
VALUE INSTITUTE REPORT 2018-2019

University of Toledo: CRITICAL THINKING



*Association
of American
Colleges and
Universities*

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About VALUE and the VALUE Institute

VALUE (Valid Assessment of Learning in Undergraduate Education) is a campus-based assessment approach developed and led by the Association of American Colleges and Universities (AAC&U) as part of its Liberal Education and America's Promise (LEAP) initiative. VALUE rubrics provide needed tools to assess students' own authentic work, produced across students' diverse learning pathways, fields of study and institutions, to determine whether and how well students are meeting graduation level achievement in learning outcomes that both employers and faculty consider essential. Teams of faculty and other educational professionals from institutions across the country—two- and four-year, private and public, research and liberal arts, large and small—developed rubrics for sixteen Essential Learning Outcomes that all students need for success in work, citizenship, and life. The VALUE rubrics are being used to help institutions demonstrate, share, and assess student accomplishment of progressively more advanced and integrative learning.

The sixteen VALUE rubrics¹ are listed below (rubrics in **bold** are currently available for VALUE Institute scoring):

- **Civic Knowledge and Engagement—Local and Global,**
- Creative Thinking,
- **Critical Thinking,**
- **Ethical Reasoning and Action,**
- Foundations and Skills for Lifelong Learning,
- **Global Learning,**
- Information Literacy,
- Inquiry and Analysis,
- Integrative Learning,
- **Intercultural Knowledge and Competence,**
- Oral Communication,
- Problem Solving,
- **Quantitative Literacy,**
- Reading,
- Teamwork, and
- **Written Communication.**

¹ To download these rubrics, please visit <https://www.aacu.org/value-rubrics>.

Since their release in the fall of 2009, the rubrics have become a widely referenced and utilized form of assessment on campuses across the United States and internationally. Since 2014, within the United States alone, 427,000 individual VALUE rubrics have been downloaded from more than 5,895 organizations, including more than 2,258 colleges and universities. The VALUE rubrics have also been approved for use in meeting national standards for accountability established by the Voluntary System of Accountability (VSA) and are used in all regional and some professional self-study reports and reviews for accreditation.

The VALUE approach to assessing student learning is philosophically, pedagogically, and methodologically complex. From its inception, VALUE has been guided by a core set of fundamental assumptions:²

- In order to achieve a high-quality education for all students, valid assessment data are needed to guide planning, teaching, and improvement. This means that the work students do in their courses and the cocurriculum is the best authentic representation of their learning.
- Colleges and universities seek to foster and assess learning outcomes beyond the three or four typically addressed by currently available standardized tests.
- Learning develops over time, is nonlinear, and should become more complex and sophisticated as students move through their curricular and cocurricular educational pathways within and among institutions toward a degree.
- Good practice in assessment requires multiple assessments over time.
- Assessment of student work in such high-impact educational practices (HIPs) as ePortfolios can inform programs and institutions on their progress in achieving expected goals for external reporting and, at the same time, provide faculty with information necessary to improve courses and pedagogy.

The VALUE Institute assessment results will provide actionable information about your students to enhance the learning environment at your institution while providing external validation of local campus learning assessment information. The Institute also includes additional capacity building resources for faculty, institutions, and policy makers on how to use VALUE evidence to support student success and effective pedagogy. Results can also strengthen existing programs—including transfer programs—to help students achieve and demonstrate key learning outcomes across guided learning pathways as part of general education or the majors. To find out more about the VALUE approach to assessment broadly and/or the history of the VALUE Institute specifically, please see AAC&U's publications *On Solid Ground*³ and *We Have a Rubric for That: The VALUE Approach to Assessment*⁴.

² See Rhodes, T.L. (2010). Valid assessment of learning in undergraduate education. In *rising to the challenge: Meaningful assessment of student learning* (pp. 16-25). Washington, DC: Association of American Colleges and Universities.

³ <https://www.aacu.org/OnSolidGroundVALUE>

⁴ <https://www.aacu.org/publications-research/publications/we-have-rubric>

About this Report

This report contains your institution's scoring results for Critical Thinking. If you examined more than one outcome this year, you will receive a separate report on your other outcomes with detailed results. You will also receive several additional documents to help you interpret and share the results from this report, as well as a file containing all of your raw data.

The first section of the report provides background on the nature of the data generated by the VALUE Institute, including the rationale behind the report's analyses and data displays, as well as an explanation of how to interpret and utilize your institution's VALUE data and results. The next section of the report provides your results. This section includes an overview of your institution's administration summary: the outcomes you selected, sampling plan, goals in using the VALUE Institute, number of artifacts and assignments, as well as various characteristics of your sample. Results are presented in this section in graphical format (the tabular results upon which all the data displays are based can be found in Appendix A). Overall scoring results are presented first. We then break down the results by Faculty Intention and Assignment Overall Purpose/Assignment Difficulty. Following this, we disaggregate the data by various demographic characteristics, such as sex, Pell eligibility, race/ethnicity, and credits completed.⁵ Last, the report provides a guide to reflecting upon and making meaning of your results.

Why does the VALUE Institute present results in this manner? It is AAC&U's mission to advance the vitality and public standing of liberal education by making quality and equity the foundations for excellence in undergraduate education in service to democracy. In furtherance of this mission, AAC&U (1) champions faculty-engaged, evidence-based, sustainable models and strategies for promoting **quality** in undergraduate education and (2) advanced **equity** across higher education in service to academic excellence and social justice. At AAC&U, there is no quality without equity. That said, our research indicates that our member institutions often struggle with tracking and disaggregating data on student learning—our most recent member survey revealed that only 70% of institutions tracked the attainment of student learning outcomes, and only 17% disaggregated data by demographic characteristics such as race/ethnicity, parents' level of educational attainment, and socioeconomic status. Even campuses that have set equity goals to close gaps in achievement of student learning outcomes fail to consider the very data that defines success.⁶ By disaggregating the data generated by the VALUE Institute—wherever and whenever possible—AAC&U hopes to encourage institutions to follow suit in all of their assessment work to ensure that all students are learning.

⁵ If all assignments were at the same level of difficulty, your report will not contain this information. Furthermore, if your institution did not provide the requisite assignment-level and/or demographic data to the VALUE Institute, your report will not contain these displays.

⁶ See [Hart Research Associates \(2015\). *Bringing equity and quality learning together: Institutional priorities for tracking and advancing underserved students' success*. Washington, DC: AAC&U and Hart Research Associates](#)

Understanding the VALUE Institute Data

What Kind of Data Are Produced by VALUE Rubrics?

VALUE rubrics generate data that may be considered categorical or qualitative, depending upon your purposes. Regardless, the following are true of the data:

- The data are descriptive in nature.
- The data are categorical—meaning that scorers put work into categories that are labeled both numerically (4, 3, 2, 1, and 0) 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). This is premised on a backward design approach of starting with the end in mind and planning back to the start to achieve this end. Additionally, this helps to orient scorers toward utilizing an assets-based, versus deficit-based, approach to scoring by having them focus on the potential for every piece of student work to demonstrate the highest possible level of learning.
- However, it is very important to remember that 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.

Why Isn't the VALUE Rubric a Scale?

The simplest answer to this question is that the distance between each “point” on the VALUE rubric may not be the same. In other words, the space between Benchmark (1) and Milestone (2) and the distance between Milestone (2) and Milestone (3) is not necessarily equidistant in the same way that the space between true numerical integers is the same on a number line.

Above all, the VALUE Institute firmly believes that presentations of the data should mirror this aspect of the rubrics. The following sections provide answers to frequently asked methodological questions about the VALUE data.

The VALUE Institute Approach to Presenting Rubric Data

The unique nature of the VALUE data—data derived by more qualitative processes with output that lends itself to quantitative, statistical consideration—is both a strength and a challenge when it comes to data presentation. The VALUE Institute believes that the presentation of data generated by VALUE rubric scoring should reflect both the pedagogical and philosophical theories and constructs that support the development and use of the rubrics as well as methodological best practices. While each project partner and participating campus is free to present its data in whatever manner is most helpful to its intended audience(s), the VALUE Institute adheres to the following tenets in its display of VALUE rubric data:

- The display of data must mirror the structure of the rubrics, descending from 4 to 0 and emphasizing VALUE’s assets-based versus deficits-based approach to scoring and scorer training.
- This display also reinforces the notion that these data do not represent an interval scale, but instead reflect categories of possible performance and learning whose values are better represented as ordinal.
- Do not, to the extent possible, show means in the absence of descriptive context as that reinforces the false notion of scale. As part of scorer training on the VALUE rubrics, individuals are “forced” to select a single performance level for each dimension. They must assign a student work product to a single, albeit ordered category of performance, not assign placement on a continuum or scale. Such ordinal data may be better described by medians, frequency distributions, and bar charts. Furthermore, this also implies that some statistical procedures may be more appropriate for analyzing the data generated from VALUE rubrics (e.g., analysis of variance, etc.) than others.
- Do not average the scores assigned to each dimension on a VALUE rubric to create a total score for the rubric. The power of the VALUE rubrics rests in the ability to focus attention on the specific learning addressed within each dimension; a total score for the rubric provides little diagnostic assistance to students or faculty. Furthermore, averaging across rubric dimensions makes methodological assumptions that are inappropriate when treating the VALUE data as ordinal.

Additional Nuances of VALUE

As you interpret your VALUE Institute results, it is important to highlight specific nuances inherent in the data. The VALUE Institute does not see these nuances as limitations, but rather as important contextual facets of the data. Future work will attempt to address some of these facets, while others are simply reflective of the multiple moving parts that make VALUE a rich alternative to other modes for assessing student learning:

- First and foremost, depending on your sampling plan, your data are not necessarily generalizable to your entire institution. Extrapolating meaning and making inferences about the quality of learning at entire institution, state, or national levels is entirely inappropriate at this time.
- The sample of seventy-five to one hundred artifacts per outcome submitted by each school are sometimes too small relative to the size of the campus to allow for broad generalizations, even more so for those institutions experimenting with collecting student work at multiple credit levels.
- A “Zero” score on any piece of student work is best described as reflective of an absence of evidence of student learning for that specific criterion. That absence of evidence may be attributable to poor student performance, but it is also possible that the assignment from which the student work product was derived did not actually prompt the student to demonstrate skills or abilities in an area.
- By collecting a single work product from each student at different levels of their educational experience, there is no way to contextualize these data in terms of student growth and assign a value judgment to it either individually for the student or collectively for the institution or the project.
- When submitting student work products, faculty have the opportunity to indicate whether or not the assignment that generated the work product was designed to explicitly address each criterion of the rubric. That information is recorded in the VALUE database. Regardless of faculty intentionality, each work product is scored against all criteria on the rubric. The very design of the undergraduate curricula assumes students will leverage their learning from across the totality of their experiences, integrating prior knowledge, skills, and abilities into new, novel situations—be it a new course, participation in a high-impact practice, or the first job after graduation. Or, to put it more simply, students often exceed expectations and should be given the opportunity to do so.

Interpreting and Utilizing Your Results

Interpreting Your VALUE Institute Results

As stated previously, The VALUE approach to assessing student learning is philosophically, pedagogically, and methodologically complex. Given this complexity, much of the emphasis of VALUE work has focused on establishing its methodological soundness. This complexity must be reflected in the appropriate analysis of the data as well as in the presentation and visualization of results.

Also stated previously, the VALUE rubrics were purposefully designed to reflect an assets-based—versus deficit-focused—approach to assessing student learning (i.e., let’s focus on what students can do and build from that solid base). The rubric “descends” from the level-four Capstone to the level-one Benchmark when reading from left to right; when scorers are trained to assess student work using the VALUE rubrics, they begin at the highest levels of the rubric, working from the assumption that all students have the potential for achieving Capstone-level work. In this way, scorers immediately orient themselves to the learning that is possible.

The data displays presented comply with the key points delineated earlier. We provide both numbers and percentages⁷ of students scoring at each level of performance on each dimension of the rubric—we do not list averages across dimensions. Data tables (see Appendix A) mirror the assets-based, developmental structure of the rubrics themselves, with the highest level of performance, Capstone (4), displayed first and the lowest level of performance, Benchmark (1) displayed last. Zero (0) indicates an absence of evidence and is displayed separately in the far-right column of the tables. Data are also depicted graphically, with the proportion of students in your sample scoring at the highest level of performance depicted on top or on the left. Each bar represents the percentage of student work that was scored at that particular level of performance.

Your VALUE results are also disaggregated by assignment characteristics and demographic characteristics. All disaggregated displays look at results both within and across scores. Assignment characteristics may include both the faculty intention indicator described above (whether faculty intended the assignment to target this dimension of this particular learning outcome), as well as a measure of assignment difficulty. Faculty were asked to rate each assignment’s level of difficulty on a scale of 1-8. Scores of 1 and 2 represent a level where an outcome was “Introduced;” Scores of 3 and 4 represent a level where an outcome was “Practiced;” scores of 5 and 6 represent a level where an outcome was “Reinforced;” and scores of 7 and 8 represent a level where students should have an opportunity to demonstrate “Mastery.” To read more about faculty intention and assignment outcomes, please read *It’s the Assignments*⁸.

⁷ Please note: All percentages are rounded to the nearest whole number, which will account for any rounding errors where the percentages do not add up to 100%.

⁸ Daniel F. Sullivan & Kate Drezek McConnell (2018) It’s the Assignments—A Ubiquitous and Inexpensive Strategy to Significantly Improve Higher-Order Learning, *Change: The Magazine of Higher Learning*, 50:5, 16-23, DOI: [10.1080/00091383.2018.1510257](https://doi.org/10.1080/00091383.2018.1510257)

INTRODUCE <i>Assignment designed to introduce the outcome</i>		PRACTICE <i>Assignment designed to afford student practice with the outcome</i>		REINFORCE <i>Assignment designed to reinforce previously practiced outcome</i>		MASTERY <i>Assignment designed for students to demonstrate level of mastery of the outcome</i>	
1	2	3	4	5	6	7	8
BENCHMARK		MILESTONE (2)		MILESTONE (3)		CAPSTONE	

Demographic characteristics displayed in this report may include sex, race/ethnicity, Pell eligibility, and/or credits completed. Like your overall results, a complete breakdown of scores for each dimension by demographic characteristics is displayed in a table format in Appendix A.

Utilizing Your VALUE Institute Results

Before discussing how to use VALUE data and results, it is important to assert how they should not be used. This system is not designed to publicly judge the effectiveness of individual faculty members. VALUE has one goal: to help all students achieve the levels of proficiency necessary for success in work and in life. It takes faculty and programs working collectively to help students achieve high levels of demonstrated accomplishment. As an institution gathers solid evidence of what teaching and learning practices consistently lead to required proficiency, faculty will be more likely to adopt those evidence-based practices. The process of continuous improvement built into the VALUE project, in other words, is based on carrots and not sticks.

The VALUE Institute makes no attempt to set specific threshold or target scores for achievement at two- and four-year institutions. That said, the rubrics reflect the collective best thinking and ambitions for learning within higher education in the United States, so it is not unreasonable to say that scores at the two Milestone levels are appropriate for students who have completed the majority of their coursework for an associate’s degree, and that scores moving up from Milestone (3) to Capstone (4) are appropriate for those on the cusp of completing a baccalaureate degree. Indeed, some users have indicated that the Capstone level may be viewed as aspirational for many students, but necessary as a goal to encourage students’ and faculty’s best work. The purpose in presenting the data is not to create specious comparisons but rather to provide evidence of an **emerging landscape of learning** for the participating institutions that can serve as a useful touchstone for institutions to understand their own students’ performance in relation to the project.

Individual institutions, of course, are welcomed and encouraged to undertake a study focusing on key proficiencies of the learning outcomes from the VALUE initiative. An institution can decide, for example, to measure the development of students' critical thinking and written communication through the general education curriculum. A team of faculty members and others can assess authentic, problem-centered student work at the beginning, middle, and end of that series of courses, measuring the aggregate improvement in those two skills over time. If institutional leaders and faculty decide the level of development is lower than expected, they can target where interventions can be included in courses and assignments and assess the learning again after those changes take place. For example, assignments may be modified to elicit specific learning improvements to see if improvement occurs, or they may be changed to include evidence-based high-impact teaching and learning practices that tend to lead to better learning outcomes. Such a criterion-referenced approach helps to put the landscape described by VALUE into context and helps to frame the next phase of VALUE work.

Administration Summary

Your Outcome: **CRITICAL THINKING**

Your Goal(s) in Using the VALUE Institute (from your sampling plan):

“The University of Toledo is participating in the Value Institute as a strategy to help measure UT’s Institutional Student Learning Outcomes. The University Assessment Committee selected Critical Thinking as the first skill to be assessed using the Value Institute framework.”

100	Artifacts Submitted
7	Assignments
Faculty	Sampling Method
Other*	Method for Drawing a Random Sample

*Our sample will not be random. It will include the assignments from the students enrolled in the courses of the faculty recruited to initially participate. As of today, we have a combined total of 110 students enrolled in the courses. The largest enrollment is 24, the smallest is 4. The selected assignments are not due until closer to the end of the semester. If, all 110 students remain enrolled, and all of them submit his or her assignment, we will most likely use stratified sampling to remove 10 assignments from our sample. If more than 10 students do not submit his or her assignments, we will be able to use the entire set of assignments. I do not believe we have any individual students enrolled in multiple courses-and therefore submitting multiple assignments for the project. I will double check that is the case before submitting our artifacts.

Results

For Critical Thinking, each artifact you submitted was scored by two trained, certified VALUE scorers. In order to reach our final VALUE Institute-certified score, we performed several different calculations. For artifacts in which the majority of dimensions received a similar score (less than two apart), we calculated the average of the two scores and rounded up to the nearest whole number. Artifacts for which the two scorers notably disagreed (in that the majority of dimensions received scores more than two apart) underwent a separate process. These artifacts were then given a third score from an “expert” VALUE scorer. These triple-scored artifacts were then analyzed for patterns to determine the nature of the “true” score. The third score tended to fall in the middle of the two discrepant scores; as a result, we used the same calculation rules we established for the rest of the non-zero scores--averaging the two original scores and rounding up to the nearest whole number.

For any given dimension, artifacts which received a zero from either of the two scorers received a score of zero overall for that dimension rather than averaging the two scores and rounding up to the nearest whole number. The rationale for doing so is to highlight all instances where at least one scorer found that there was **an absence of evidence** of any student learning on that dimension. Whenever two scorers notably disagreed regarding an absence of evidence (in that scorers were more than two performance levels apart, with one scorer assigning a zero), these artifacts were also given a third score from an “expert” VALUE scorer, with the final scores for the artifact being adjudicated in the same manner as described above.

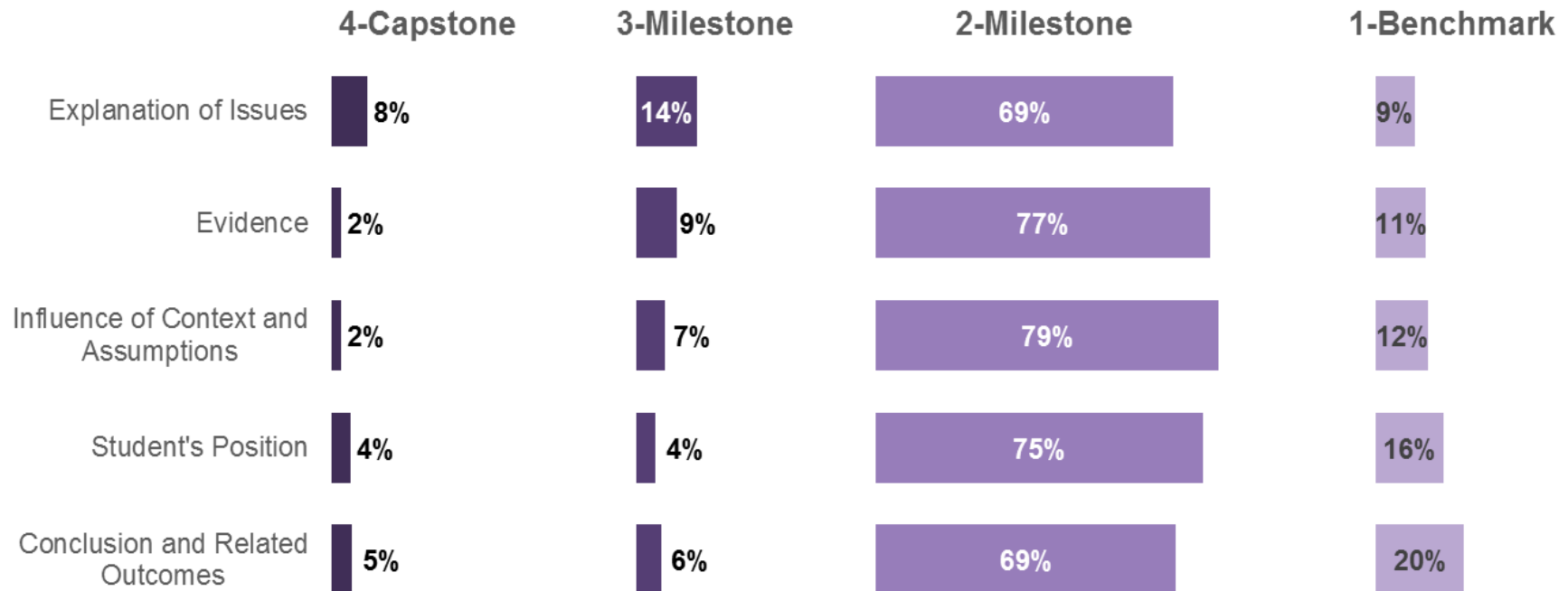
What follows provides a graphical snapshot of your student artifact scores based upon the assignment-level and demographic data provided by your institution. The tabular results upon which these displays are based can be found in Appendix A.

Critical Thinking Overall Results

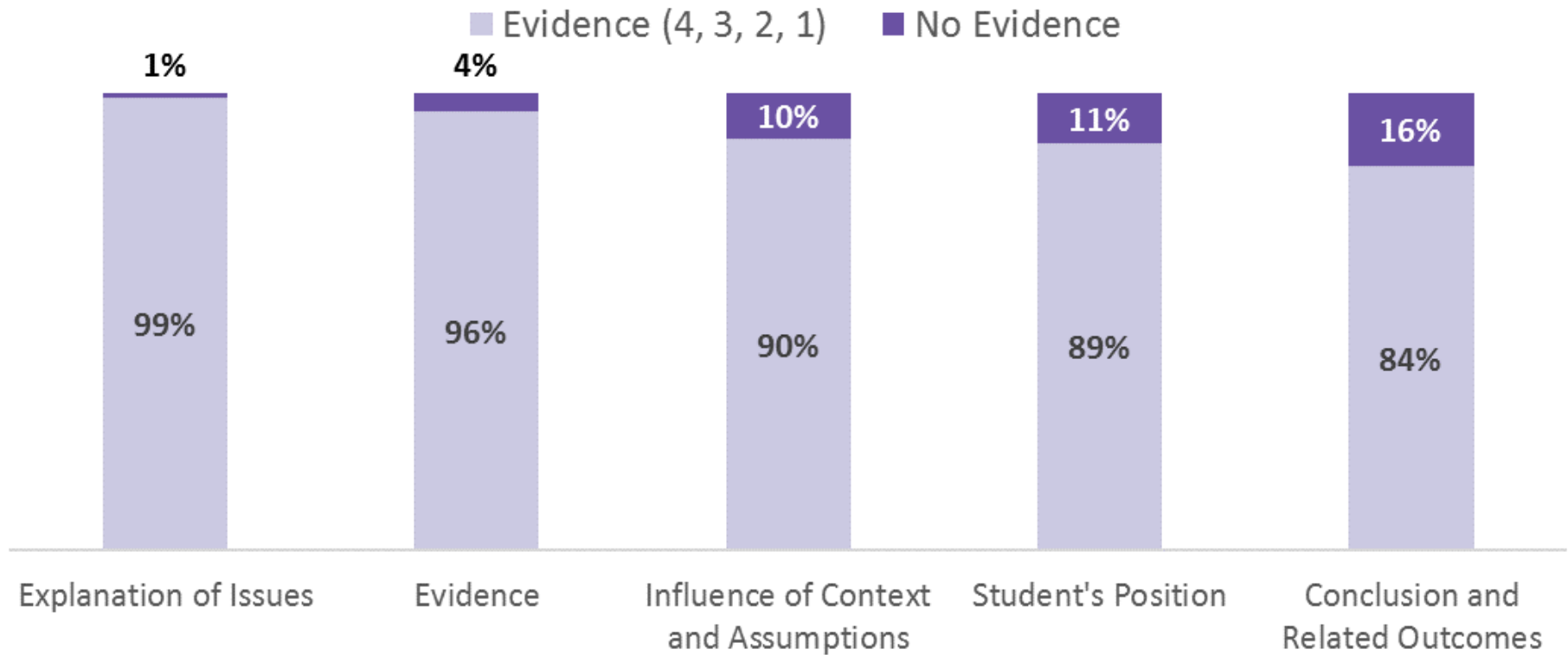
This section provides a snapshot of overall student scores. Graph 1 shows the proportion of students who scored at each level from Capstone (4) to Milestones (3, 2) to Benchmark (1). Graph 2 shows the percentage of students who demonstrated evidence of each dimension of the learning outcome (scored a 4, 3, 2, 1) versus those whose work had no evidence of the dimension (score of 0.)

Graph 1. Overall Score Results

Critical Thinking



Graph 2: Evidence of Each Dimension



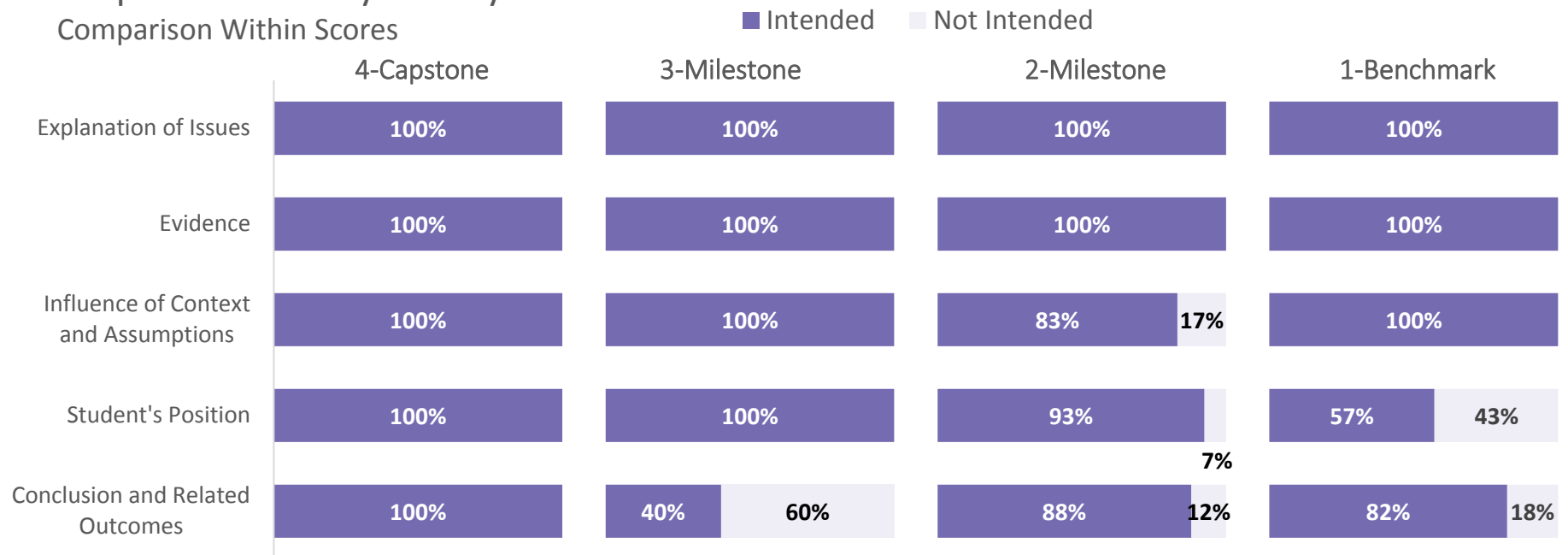
Critical Thinking

Results by Faculty Intention

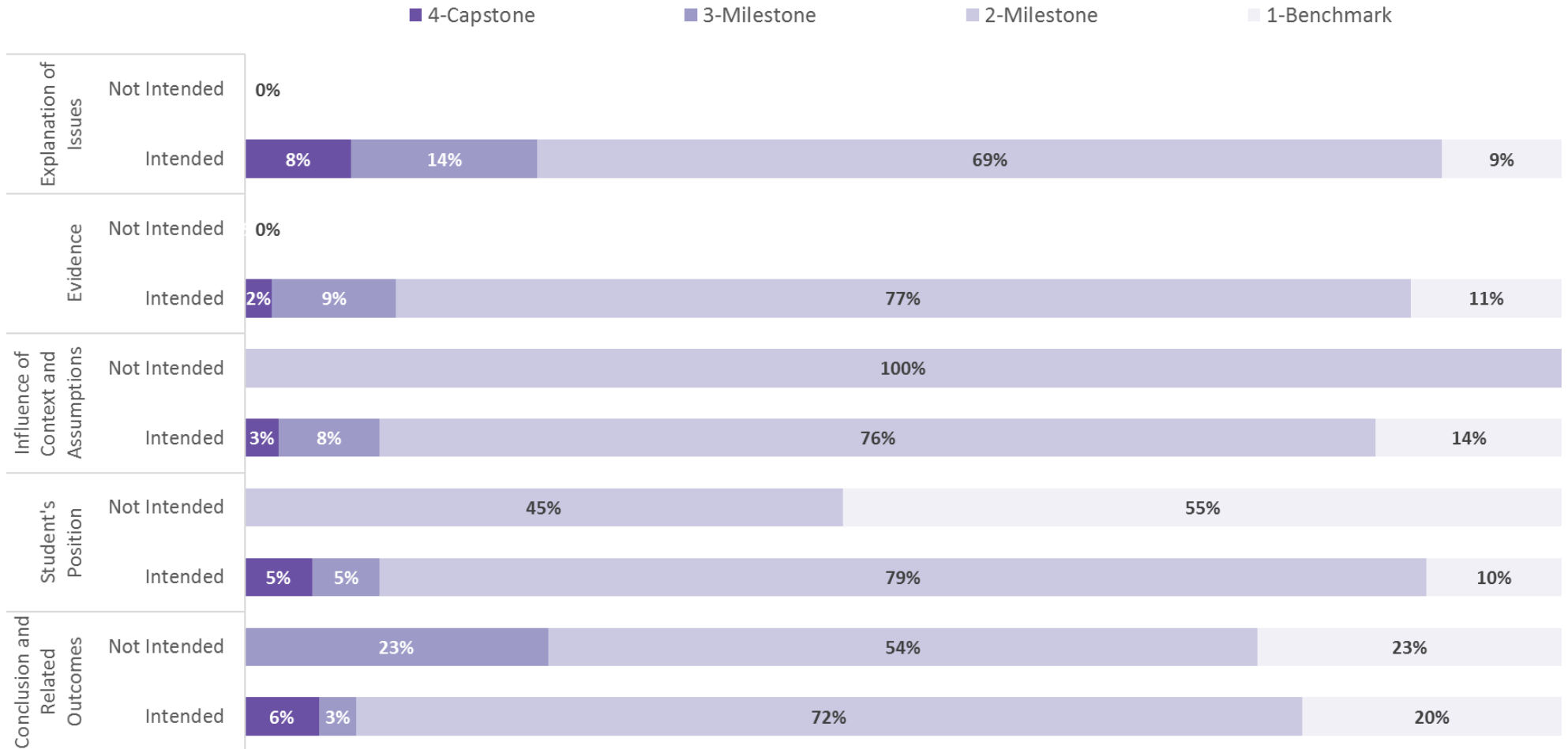
This section provides a breakdown of student scores by Faculty Intention within the assignments of the dimensions on this rubric. Graph 3 shows Faculty Intention (Intended to ask for students to demonstrate that dimension in their work versus did not intend in the assignment to ask for students to demonstrate that dimension in their work) distribution within a score. In other words, this graph demonstrates the proportion of intended to not intended within each score of each dimension. Graph 4 compares Faculty Intention across the scores of Capstone (4) to Milestones (3, 2) to Benchmark (1). This graph displays how intended and not intended distributes across the scores.

Graph 3. Results by Faculty Intention

Comparison Within Scores



Graph 4. Results by Faculty Intention
Comparison Across Scores



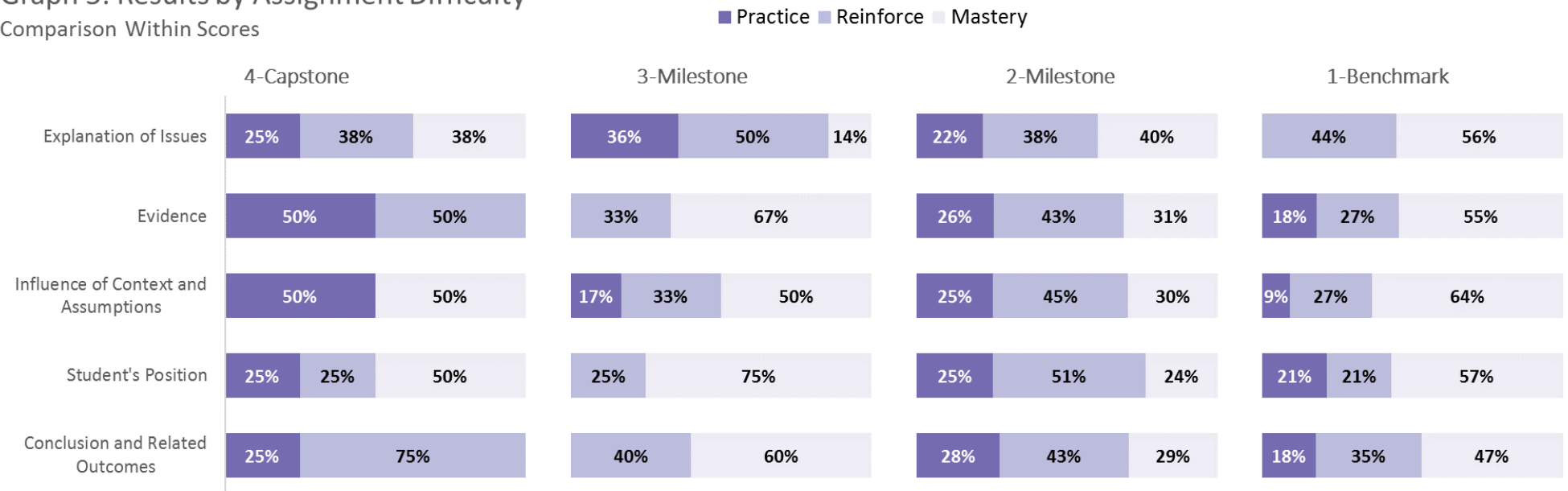
Critical Thinking

Results by Assignment Difficulty

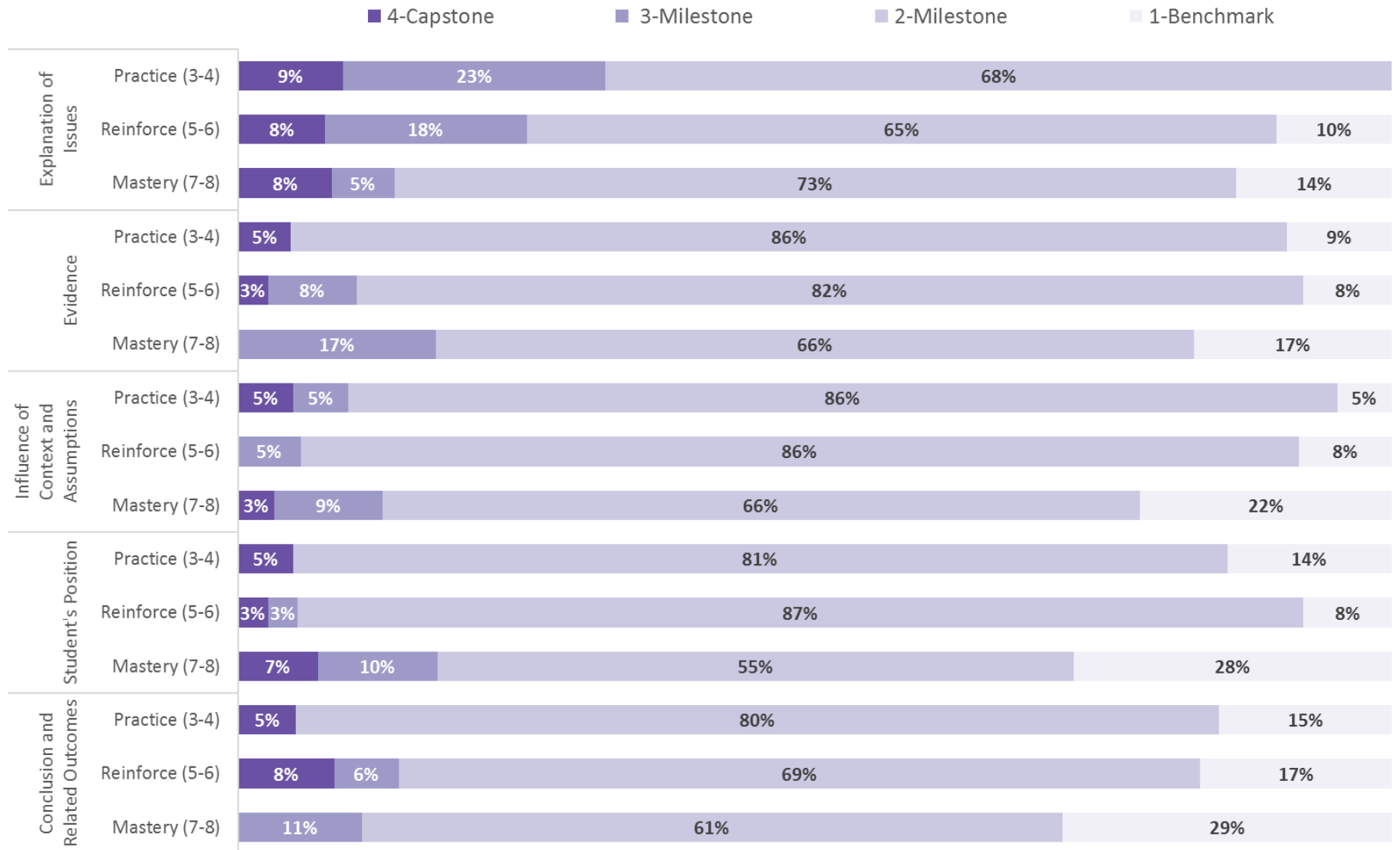
This section provides a breakdown of student scores by Assignment Difficulty by assignments and how that changes score distribution on this rubric. Assignment Difficulty is rated on a scale of 1-8 and categorized into Introduce (1-2), Practice (3-4), Reinforce (5-6), and Mastery (7-8). For more information, please see pg 9-10 of this report. Graph 5 shows Assignment Difficulty distribution within a score. In other words, this graph answers the question, “for all artifacts that scored a 4 on dimension 1, Explanation of Issues, how is the assignment difficulty distributed?” Graph 6 compares Assignment Difficulty across the scores of Capstone (4) to Milestones (3, 2) to Benchmark (1). This graph answers the question, “How does each assignment difficulty level score from 4 to 1 on dimension 1, Explanation of Issues?”

Graph 5: Results by Assignment Difficulty

Comparison Within Scores



Graph 6: Results by Assignment Difficulty
Comparison Across Scores



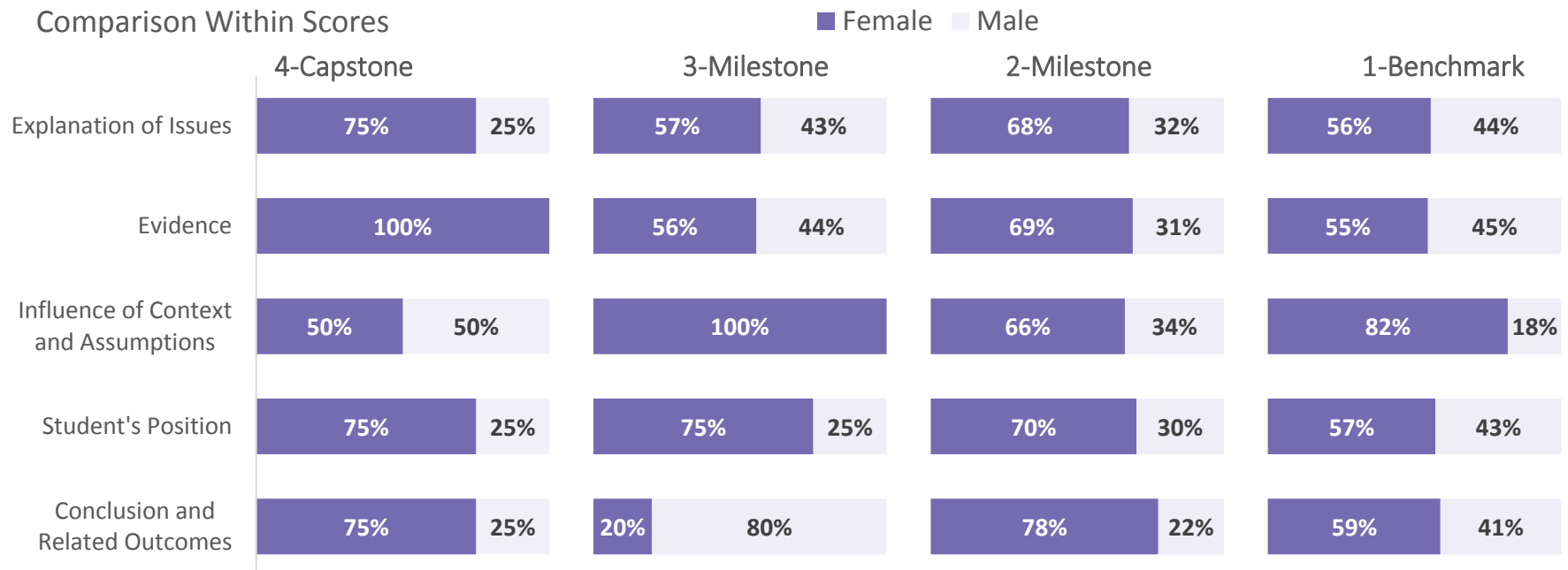
Critical Thinking

Results by Sex

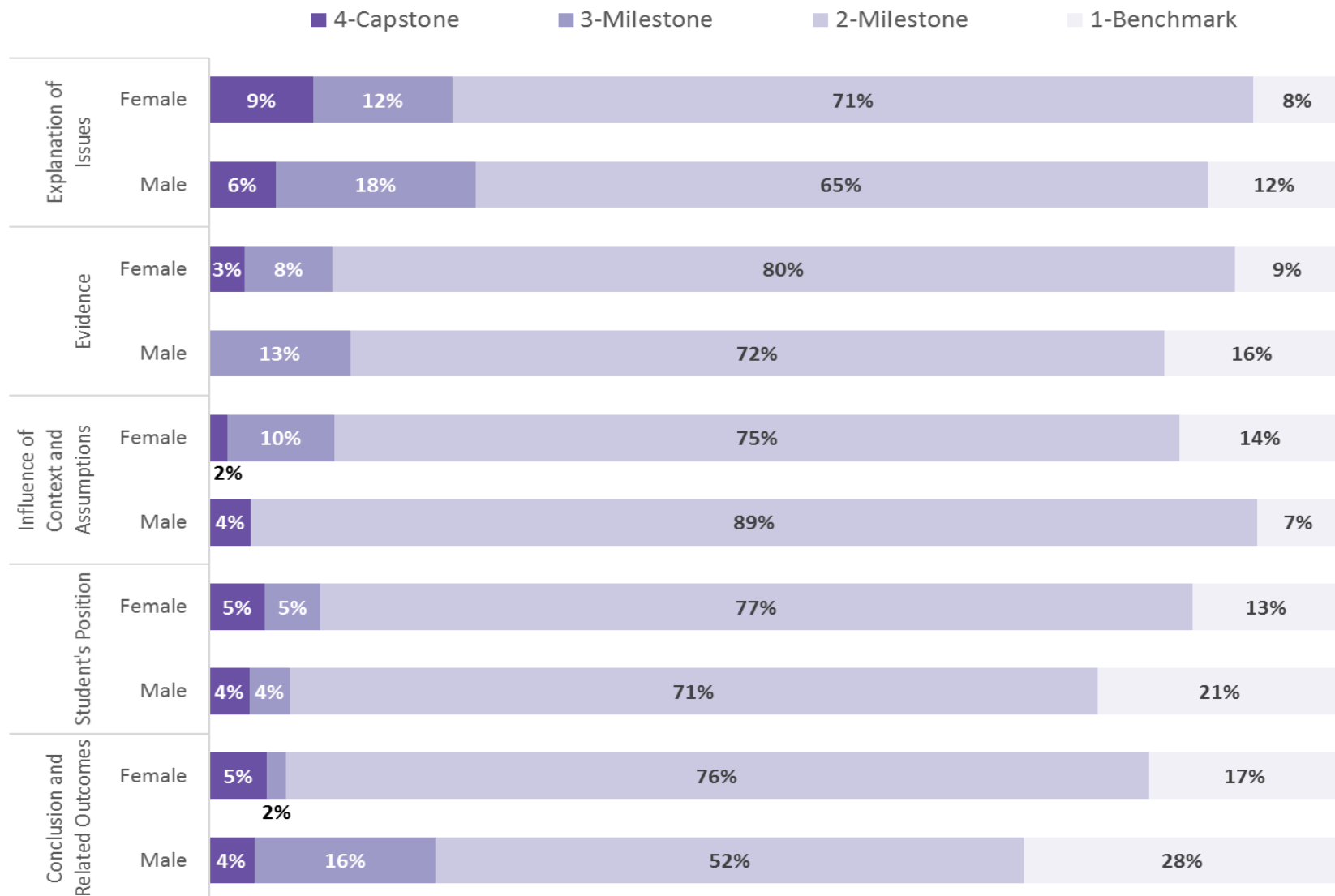
This section provides a breakdown of student scores by Sex on the dimensions on this rubric. Graph 7 shows male and female distribution within a score. In other words, this graph answers the question, “for those who scored a 4 on dimension 1, Explanation of Issues, what is the distribution between males and females?” Graph 8 compares Sex across the scores of Capstone (4) to Milestones (3, 2) to Benchmark (1). This graph answers the question, “How did females score from 4 to 1 on dimension 1, Explanation of Issues?”

Graph 7. Results by Sex

Comparison Within Scores



Graph 8. Results by Sex
Comparison Across Scores



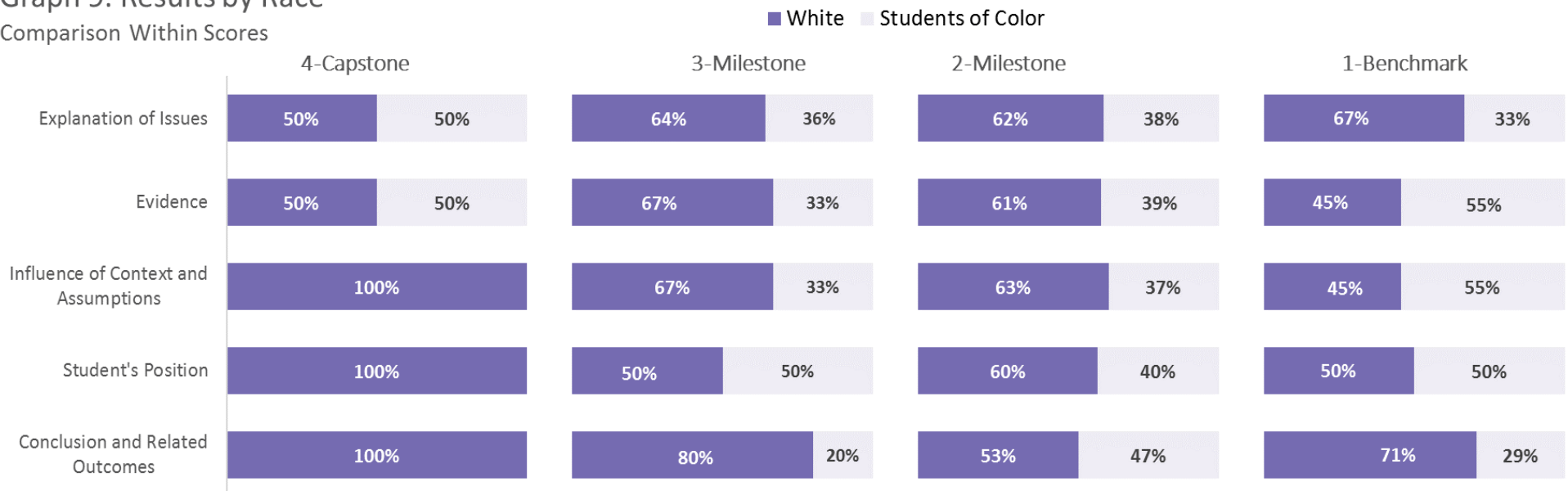
Critical Thinking

Results by Race and Ethnicity

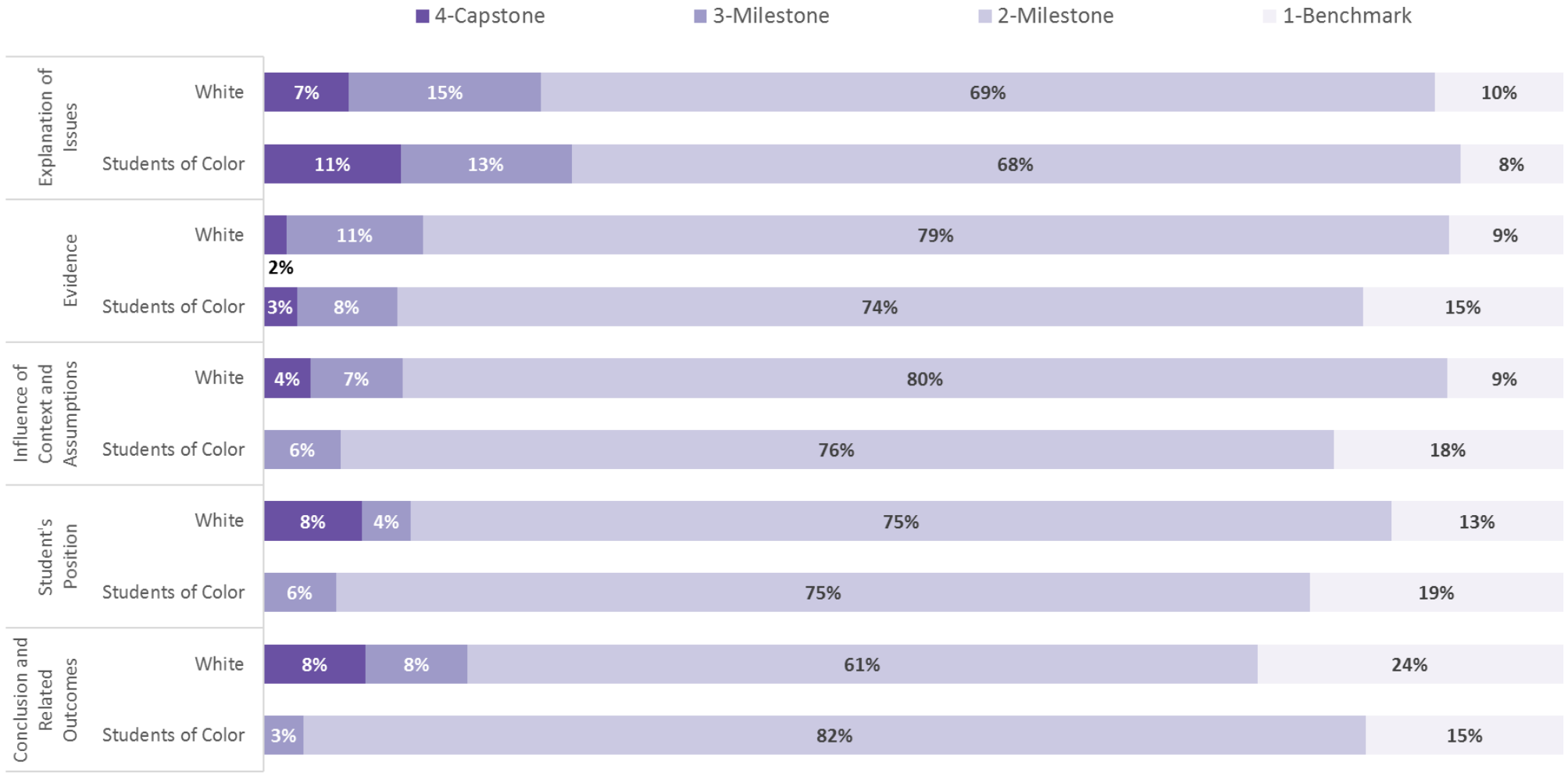
This section provides a breakdown of student scores by Race on the dimensions on this rubric. Given the limited number of students within different races and in order to protect their identity, we have reassigned race into two categories: White and Students of Color. If you would like a more detailed breakdown of how difference races fall on different scores, we encourage you to use your own collected information. Graph 9 shows race distribution within a score. In other words, this graph answers the question, “for those who scored a 4 on dimension 1, Explanation of Issues, what is the distribution between white students and students of color?” Graph 10 compares race across the scores of Capstone (4) to Milestones (3, 2) to Benchmark (1). This graph answers the question, “How did white students score from 4 to 1 on dimension 1, Explanation of Issues?”

Graph 9. Results by Race

Comparison Within Scores



Graph 10. Results by Race
Comparison Across Scores

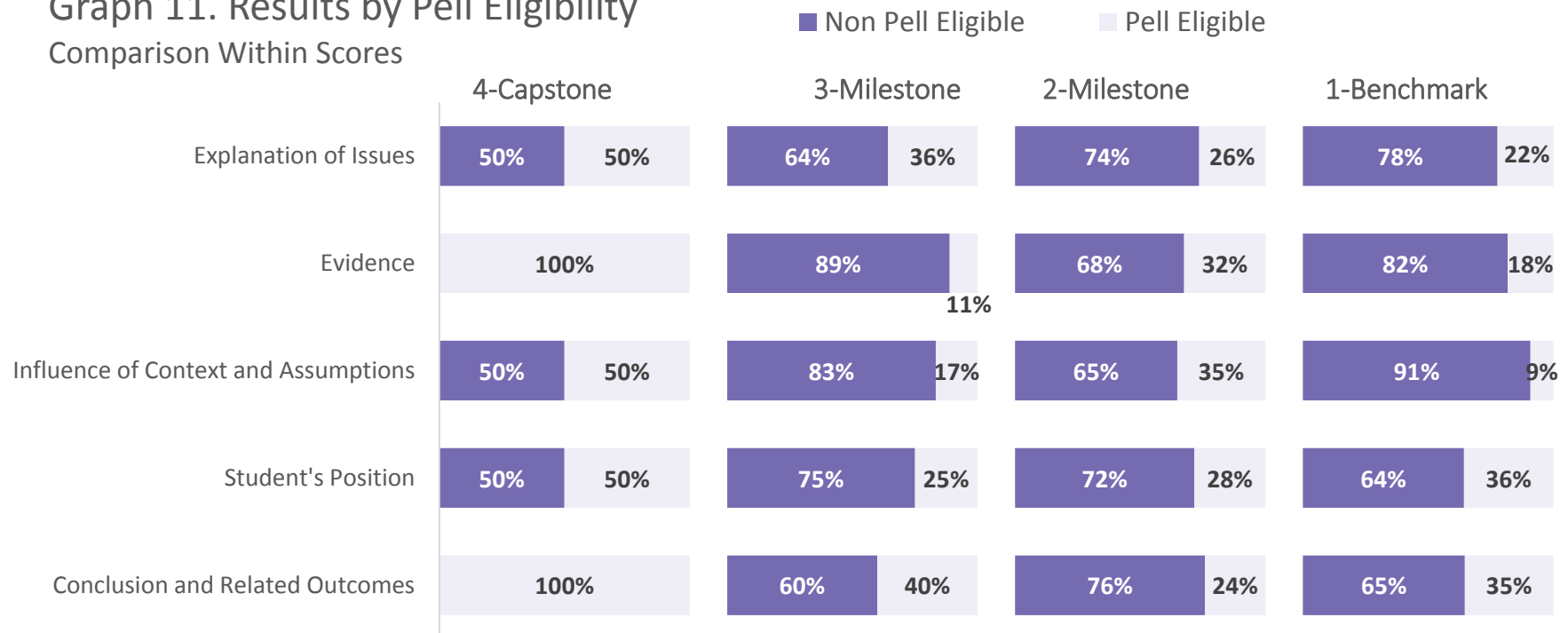


Critical Thinking

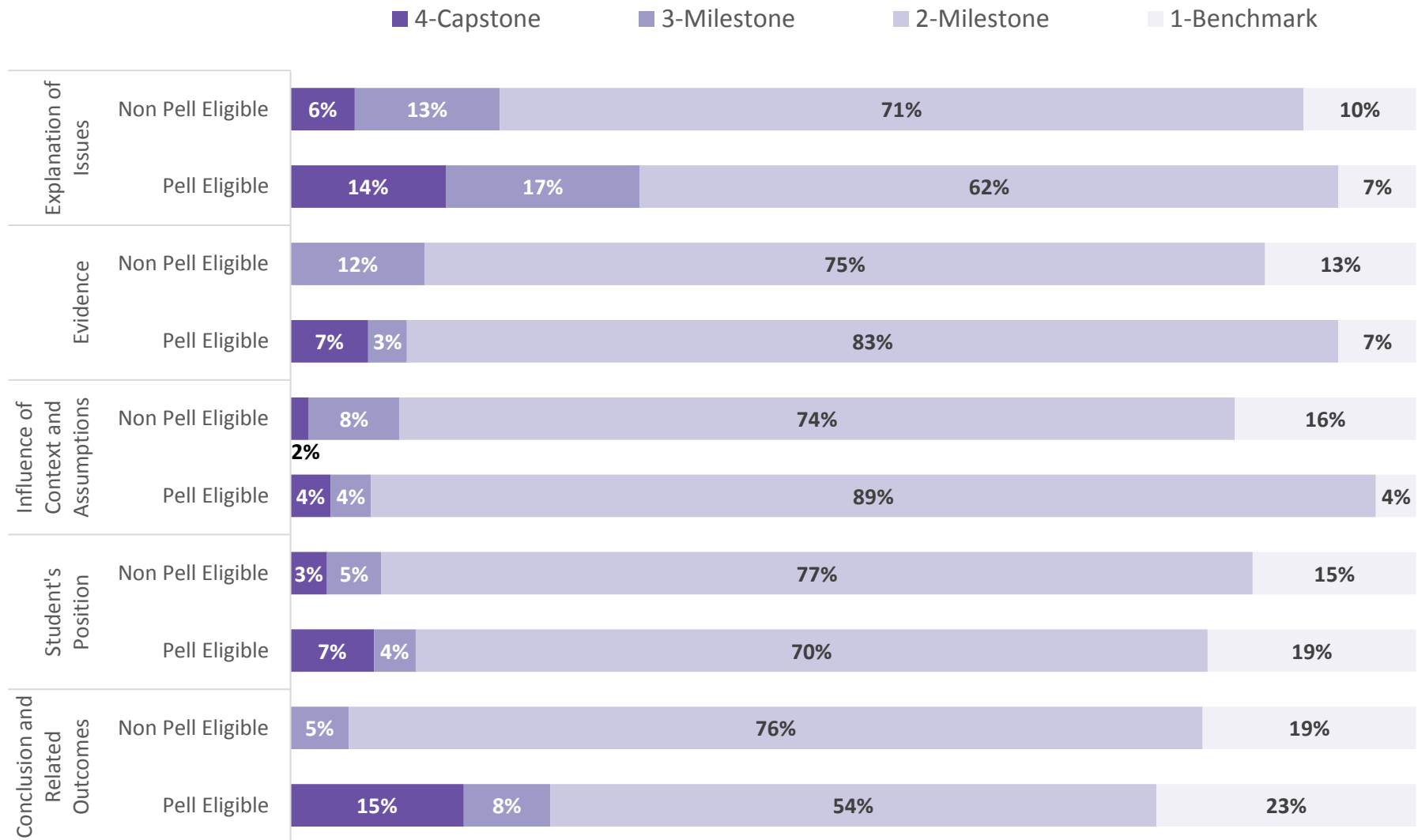
Results by Pell Eligibility

This section provides a breakdown of student scores by Pell Eligibility on the dimensions on this rubric. Graph 11 shows Pell Eligibility distribution within a score. In other words, this graph answers the question, “for those who scored a 4 on dimension 1, Explanation of Issues, what is the distribution between Pell eligible students and non-Pell eligible students?” Graph 12 compares Pell eligibility across the scores of Capstone (4) to Milestones (3, 2) to Benchmark (1). This graph answers the question, “How did non-Pell eligible students score from 4 to 1 on dimension 1, Explanation of Issues?”

Graph 11. Results by Pell Eligibility
Comparison Within Scores



Graph 12. Results by Pell Eligibility
Comparison Across Scores



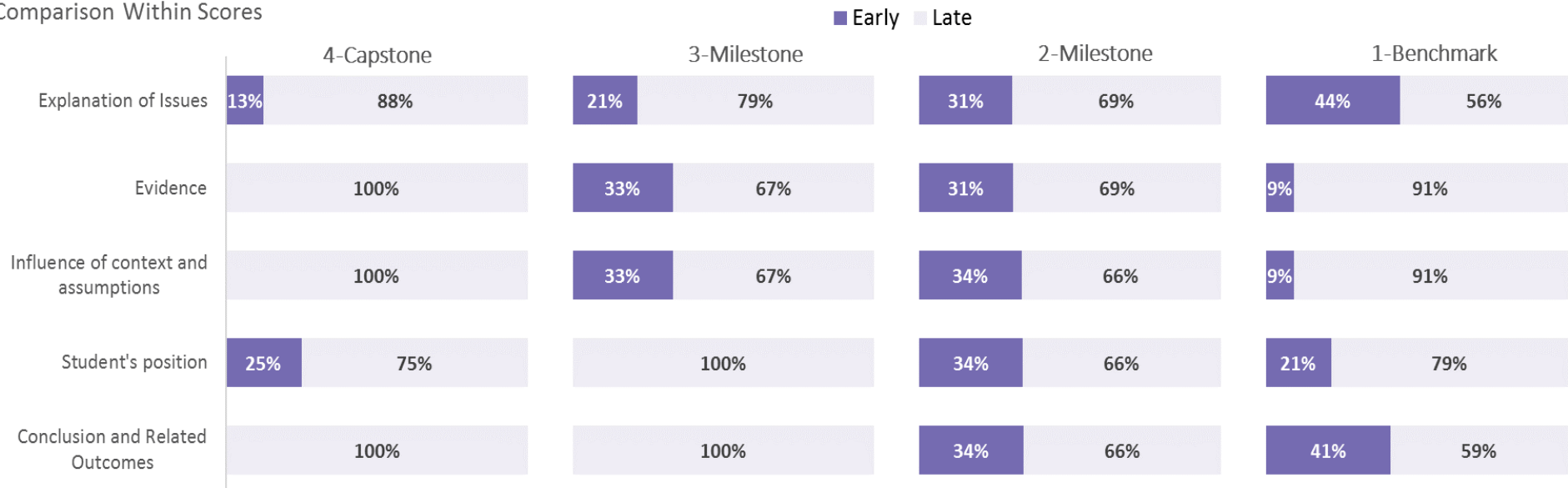
Critical Thinking

Results by Credits Completed

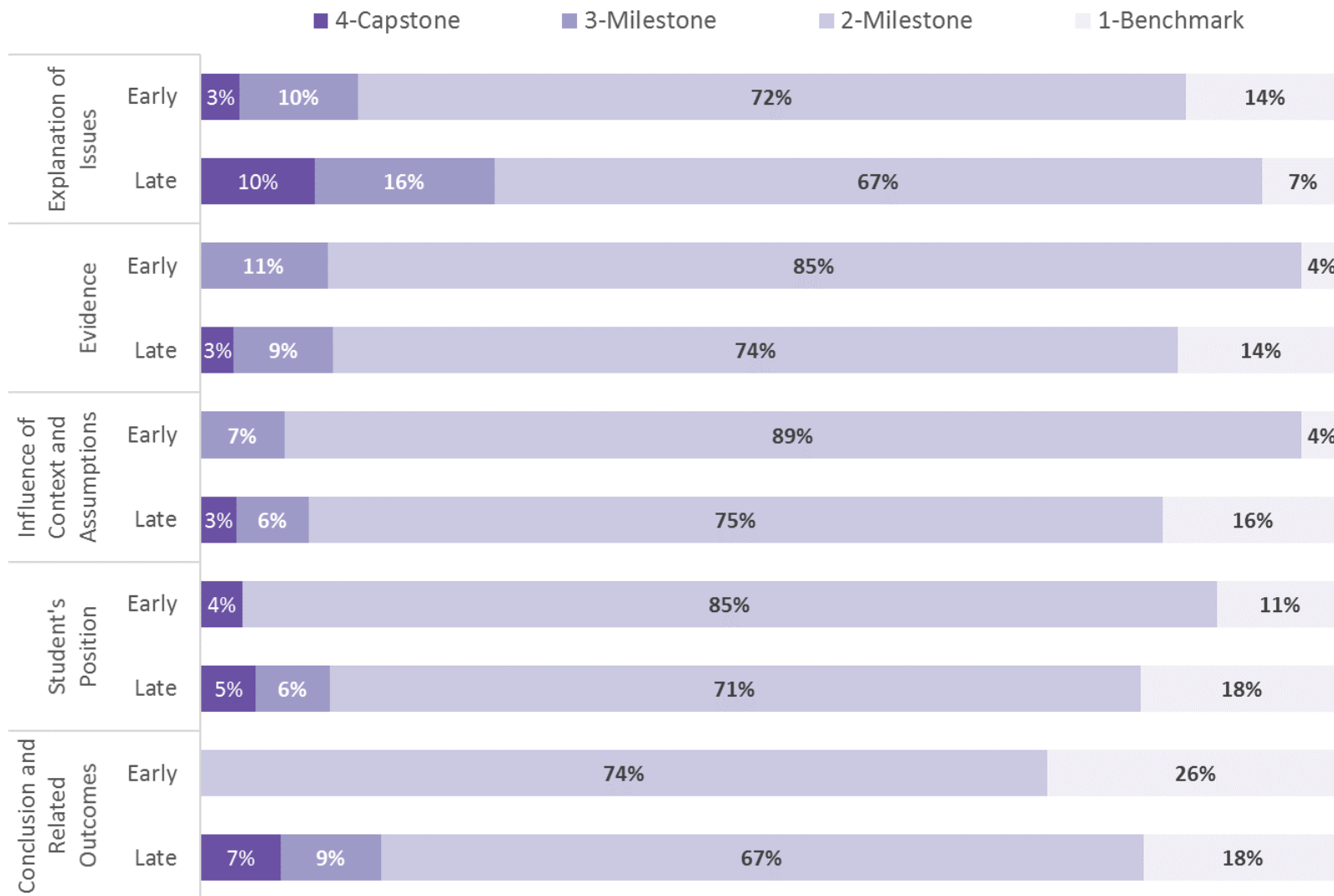
This section provides a breakdown of student scores by Credits Completed on the dimensions on this rubric. We have reassigned credits completed into two categories: Early (students with less than 75% of their degree program finished) and Late (students who have more than 75% of their degree program finished). Graph 13 shows credits completed distribution within a score. In other words, this graph answers the question, “for those who scored a 4 on dimension 1, Explanation of Issues, what is the distribution between early and late students?” Graph 14 compares credits completed across the scores of Capstone (4) to Milestones (3, 2) to Benchmark (1). This graph answers the question, “How did students with less than 75% completion score from 4 to 1 on dimension 1, Explanation of Issues?”

Graph 13. Results by Credits Completed

Comparison Within Scores



Graph 14. Results by Credits Completed
Comparison Across Scores



Next Steps

This section is designed to serve as a guide to help you reflect on what your VALUE Institute results say about student learning on your campus. It is designed to be used in conjunction with your VALUE Institute Institutional Reports. You can also use this tool in a group setting. For example, if you have a committee charged with overseeing student learning outcomes or assessment work, these questions will foster productive discussions among such groups. If your campus selected multiple learning outcomes, you may want to hold separate discussions for each learning outcome.

General Reflection

- As you examined your results, did you see anything you expected? Anything that was surprising?
- What implications do these results have for your program? Your institution?
 - Resource implications?
 - Policy implications?
 - Implications for assignment design?
 - Implications for teaching?
 - Implications for future assessment design?
- If you sampled students who are earlier in their college career (less than 75% of credits completed)—what do your results tell you about what your students have learned so far? What they still need to learn? Where they need to improve?
- If you sampled students who are later in their college career (more than 75% of credits completed), what do your results tell you about the overall learning experience at your institution? Is there one particular area that students excelled in? Is there one particular area that students fell short in?

Demographics and Equity Implications

- If you provided demographic data, first compare your VALUE Institute sample to your overall institutional demographics. Is your sample representative? If not, how does your sample differ from your overall population of students?
- Now take a look at your results broken out by demographic characteristics. Do you notice any disparities or patterns across groups?
 - Sex
 - Race/ethnicity?
 - Pell eligibility?
- If you noticed any gaps across demographic groups, were these surprising to you? Have you seen any other evidence on your campus that might also suggest there are equity gaps among various groups of students?
- Consider the implications of any equity gaps across demographic groups—what do these mean for learning on your campus? For teaching (e.g., assignment design)? For how teaching and learning environments are organized (e.g. participation in high impact practices, advanced levels of work)?

Sharing Your Results

- Who needs to see your VALUE Institute results? Examples of stakeholder groups you might need to share these results with include:
 - Provosts
 - Deans
 - Assessment committee
 - Faculty whose assignments were sampled
 - Faculty senate or other governing body
 - Curriculum committee in a department or general education program
 - Students
- How are you planning to share your results with each of those groups?
- Are there particular data points that are more salient for one group vs. another?
- Do you need to display the results in different ways for each group?

Appendix A: Tabular Results

A: Table for Overall Results

	Capstone		Milestones				Benchmark		Total with Evidence (4, 3, 2, 1)		No Evidence	
	4		3		2		1		count	%	0	
	count	%	count	%	count	%	count	%			count	%
Explanation of Issues	8	8%	14	14%	68	69%	9	9%	99	99%	1	1%
Evidence	2	2%	9	9%	74	77%	11	11%	96	96%	4	4%
Influence of Context and Assumptions	2	2%	6	7%	71	79%	11	12%	90	90%	10	10%
Student's Position	4	4%	4	4%	67	75%	14	16%	89	89%	11	11%
Conclusion and Related Outcomes	4	5%	5	6%	58	69%	17	20%	84	84%	16	16%

B: Table for Results based on Faculty Intentions

	Capstone 4		Milestones 3		2		Benchmark 1		Total with Evidence (4, 3, 2, 1)		No Evidence 0	
	n	%	n	%	n	%	n	%	n	%	n	%
Intended												
Explanation of Issues	8	8%	14	14%	68	69%	9	9%	99	99%	1	1%
Evidence	2	2%	9	9%	74	77%	11	11%	96	96%	4	4%
Influence of Context and Assumptions	2	3%	6	8%	59	76%	11	14%	78	89%	10	11%
Student's Position	4	5%	4	5%	62	79%	8	10%	78	95%	4	5%
Conclusion and Related Outcomes	4	6%	2	3%	51	72%	14	20%	71	82%	16	18%
Not Intended												
Explanation of Issues	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Evidence	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Influence of Context and Assumptions	0	0%	0	0%	12	100%	0	0%	12	100%	0	0%
Student's Position	0	0%	0	0%	5	45%	6	55%	11	61%	7	39%
Conclusion and Related Outcomes	0	0%	3	23%	7	54%	3	23%	13	0%	0	0%

C: Table for Results based on Assignment Difficulty

	Capstone		Milestones				Benchmark		Total with Evidence		No Evidence	
	4		3		2		1		(4, 3, 2, 1)		0	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Practice (3-4)												
Explanation of Issues	2	9%	5	23%	15	68%	0	0%	22	96%	1	4%
Evidence	1	5%	0	0%	19	86%	2	9%	22	96%	1	4%
Influence of Context and Assumptions	1	5%	1	5%	18	86%	1	5%	21	91%	2	9%
Student's Position	1	5%	0	0%	17	81%	3	14%	21	91%	2	9%
Conclusion and Related Outcomes	1	5%	0	0%	16	80%	3	15%	20	87%	3	13%
Reinforce (5-6)												
Explanation of Issues	3	8%	7	18%	26	65%	4	10%	40	100%	0	0%
Evidence	1	3%	3	8%	32	82%	3	8%	39	98%	1	3%
Influence of Context and Assumptions	0	0%	2	5%	32	86%	3	8%	37	93%	3	8%
Student's Position	1	3%	1	3%	34	87%	3	8%	39	98%	1	3%
Conclusion and Related Outcomes	3	8%	2	6%	25	69%	6	17%	36	90%	4	10%
Mastery (7-8)												
Explanation of Issues	3	8%	2	5%	27	73%	5	14%	37	100%	0	0%
Evidence	0	0%	6	17%	23	66%	6	17%	35	95%	2	5%
Influence of Context and Assumptions	1	3%	3	9%	21	66%	7	22%	32	86%	5	14%
Student's Position	2	7%	3	10%	16	55%	8	28%	29	78%	8	22%
Conclusion and Related Outcomes	0	0%	3	11%	17	61%	8	29%	28	76%	9	24%

D: Table for Results based on Demographics - Sex

	Capstone 4		Milestones 3		2		Benchmark 1		Total with Evidence (4, 3, 2, 1)		No Evidence 0	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Female												
Explanation of Issues	6	9%	8	12%	46	71%	5	8%	65	98%	1	2%
Evidence	2	3%	5	8%	51	80%	6	9%	64	97%	2	3%
Influence of Context and Assumptions	1	2%	6	10%	47	75%	9	14%	63	95%	3	5%
Student's Position	3	5%	3	5%	47	77%	8	13%	61	92%	5	8%
Conclusion and Related Outcomes	3	5%	1	2%	45	76%	10	17%	59	89%	7	11%
Male												
Explanation of Issues	2	6%	6	18%	22	65%	4	12%	34	100%	0	0%
Evidence	0	0%	4	13%	23	72%	5	16%	32	94%	2	6%
Influence of Context and Assumptions	1	4%	0	0%	24	89%	2	7%	27	79%	7	21%
Student's Position	1	4%	1	4%	20	71%	6	21%	28	82%	6	18%
Conclusion and Related Outcomes	1	4%	4	16%	13	52%	7	28%	25	74%	9	26%

E: Table for Results based on Demographics - Race/Ethnicity

	Capstone 4		Milestones 3		2		Benchmark 1		Total with Evidence (4, 3, 2, 1)		No Evidence 0	
	n	%	n	%	n	%	n	%	n	%	n	%
White												
Explanation of Issues	4	7%	9	15%	42	69%	6	10%	61	100%	0	0%
Evidence	1	2%	6	11%	45	79%	5	9%	57	93%	4	7%
Influence of Context and Assumptions	2	4%	4	7%	45	80%	5	9%	56	92%	5	8%
Student's Position	4	8%	2	4%	40	75%	7	13%	53	87%	8	13%
Conclusion and Related Outcomes	4	8%	4	8%	31	61%	12	24%	51	84%	10	16%
Students of Color												
Explanation of Issues	4	11%	5	13%	26	68%	3	8%	38	97%	1	3%
Evidence	1	3%	3	8%	29	74%	6	15%	39	100%	0	0%
Influence of Context and Assumptions	0	0%	2	6%	26	76%	6	18%	34	87%	5	13%
Student's Position	0	0%	2	6%	27	75%	7	19%	36	92%	3	8%
Conclusion and Related Outcomes	0	0%	1	3%	27	82%	5	15%	33	85%	6	15%

F: Table for Results based on Demographics – Pell Eligibility

	Capstone		Milestones		Benchmark		Total with Evidence		No Evidence			
	4		3		2		1		0			
	n	%	n	%	n	%	n	%	n	%		
Non Pell Eligible												
Explanation of Issues	4	6%	9	13%	50	71%	7	10%	70	100%	0	0%
Evidence	0	0%	8	12%	50	75%	9	13%	67	96%	3	4%
Influence of Context and Assumptions	1	2%	5	8%	46	74%	10	16%	62	89%	8	11%
Student's Position	2	3%	3	5%	48	77%	9	15%	62	89%	8	11%
Conclusion and Related Outcomes	0	0%	3	5%	44	76%	11	19%	58	83%	12	17%
Pell Eligible												
Explanation of Issues	4	14%	5	17%	18	62%	2	7%	29	97%	1	3%
Evidence	2	7%	1	3%	24	83%	2	7%	29	97%	1	3%
Influence of Context and Assumptions	1	4%	1	4%	25	89%	1	4%	28	93%	2	7%
Student's Position	2	7%	1	4%	19	70%	5	19%	27	90%	3	10%
Conclusion and Related Outcomes	4	15%	2	8%	14	54%	6	23%	26	87%	4	13%

G: Table for Results based on Demographics – Credits Completed

	Capstone		Milestones		2		Benchmark		Total with Evidence		No Evidence	
	4		3				1		(4, 3, 2, 1)		0	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Less than 75% completed												
Explanation of Issues	1	3%	3	10%	21	72%	4	14%	29	97%	1	3%
Evidence	0	0%	3	11%	23	85%	1	4%	27	90%	3	10%
Influence of Context and Assumptions	0	0%	2	7%	24	89%	1	4%	27	90%	3	10%
Student's Position	1	4%	0	0%	23	85%	3	11%	27	90%	3	10%
Conclusion and Related Outcomes	0	0%	0	0%	20	74%	7	26%	27	90%	3	10%
More than 75% completed												
Explanation of Issues	7	10%	11	16%	47	67%	5	7%	70	100%	0	0%
Evidence	2	3%	6	9%	51	74%	10	14%	69	99%	1	1%
Influence of Context and Assumptions	2	3%	4	6%	47	75%	10	16%	63	90%	7	10%
Student's Position	3	5%	4	6%	44	71%	11	18%	62	89%	8	11%
Conclusion and Related Outcomes	4	7%	5	9%	38	67%	10	18%	57	81%	13	19%

Appendix B: Your VALUE Rubric

Your VALUE Rubric

CRITICAL THINKING

CRITICAL THINKING VALUE RUBRIC

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.

Definition

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.

Framing Language

This rubric is designed to be transdisciplinary, reflecting the recognition that success in all disciplines requires habits of inquiry and analysis that share common attributes. Further, research suggests that successful critical thinkers from all disciplines increasingly need to be able to apply those habits in various and changing situations encountered in all walks of life.

This rubric is designed for use with many different types of assignments and the suggestions here are not an exhaustive list of possibilities. Critical thinking can be demonstrated in assignments that require students to complete analyses of text, data, or issues. Assignments that cut across presentation mode might be especially useful in some fields. If insight into the process components of critical thinking (e.g., how information sources were evaluated regardless of whether they were included in the product) is important, assignments focused on student reflection might be especially illuminating.

Glossary

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- **Ambiguity:** Information that may be interpreted in more than one way.
- **Assumptions:** Ideas, conditions, or beliefs (often implicit or unstated) that are "taken for granted or accepted as true without proof." (quoted from www.dictionary.reference.com/browse/assumptions)
- **Context:** The historical, ethical, political, cultural, environmental, or circumstantial settings or conditions that influence and complicate the consideration of any issues, ideas artifacts, and events.
- **Literal meaning:** Interpretations of information exactly as stated For example, "she was green with envy" would be interpreted to mean that her skin was green.
- **Metaphor:** Information that is (intended to be) interpreted in a non-literal way. For example, "she was green with envy" is intended to convey an intensity of emotion, not a skin color.

CRITICAL THINKING VALUE RUBRIC

Definition

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.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

	Capstone	Milestones		Benchmark
	4	3	2	1
Explanation of issues	Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.	Issue/problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Appendix C: Anatomy of a VALUE Rubric

Learning Outcome → **CRITICAL THINKING VALUE RUBRIC**
for more information, please contact valuc@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 programs. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such as the rubric. The utility of the VALUE rubrics can be shared nationally through a common dialog and understanding of student success.

Definition
 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.

Framing Language
 This rubric is designed to be transdisciplinary, reflecting the recognition that success in all disciplines requires habits of inquiry and analysis that share common attributes. Further, research suggests that successful critical thinkers from all disciplines increasingly need to be able to apply those habits in various and changing situations encountered in all walks of life.

This rubric is designed for use with many different types of assignments and the suggestions here are not an exhaustive list. Critical thinking can be demonstrated in assignments that require students to complete analyses of text, data, or issues. Assignments that require students to analyze a mode might be especially useful in some fields. If insight into the process components of critical thinking (e.g., how information is processed) is important, assignments focused on student reflection might be especially illuminating.

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The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- Ambiguity: Information that may be interpreted in more than one way.
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- Literal meaning: Interpretation of information exactly as stated. For example, "she was green with envy" would be interpreted to mean that her skin was green.
- Metaphor: Information that is (intended to be) interpreted in a non-literal way. For example, "she was green with envy" is intended to convey an intensity of emotion, not a skin color.

Learning Outcome → **CRITICAL THINKING VALUE RUBRIC**
for more information, please contact valuc@aacu.org

Definition
 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.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (all one) for performance levels.

Levels (4,3,2,1,0)	Performance Levels			
	Capstone (4)	Milestones (3, 2)		Benchmark (1)
Explanation of issues	Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.	Issue/problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.	Information is taken from source(s) with some interpretation/evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning.	Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/hypothesis) are acknowledged. Other points of view are synthesized within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).	Specific position (perspective, thesis/hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Dimensions (rows) and **Performance Descriptors** (columns)



Thank you for participating in this year's VALUE Institute!

VALUE Institute Team

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