2) Evidence – Selecting and using information to investigate a point of view or conclusion
(CT3) Influence of context and assumptions
(CT4) Student's position (perspective, thesis/hypothesis)
(CT5) Conclusions and related outcomes (implications and consequences)

*AAC&U Written Communication VALUE Rubric*

(WC1) Context of and Purpose for Writing
(WC2) Content Development
(WC3) Genre and Disciplinary Conventions
(WC4) Sources and Evidence
(WC5) Control of Syntax and Mechanics

*University of Louisville, Cardinal Core Diversity Rubric*

(D1) Knowledge of social, historical, and cultural structures
(D2) Applied Knowledge
(D3) Cultural Awareness
(D4) Attitudes/Openness

The AAC&U VALUE Rubrics and the UofL Cardinal Core Diversity rubric use a four-point scale, with *4* indicating performance of the measure as "capstone" level, *3* indicating performance at "milestone," *2* indicating "milestone," and *1* indicating performance at "benchmark." In addition, a score of zero can be assigned to any work that does not meet the benchmark level performance and "not applicable" could be assigned for assignments that did not provide an opportunity for the student to demonstrate the criterion within the rubric measure.

**Assessment Process**

For the 2023-24 assessment of student work from the Social & Behavioral Sciences (SB) and Historical Perspective (SBH) content areas, the Cardinal Core Office collaborated with department chairs regarding the details of the upcoming assessment to ensure faculty participation and appropriate sampling. A formal memo outlining the project and process was also provided to all faculty teaching Cardinal Core courses within the SB and SBH content areas prior to the start of the semester to ensure a mutual understanding of project expectations. The

initial communication provided a timeline for collection of assignment prompts and student work. Multiple follow-up communications were sent throughout the fall semester.

After the semester withdrawal deadline passed, the Cardinal Core Office retrieved the class rosters for all SB and SBH Cardinal Core courses from the Office of the Registrar and selected a stratified random sample, to ensure that the sample included students from all courses, with only one course from each instructor if they were teaching multiple sections of the same course. Instructors of all SB and SBH courses were sent a list of students selected for the assessment along with detailed instructions requesting that instructors provide a copy of one assignment along with the ungraded responses for the selected students to be sent via email to the Cardinal Core Office service account.

Student artifacts were collected and stored in an electronic repository and uploaded into the LiveText© assessment management system. A panel of faculty (tenured and tenure-track faculty, term faculty, and adjunct faculty) assessed student artifacts. All reviewers had previously participated in at least one assessment. The AAC&U Critical Thinking VALUE Rubric, AAC&U Written Communication VALUE Rubric, and the University of Louisville Cardinal Core Diversity Rubric were applied to all student artifacts.

Prior to the assessment reading, assessors completed mandatory training/rubric norming. Training materials were developed in collaboration with the CCCC Assessment Subcommittee and based upon UofL's long-standing general education assessment training practices, as well as AAC&U VALUE Institute training procedures. All participants were required to complete an asynchronous training module, consisting of an overview of the assessment process and holistic assessment practices, a dissection of each rubric, and scoring of benchmark sample assignments. Benchmarks were assignments selected to represent a wide range of content and skill development in order to give the assessors a baseline for measuring expectations of learning and evaluating student performance (Herman, Osmundson, & Dietel, 2010). Assessors were given a week to complete the training module in Blackboard and submit their scores for all benchmark samples. The results of the benchmark scoring were compiled, presented, and discussed during a collaborative meeting. Competency areas (rubric rows) with disagreement among reviewers were discussed in the findings shared with reviewers to clarify intended applications of the rubrics. The results from scoring benchmark samples are provided in Appendix A.

After completion of the assessment training/rubric norming, each assessor was assigned a username and password for one of three LiveText© accounts and a list of courses and sections to assess. Three readers assessed each artifact so that scores could be compared across assessors for reliability purposes. Assessors were given a week to complete all assessments.

**Data Collection Overview**

The enrollment for Social & Behavioral Sciences (SB) and Historical Perspective (SBH) Cardinal Core courses in Fall 2023 was approximately 4939 (4403 SB and 1536 SBH) students at the time the sample for the assessment was selected. The Cardinal Core Office waited to identify a sample after the deadline to withdraw from courses passed and received 482 student work samples. Samples were included from the College of Arts and Sciences, College of Education and Human Development, College of Business, School of Public Health and

Information Sciences, School of Music, School of Nursing, and the Kent School of Social Work. Of the 482 work samples, 367 came from SB courses with 69 of those 367 also fulfilling a U.S. Diversity (D1) requirement and 77 also fulfilling a Global Diversity (D2) requirement. Of the 482 samples received, 115 were from SBH courses, with 40 courses also fulfilling a U.S. Diversity (D1) requirement and 71 fulfilling a Global Diversity (D2) requirement.

**Summary of Assessment Data**

For the assessment of Social & Behavioral Sciences and Historical Perspective outcomes, 482 student artifacts were assessed by faculty from the College of Arts & Sciences, College of Business, Kent School of Social Work, and the School of Dentistry, using the AAC&U Critical Thinking VALUE Rubric, Written Communication VALUE Rubric, and the University of Louisville Cardinal Core Diversity Rubric.

Table 1 and Table 2 provide the percentage of work samples scored at each rubric level for both Critical Thinking and Written Communication. A calculation of the percentage of students who scored at a *3* or *4 (after any not applicable ratings were removed)* is also included from both 2019-20 and 2023-24 assessments to provide a comparison of student performance.

Table 1

*Percentage of Artifacts Scored at Each Rubric Level for Critical Thinking*

|  | CT1 | CT2 | CT3 | CT4 | CT5 |
|---|---|---|---|---|---|
| Capstone (4) | 7.2% | 7.2% | 9.0% | 9.1% | 10.6% |
| Milestone (3) | 35.6% | 35.6% | 31.6% | 32.6% | 29.3% |
| Milestone (2) | 34.8% | 34.8% | 37.6% | 35.5% | 40.4% |
| Benchmark (1) | 11.3% | 11.3% | 13.9% | 18.1% | 10.5% |
| (0) | 3.0% | 3.0% | 3.4% | 1.2% | 2.8% |
| Not Applicable (NA) | 8.1% | 8.1% | 4.6% | 3.4% | 6.4% |
| **\*%Scored at 4 & 3 (2023-24)** | **46.6%** | **46.6%** | **42.5%** | **43.2%** | **42.6%** |
| **\*%Scored at 4 & 3 (2019-20)** | **48.1%** | **34.9%** | **26.8%** | **30.5%** | **30.5%** |

*Not Applicable scores were removed for calculating the % of students scoring at 4 or 3.
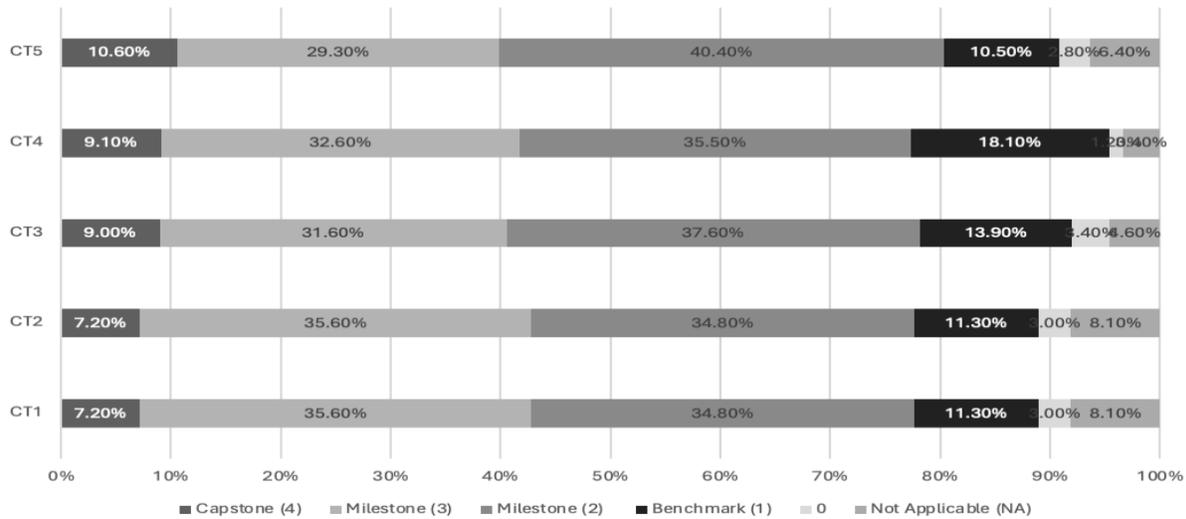
*Figure 1. Percentage of Artifacts Scored at Each Rubric Level for Critical Thinking*

Table 2

*Percentage of Artifacts Scored at Each Rubric Level for Written Communication*

|  | WC1 | WC2 | WC3 | WC4 | WC5 |
|---|---|---|---|---|---|
| Capstone (4) | 15.9% | 11.5% | 9.2% | 10.4% | 10.9% |
| Milestone (3) | 41.1% | 34.5% | 34.0% | 31.1% | 52.0% |
| Milestone (2) | 30.6% | 35.5% | 40.0% | 30.3% | 28.1% |
| Benchmark (1) | 10.4% | 14.6% | 13.6% | 13.0% | 7.3% |
| (0) | 0.6% | 1.4% | 1.0% | 4.0% | 0.3% |
| Not Applicable (NA) | 1.4% | 2.5% | 2.1% | 11.2% | 1.4% |
| **\*%Scored at 4 & 3 (2023-24)** | **57.8%** | **47.2%** | **44.1%** | **46.7%** | **63.7%** |
| **\*%Scored at 4 & 3 (2019-20)** | **45.6%** | **35.5%** | **37.7%** | **35.6%** | **50.5%** |

*Not Applicable scores were removed for calculating the % of students scoring at 4 or 3.
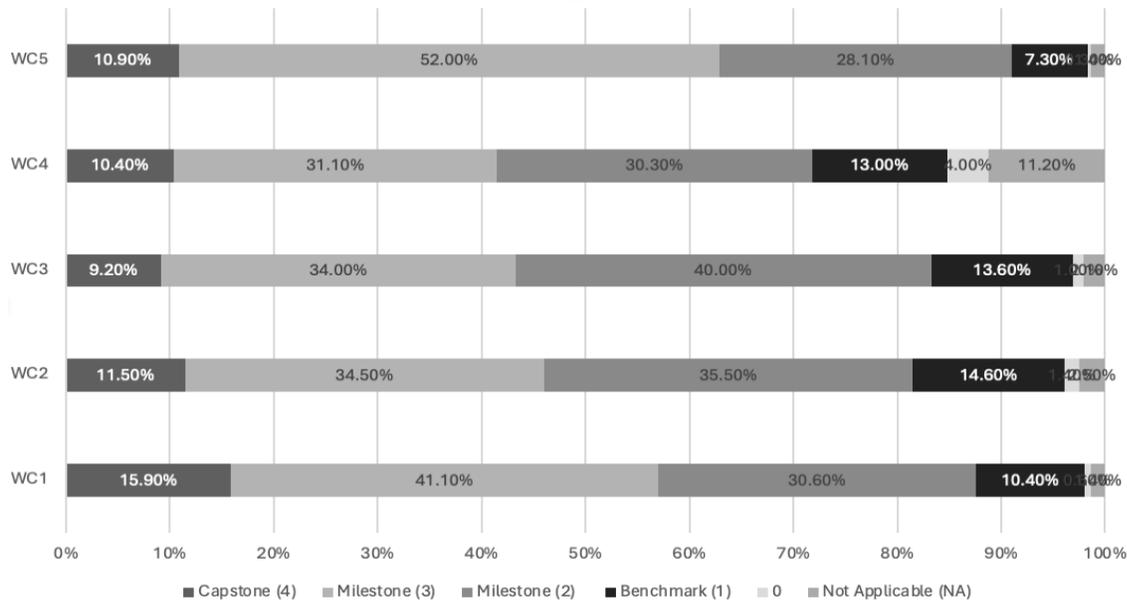
*Figure 2. Percentage of Artifacts Scored at Each Rubric Level for Written Communication*

Since the Assessment of Social & Behavioral Sciences and Historical Perspective, included courses that also fulfilled U.S. Diversity (D1) and Global Diversity (D2) requirements, the findings for the University of Louisville Cardinal Core Diversity Rubric are provided based on the Cardinal Core classification (SB & SBH, SBD1 & SBHD1, and SBD2 & SBHD2). The percentage of artifacts scored at a 4 or 3 for the Cardinal Core Diversity Rubric, by course classification is provided in Table 3 and Figure 3.

Table 3

*Percentage of Artifacts Scored at a 4 or 3 for University of Louisville Cardinal Core Diversity Rubric*

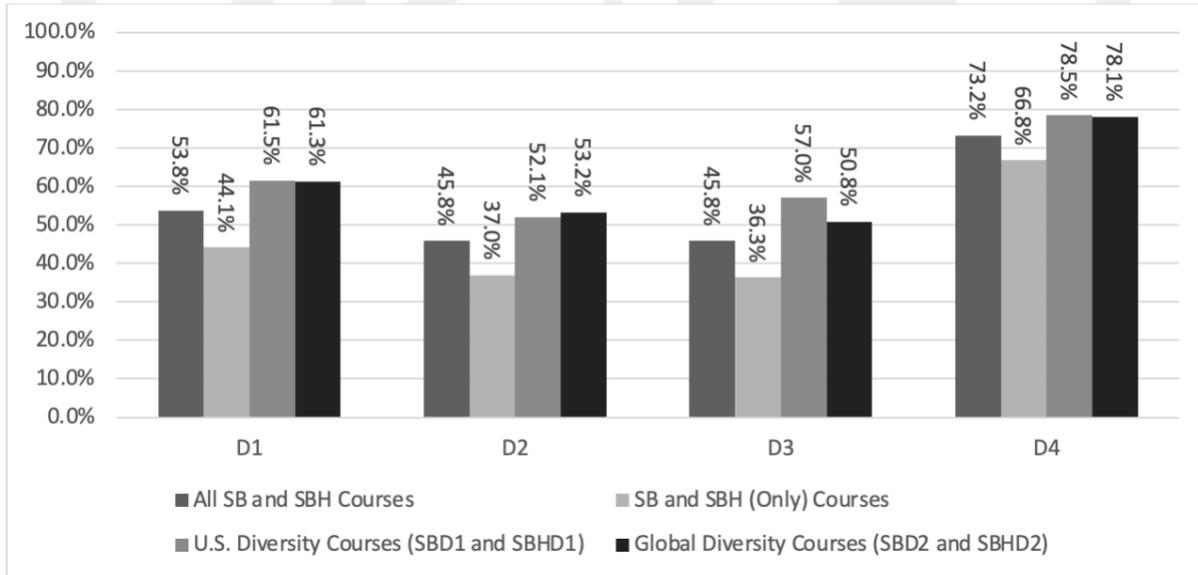| | All SB and SBH Cardinal Core Courses (SB, SBD1, SBD2, SBH, SBHD1, SBHD2) | SB and SBH Courses without a Diversity Designation (SB and SBH) | Courses with U.S. Diversity (D1) Designation (SBD1 and SBHD1) | Courses with Global Diversity (D2) Designation (SBD2 and SBHD2) |
|---|---|---|---|---|
| D1 | 53.8% | 44.1% | 61.5% | 61.3% |
| D2 | 45.8% | 37.0% | 52.1% | 53.2% |
| D3 | 45.8% | 36.3% | 57.0% | 50.8% |
| D4 | 73.2% | 66.8% | 78.5% | 78.1% |

*Figure 3. Percentage of Artifacts Scored at 3 or 4 by Cardinal Core Classification for each Measure of the University of Louisville Cardinal Core Diversity Rubric*

In alignment with AAC&U VALUE Institute practices, scores for each individual work sample were calculated based upon scores assigned by three separate reviewers. The scores from all three reviewers were averaged and rounded to determine individual work sample scores for each rubric row. The mode for the individual work sample scores is provided in Table 4.

Table 4

*Mode for Critical Thinking VALUE Rubric, Written Communication VALUE Rubric, and Cardinal Core Diversity Rubric*

|      | CT1 | CT2 | CT3 | CT4 | CT5 |
|------|-----|-----|-----|-----|-----|
| Mode | 3   | 2   | 2   | 2   | 3   |
|      | WC1 | WC2 | WC3 | WC4 | WC5 |
| Mode | 3   | 2   | 2   | 3   | 3   |
|      | D1  | D2  | D3  | D4  |     |
| Mode | 3   | 2   | 2   | 3   |     |

A breakdown of overall scores by Diversity designation is provided in Table 5. The overall scores for each individual student were averaged to determine the mean for each group by measure.

Table 5

*Mean for University of Louisville Cardinal Core Diversity Rubric by Cardinal Core Designation*

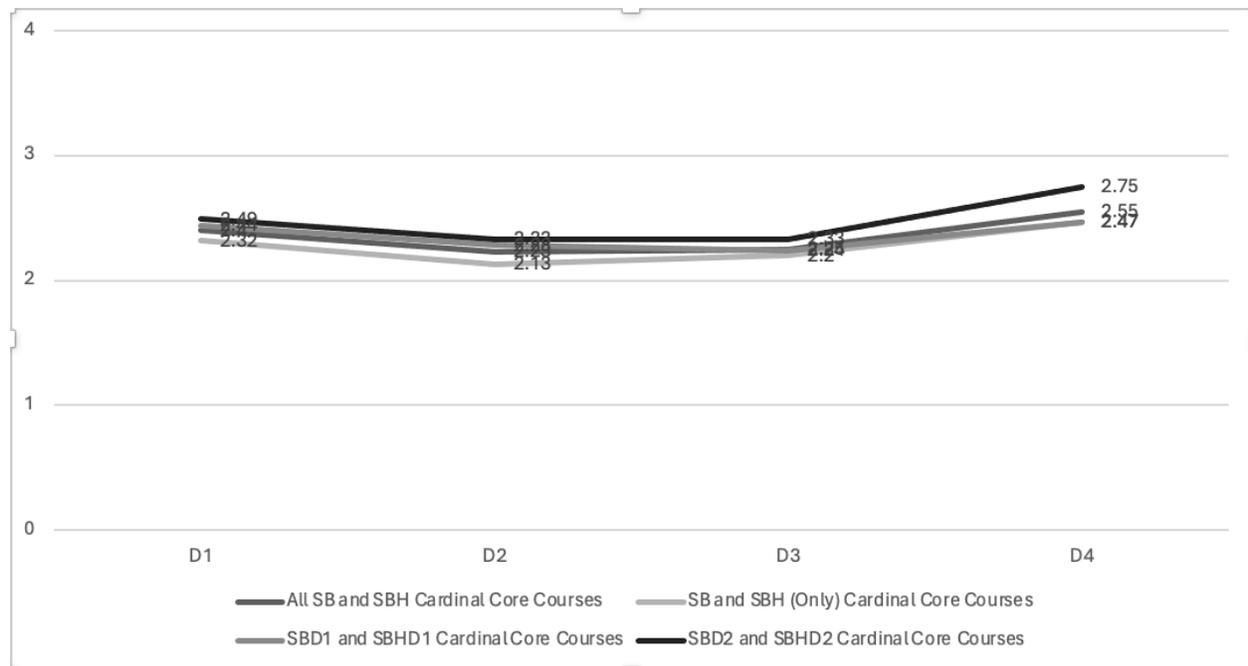|  | All SB and SBH Cardinal Core Courses | SB and SBH (Only) Cardinal Core Courses | SBD1 and SBHD1 Cardinal Core Courses | SBD2 and SBHD2 Cardinal Core Courses |
|---|---|---|---|---|
| D1 | 2.40 | 2.32 | 2.44 | 2.49 |
| D2 | 2.23 | 2.13 | 2.28 | 2.33 |
| D3 | 2.25 | 2.20 | 2.24 | 2.33 |
| D4 | 2.55 | 2.47 | 2.47 | 2.75 |



*Figure 4. Mean Scores by Cardinal Core Classification for University of Louisville Cardinal Core Diversity Rubric Measures*

A multivariate test (MANOVA) revealed that there was a statistically significant difference in performance on diversity measures based on Cardinal Core course designation, [$F(8,952)= 2.20$, $p <.05$; Wilk's $\Lambda = .964$]. To determine how the results for Diversity measures differ by group, the tests of between-subjects revealed statistically significant difference for D4 (attitudes/openness), [$F(2,479) = 5.16$, $p<.05$].

Post hoc comparisons using Tukey HSD test indicated that the mean score for courses with a Global Diversity (SBD2 and SBHD2) designation were significantly different from courses without a diversity (SB and SBH) designation ($p<.05$) and courses with a U.S. Diversity (SBD1 and SBHD1) designation ($p<.05$) for attitudes/openness (D4). These results indicate that samples

from courses with a Global Diversity (SBD2 and SBHD2) designation scored significantly higher than students enrolled in courses without a diversity designation (SB and SBH) or with a U.S. Diversity (SBD1 and SBHD1) designation on demonstrating attitudes/openness.

Distance Education Courses

For further understanding of student performance we sought to determine if there were any significant differences between student performance from face-to-face versus distance education courses, using the average of student overall scores for each rubric measure.

A multivariate test (MANOVA) revealed that there was a statistically significant difference in performance on rubric measures based on distance education versus face-to-face courses, [$F(14,466)= 2.78$, $p <.05$; Wilk's $\Lambda = .923$]. To determine how the results for these measures differ by group the tests of between subjects revealed statistically significant differences for critical thinking measures CT1 and CT3, as well as diversity measures D1 and D4 ($p<.05$). In the case of critical thinking measures, the distance education courses had a higher average rating and for diversity, face-to-face had a higher average rating.

Table 6

*Mean for University of Louisville Cardinal Core Rubrics by Course Delivery Mode*

|  | Face-to-Face Courses | Distance Education Courses |
|---|---|---|
| CT1* | 2.59 | 2.74 |
| CT2 | 2.17 | 2.18 |
| CT3* | 2.13 | 2.30 |
| CT4 | 2.23 | 2.27 |
| CT5 | 2.19 | 2.22 |
| WC1 | 2.60 | 2.51 |
| WC2 | 2.36 | 2.34 |
| WC3 | 2.36 | 2.28 |
| WC4 | 2.07 | 2.08 |
| WC5 | 2.68 | 2.60 |
| D1* | 2.49 | 2.25 |
| D2 | 2.28 | 2.15 |
| D3 | 2.29 | 2.19 |
| D4* | 2.64 | 2.42 |

## Inter-rater Reliability

Three separate readers assessed each student artifact. Table 7 displays the mean score for the three separate readings of all artifacts.

Table 7

*Inter-rater Summary for Critical Thinking VALUE Rubric, Written Communication VALUE Rubric, and the University of Louisville Cardinal Core Diversity Rubric*

| | Assessor 1 | Assessor 2 | Assessor 3 | Standard Deviation |
|---|---|---|---|---|
| CT1 | 2.72 | 2.57 | 2.63 | 0.08 |
| CT2 | 2.20 | 2.20 | 2.10 | 0.06 |
| CT3 | 2.23 | 2.21 | 2.16 | 0.04 |
| CT4 | 2.30 | 2.16 | 2.24 | 0.07 |
| CT5 | 2.27 | 2.16 | 2.22 | 0.06 |
| WC1 | 2.57 | 2.53 | 2.65 | 0.06 |
| WC2 | 2.31 | 2.37 | 2.38 | 0.04 |
| WC3 | 2.31 | 2.25 | 2.41 | 0.08 |
| WC4 | 2.12 | 2.07 | 2.06 | 0.03 |
| WC5 | 2.69 | 2.52 | 2.68 | 0.10 |
| D1 | 2.46 | 2.43 | 2.29 | 0.09 |
| D2 | 2.36 | 2.28 | 2.11 | 0.13 |
| D3 | 2.34 | 2.22 | 2.25 | 0.06 |
| D4 | 2.70 | 2.49 | 2.45 | 0.13 |

In addition to the descriptive statistics, Table 8 provides multiple measures of inter-rater reliability. The percentage agreement value was calculated to determine the percentage of artifacts for which all three assessors scored at either the same or within one performance level. Values for *Total Agreement* provided in Table 8 represent the percentage of artifacts for which all three assessors selected the same score (e.g., Assessors 1, 2, and 3 all selected *3*). *Agreement (within 1 level)* represents the percentage of artifacts for which all three assessors scored the artifact at the same performance level or within one level (e.g., Assessor 1 selected a score of *3*, Assessor 2 selected a score of *2*, and Assessor 3 also selected a score of *2*). If the assessor assigned "not requested" for the artifact that was treated as a 0 for the inter-rater reliability analysis since a *0* and "not requested" would both indicate the reviewer did not see the student demonstrate any component of the rubric measure.

In addition to percentage agreement, a one-way, average-measures intra-class correlation coefficient (ICC) was calculated to assess inter-rater reliability. ICC coefficients between .75 and 1.00 are considered excellent, .60 to .74 considered good, .40 to .59 fair, and below .4 is considered poor (Cicchetti, 1994).

Table 8

*Inter-rater Reliability for Critical Thinking VALUE Rubric, Written Communication VALUE Rubric, and the University of Louisville Cardinal Core Diversity Rubric*

| Competency Measure | Total Agreement | Agreement (within 1 level) | ICC | 95% Confidence Interval |
|---|---|---|---|---|
| CT1 | 15.8% | 72.3% | 0.63 | (.56-.68) |
| CT2 | 16.2% | 61.0% | 0.58 | (.51-.64) |
| CT3 | 13.5% | 61.6% | 0.61 | (.55-.67) |
| CT4 | 13.9% | 63.5% | 0.55 | (.47-.61) |
| CT5 | 11.8% | 54.6% | 0.42 | (.32-.50) |
| WC1 | 18.9% | 68.7% | 0.58 | (.51-.64) |
| WC2 | 13.9% | 64.7% | 0.57 | (.50-.63) |
| WC3 | 17.8% | 70.3% | 0.57 | (.50-.63) |
| WC4 | 10.8% | 50.0% | 0.54 | (.46-.61) |
| WC5 | 23.4% | 77.2% | 0.51 | (.43-.58) |
| D1 | 13.3% | 62.0% | 0.61 | (.54-.66) |
| D2 | 10.4% | 53.5% | 0.57 | (.50-.63) |
| D3 | 14.7% | 62.0% | 0.58 | (.51-.64) |
| D4 | 23.9% | 63.9% | 0.58 | (.52-.64) |

**Syllabus Review**

The Provost requests that all faculty load their syllabi to Blackboard© each semester. These syllabi are then available through the university's course catalog system. For this review, the Cardinal Core Office collected all Social & Behavioral Sciences (SB) and Historical Perspective (SBH) syllabi that were loaded to Blackboard in Fall 2023.

The review of syllabi sought to answer two questions:

1) Does the syllabus contain the content specific Cardinal Core learning outcomes approved for the course?
2) Are assessment methods stated that support the content-specific Cardinal Core learning outcomes approved for the course?

The review of 135 Cardinal Core SB and SBH syllabi identified 99 syllabi (73.3%) containing the appropriate SB or SBH Cardinal Core learning outcomes approved for the course. Of the 84 courses that also fulfilled a Diversity designation, 64 (76.2%) listed the Cardinal Core U.S. Diversity (D1) or Global Diversity (D2) learning outcomes. The review of syllabi also revealed 10 syllabi (7.4%) containing SB or SBH student learning outcomes from the previous general education program and 1 syllabus (1.2%) with a Diversity designation containing the previous general education programs' cultural diversity student learning outcomes. Further review of the 109 syllabi containing the SB or SBH learning outcomes from the current or previous general education program revealed that 86 syllabi (78.9%) also listed the corresponding assessment methods. Of the 65 syllabi containing the Diversity outcomes from the current Cardinal Core

program or the previous general education program, 57 (87.7%) syllabi also included corresponding methods of assessment.

**Summary and Plan for Improvement**

For critical thinking skills, results of the SB and SBH assessment indicate students performed highest on explanation of issues (CT1) and use of evidence (CT2) and lowest on influence of context and assumptions (CT3) and conclusions and related outcomes (CT5). There was an increase in the percentage of work samples scored at the highest two performance levels from the 2019-2020 to the 2023-2024 academic year assessments on four of five rubric measures for critical thinking.

For written communication skills, there was an increase in the percentage of work samples scored at the highest two performance levels for all rubric measures from 2019-2020 to 2023-2024. Context and purpose for writing (WC1) and control of syntax and mechanics (WC5) continue to be the highest performing areas. Content development (WC2), genre and disciplinary conventions (WC3), and sources and evidence (WC4) were lower performing written communication measures.

This was the first assessment of Social & Behavioral Sciences and Historical Perspectives using the University of Louisville Cardinal Core Diversity Rubric and results indicate students are not performing as well on applied knowledge (D2) and cultural awareness (D3) as they are with knowledge of social, historical, and cultural diversity (D1) and attitudes/openness (D4). Further analysis revealed there was a significant difference in performance on attitudes and openness (D4) for samples from Global Diversity (D2) courses compared to work samples from courses without a diversity designation or with a U.S. Diversity (D1) designation. Specifically, work samples from courses without a Diversity designation and courses with a U.S. Diversity (D1) designation did not perform as high on attitudes/openness (D4) as work samples from courses with a Global Diversity (D2) designation.

While there were some significant differences in work sample scores for (CT1), (CT3), (D1), and (D4) between distance education and face-to-face courses, distance education samples were the higher performing samples for the diversity measures and the lower performing samples for critical thinking measures. These findings do not indicate that there is one mode of instruction that consistently results in better learning outcomes.

The results of this assessment are intended to help drive program improvement and support student growth. Faculty are encouraged to continue to emphasize building these competencies within their courses.
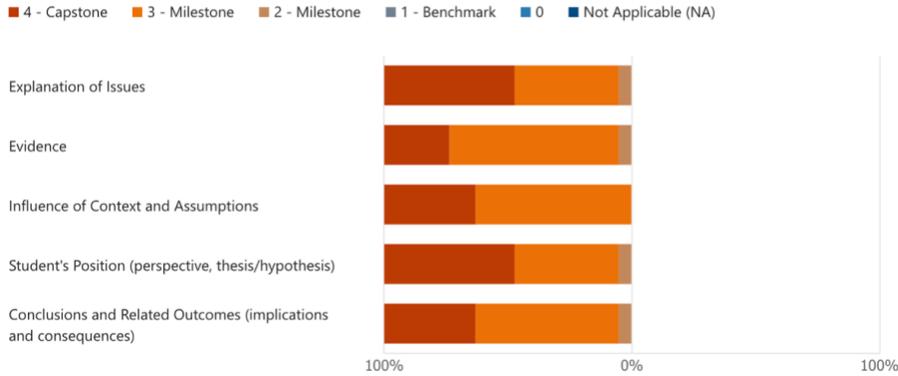
References

Association of American Colleges and Universities. (2009). *Critical Thinking VALUE Rubric.* Retrieved from https://www.aacu.org/value/rubrics/critical-thinking

Association of American Colleges and Universities. (2009). *Intercultural Knowledge and Competence VALUE Rubric.* Retrieved from https://www.aacu.org/value/rubrics/intercultural-knowledge

Association of American Colleges and Universities. (2009). *Written Communication VALUE Rubric.* Retrieved from https://www.aacu.org/value/rubrics/written-communication

Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment, 6*(4), 284-290. doi: 10.1037/1040-3590.6.4.284

Fletcher, I., Mazzi, M., & Nuebling, M. (2011). When coders are reliable: The application of three measures to assess inter-rater reliability/agreement with doctor–patient communication data coded with the VR-CoDES. *Patient Education and Counseling*, *82*(3), 341-345. doi:10.1016/j.pec.2011.01.004

Hallgren, K. A. (2012). Computing inter-rater reliability for observational data: An overview and tutorial. *Tutorials in Quantitative Methods for Psychology, 8*(1), 23-34.

Herman, J. L., Osmundson, E., & Dietel, R. (2010). *Benchmark Assessment for Improved Learning.* (AACC Report). Los Angeles, CA: University of California

**Appendix A. Results from Assessment Training for the Critical Thinking VALUE Rubric, Written Communication VALUE Rubric, and University of Louisville Cardinal Core Diversity Rubric**
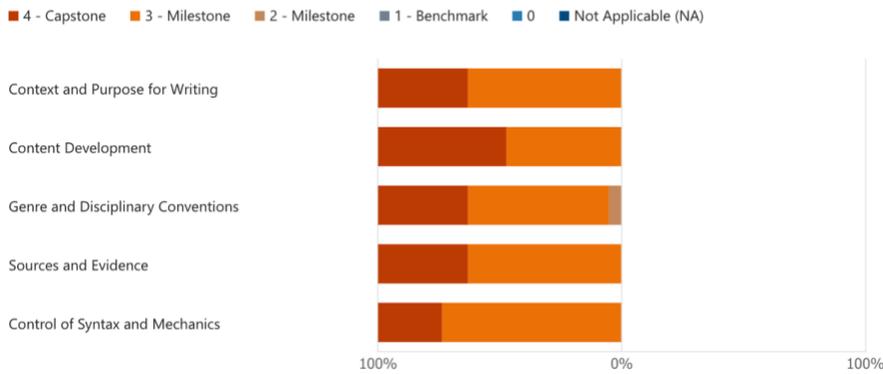
SAMPLE 1

. Critical Thinking

More Details

■ 4 - Capstone   ■ 3 - Milestone   ■ 2 - Milestone   ■ 1 - Benchmark   ■ 0   ■ Not Applicable (NA)



. Written Communication

More Details

■ 4 - Capstone   ■ 3 - Milestone   ■ 2 - Milestone   ■ 1 - Benchmark   ■ 0   ■ Not Applicable (NA)



. Diversity

More Details

■ 4 - Capstone   ■ 3 - Milestone   ■ 2 - Milestone   ■ 1 - Benchmark   ■ 0   ■ Not Applicable (NA)
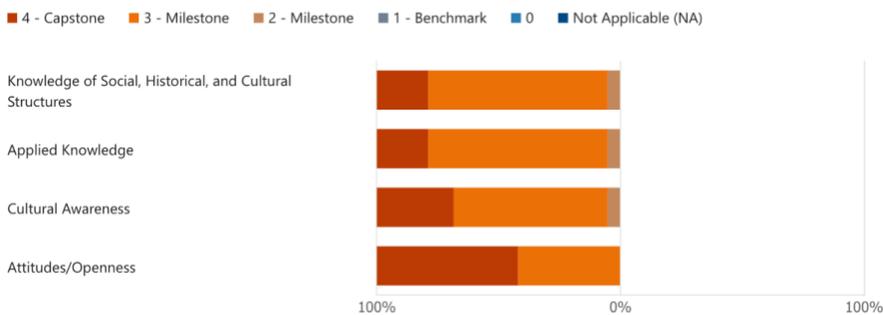
## SAMPLE 2

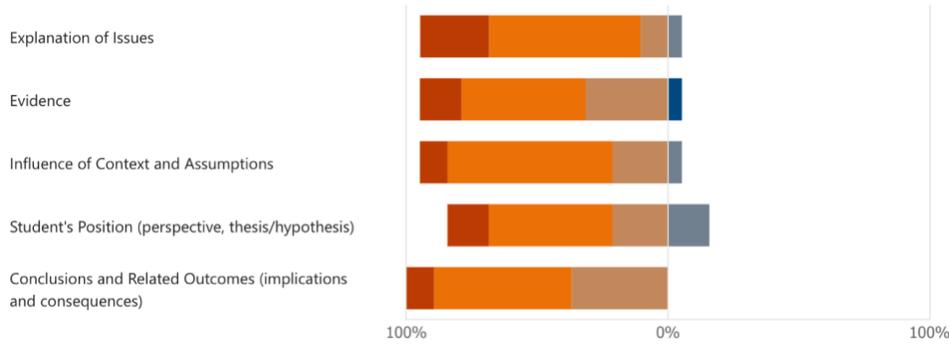. Critical Thinking

More Details

■ 4 - Capstone    ■ 3 - Milestone    ■ 2 - Milestone    ■ 1 - Benchmark    ■ 0    ■ Not Applicable (NA)



Explanation of Issues

Evidence

Influence of Context and Assumptions

Student's Position (perspective, thesis/hypothesis)

Conclusions and Related Outcomes (implications and consequences)

100%                    0%                    100%

. Written Communication

More Details

■ 4 - Capstone    ■ 3 - Milestone    ■ 2 - Milestone    ■ 1 - Benchmark    ■ 0    ■ Not Applicable (NA)



Context and Purpose for Writing

Content Development

Genre and Disciplinary Conventions

Sources and Evidence

Control of Syntax and Mechanics

100%                    0%                    100%

. Diversity

More Details

■ 4 - Capstone    ■ 3 - Milestone    ■ 2 - Milestone    ■ 1 - Benchmark    ■ 0    ■ Not Applicable (NA)



Knowledge of Social, Historical, and Cultural Structures

Applied Knowledge

Cultural Awareness

Attitudes/Openness

100%                    0%                    100%

# SAMPLE 3

## . Critical Thinking
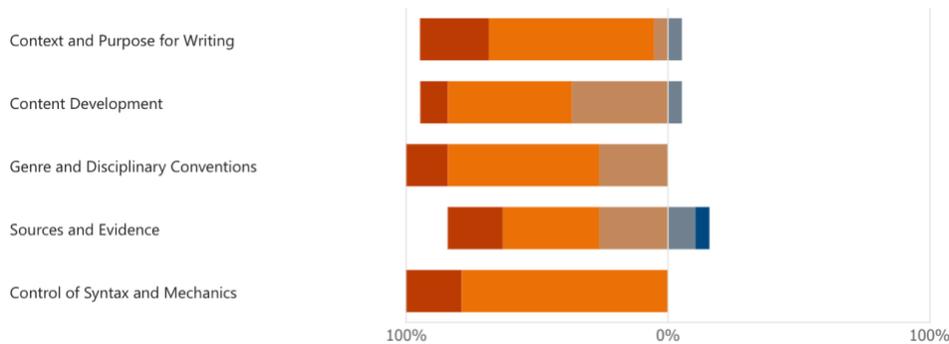
[More Details](#)

■ 4 - Capstone    ■ 3 - Milestone    ■ 2 - Milestone    ■ 1 - Benchmark    ■ 0    ■ Not Applicable (NA)



## :. Written Communication
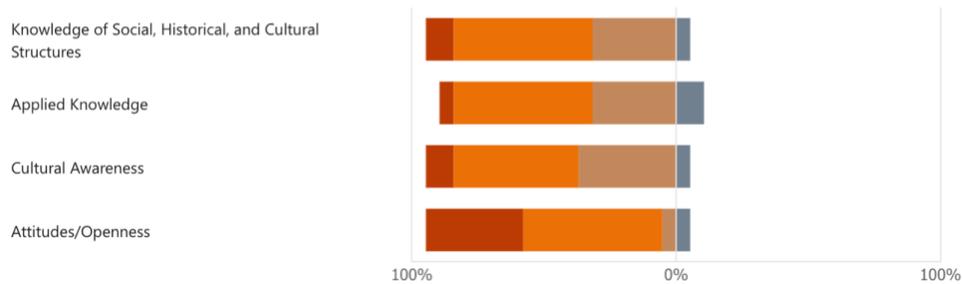
[More Details](#)

■ 4 - Capstone    ■ 3 - Milestone    ■ 2 - Milestone    ■ 1 - Benchmark    ■ 0    ■ Not Applicable (NA)
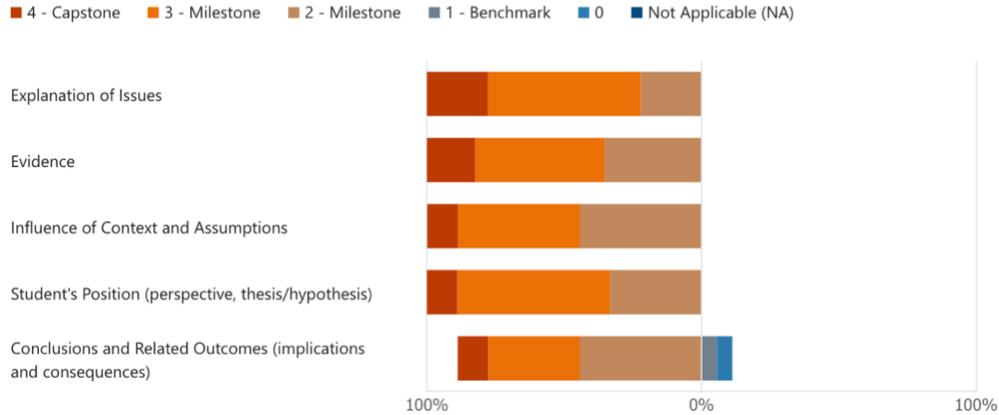


## . Diversity

[More Details](#)

■ 4 - Capstone    ■ 3 - Milestone    ■ 2 - Milestone    ■ 1 - Benchmark    ■ 0    ■ Not Applicable (NA)
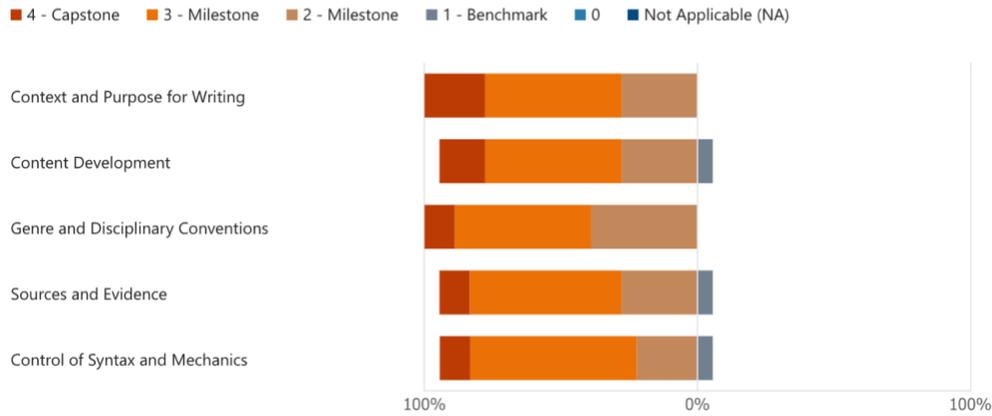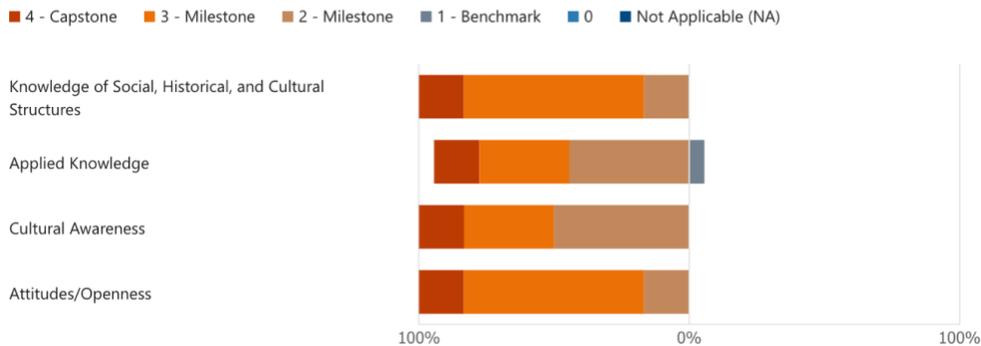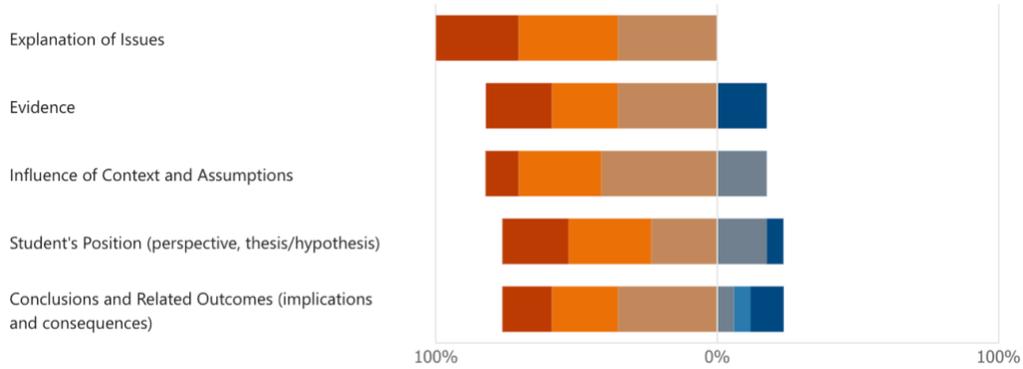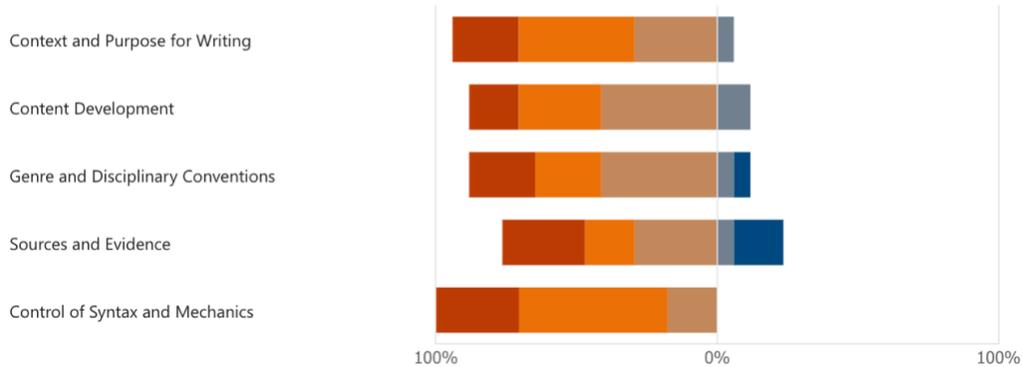
## SAMPLE 4

. Critical Thinking

More Details

■ 4 - Capstone  ■ 3 - Milestone  ■ 2 - Milestone  ■ 1 - Benchmark  ■ 0  ■ Not Applicable (NA)

Explanation of Issues

Evidence

Influence of Context and Assumptions

Student's Position (perspective, thesis/hypothesis)

Conclusions and Related Outcomes (implications and consequences)

100%                        0%                        100%

. Written Communication

More Details

■ 4 - Capstone  ■ 3 - Milestone  ■ 2 - Milestone  ■ 1 - Benchmark  ■ 0  ■ Not Applicable (NA)

Context and Purpose for Writing

Content Development

Genre and Disciplinary Conventions

Sources and Evidence

Control of Syntax and Mechanics

100%                        0%                        100%

. Diversity

More Details

■ 4 - Capstone  ■ 3 - Milestone  ■ 2 - Milestone  ■ 1 - Benchmark  ■ 0  ■ Not Applicable (NA)

Knowledge of Social, Historical, and Cultural Structures

Applied Knowledge

Cultural Awareness

Attitudes/Openness

100%                        0%                        100%

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