



The *VALUE Institute* Student Learning Assessment Project: UMass Amherst Spring 2018 Internal Scoring

Assessment Research Report, Fall 2018
Office of Academic Planning & Assessment (OAPA)

Since spring 2016, the University of Massachusetts Amherst has participated in the *VALUE Institute*, a national multi-state, multi-institutional student learning assessment project coordinated by the Association of American Colleges and Universities (AAC&U). It aims to provide the means for a valid assessment of student learning on key learning objectives (Critical Thinking, Written Communication, and Quantitative Literacy) in ways that allow for comparison of performance by student demographics.

What distinguishes the *VALUE Institute* from standardized approaches (e.g., the Collegiate Learning Assessment – CLA – instrument) is that it:

1. uses actual student work, collected from actual course contexts, as the source of evidence of student performance;
2. uses rubrics developed in 2008-2009 by national teams of faculty for key learning objectives (AAC&U *VALUE Rubric Development Project*);
3. emphasizes the formative side of assessment (i.e., campus-based involvement in student learning assessment, conversations about how to better teach the assessed skills, and cross disciplinary conversations about teaching).

It is these qualities that led UMass Amherst to initially participate in the *VALUE Institute*.

The national project requires the University to submit work from a sample of students who have completed 75% of the credits necessary for graduation (therefore, seniors) and who are representative of the UMass Amherst undergraduate population in terms of race/ethnicity, gender, and Pell grant status, and offer some level of variability in school/college affiliation. For our 2018 participation, we submitted a random sample of 100 pieces of student work from the 20 courses where the instructors volunteered for the study. The upper-division student work was scored externally by a group of faculty readers from colleges and universities across the country using both the Critical Thinking and the Written Communication *VALUE Rubrics*. The full set of results from this external scoring is not yet available but will be discussed in a future research report.

In this research report we focus on the results of the UMass Amherst summer 2018 internal scoring of the student work collected as a part of our participation in this national assessment project. A team of UMass instructors read and scored not only the same upper division student work submitted to the national project but also a sample of 100 pieces of student work drawn from first year English 112 writing courses. The expanded population of work gives the campus the opportunity to consider both first year and seniors' performance.

Instead of again using the national *VALUE rubrics* the UMass scorers used a rubric developed on campus in consultation with UMass Amherst faculty that draws from elements of both the Critical Thinking and Written Communication *VALUE rubrics* but has been adapted by UMass Amherst project participants to better match the nature of critical thinking and written communication valued across disciplines at UMass Amherst. (See the UMass Amherst developed rubric on page 3.) Page four of this report shows the internal scoring results using this rubric for both Upper-Division students and for first year students.

Key Findings about the Assessment Process, Highlighting Feedback from Scorers

"I think the most useful application of this process is giving faculty tools to enhance their teaching and communication with students. Often I feel that faculty have not thought deeply enough about what 'critical thinking' means on the page and this process encourages them to break it down into accessible components that they can communicate to students. The process also allows faculty a valuable opportunity to meet each other and calibrate their expectations for student writing performance."

- **As they have the previous two years, the instructors who scored this year stressed the value of the assessment process itself.** In a survey of their experiences, they indicated that they found using the rubric and assessing student work from UMass Amherst courses in a cross disciplinary group valuable for showing the multiple perspectives brought to bear on evaluating student work and for offering tools for teaching. Another pointed to a pedagogical value: *"This rubric seems like a very useful tool that can be used in my classroom to help communicate to students what strong writing and thinking looks like."*
- **The Critical Thinking and Written Communication rubric worked well for assessing student work across disciplines although some revisions will be made after this first use of it.** The rubric was designed recognizing that critical thinking and writing are multi-faceted constructs and that while no rubric can encompass all aspects of both, it is feasible to have a sound rubric that highlights selective traits. Indeed, scorers' feedback indicated that they felt the rubric does represent key aspects of critical thinking fairly to very well. They also indicated that they felt it worked for evaluating student work across disciplines and work by both first year and senior year students: *"I think it's an excellent rubric with broad utility."* They also pointed to ways the rubric can be fine-tuned to better represent these constructs, including organizational aspects of writing.
- **In comparison to 2016-17, there was less comparability amongst the assignments submitted and used, thus making scoring some of the work more difficult and impacting the results to some degree.** In a desire to be more inclusive, we included some assignments and student work that were not a good match for the guidelines we had established for 2016-17 and, thus, not a good match with the rubric.
- **As was the case in 2016-17, the scorers indicated that they see merit in continuing to explore the potential for this approach to assessment at all levels -- university-wide, school/college, and departmental -- while also recognizing the challenges.** Regarding university-wide application, one commented, "sampling is an issue, but I think this could be a useful too, to get some basic ideas of UMass students." Others noted that the particular value of this approach at the department level: *"---the more focused the application, the greater the potential and likelihood for success. "*

"One of the strengths of this approach was bringing together faculty from all over campus. For me, it was insightful to see how our students' writing is viewed by other faculty across the university."

UMass Amherst-Developed DRAFT Critical Thinking and Writing Rubric:

(Version 2.0, after three years of research, design, and piloting among UMass Amherst faculty scorers, the Writing Program, and the Office of Academic Planning and Assessment, OAPA.)

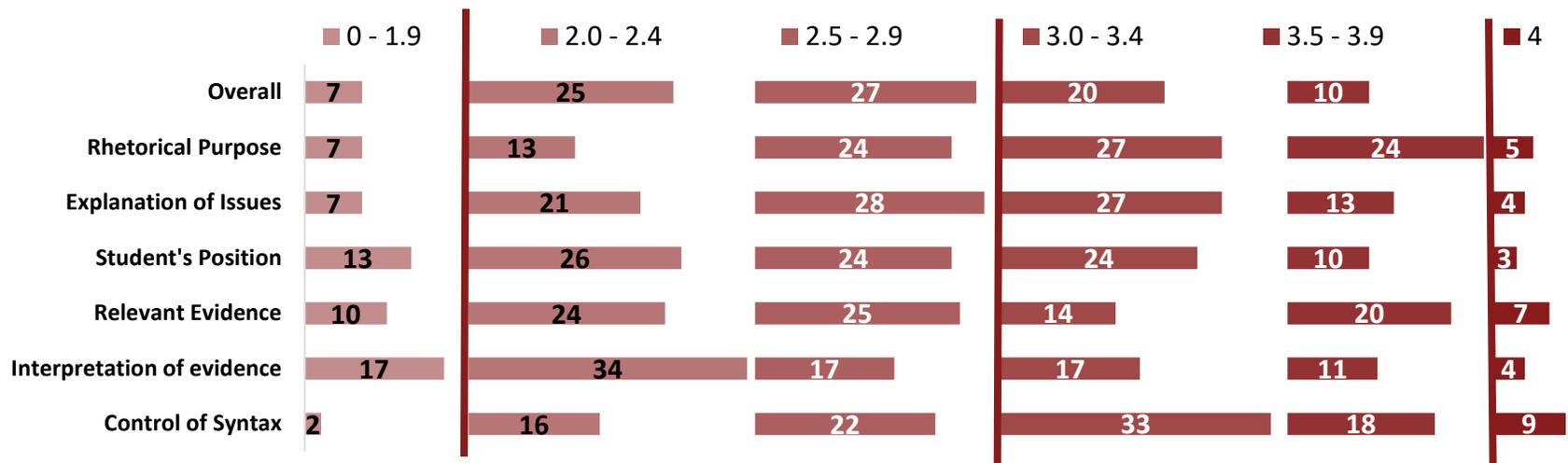
This Spring 2018 Version (2.0) is based on on-campus piloting of the VALUE Critical Thinking Rubric, review of the VALUE Written Communication Rubric, and two years of testing (spring 2017 and spring 2018) as a part of on-campus scoring of UMass Amherst student work, VALUE Institute National Assessment Project.

	Score 1 Benchmark 1	Score 2 Milestone 2	Score 3 Milestone 3	Score 4 Capstone 4
Rhetorical Purpose	Minimal sense of a communicative purpose that organizes the work for implied or explicitly addressed readers. That is, little sense of it having an intentional purpose for readers.	Loose sense of a communicative purpose and/or the work may deviate from the purpose in some ways.	Coheres around a communicative purpose that focuses most, if not all, elements of the work for implied or explicitly addressed readers.	Coheres around a communicative purpose that focuses all elements of the work (e.g., overall frame and structure, register, tone) for implied or explicitly addressed readers.
Explanation of Issue/Problem/Question	Issue/problem/question to be considered critically is stated without clarification or description.	Issue/problem/question to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.	Issue/problem/question to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem/question to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding of it.
Student's Position/Thesis	Position/thesis is stated, but is simplistic and obvious, or jumbled/difficult to pin down.	Position/thesis is stated and goes beyond being a simplistic assertion but is overly generalized and/or doesn't acknowledge limits of position or others' points of view or does so only minimally.	Overall position/thesis takes into account the complexities of an issue/topic. Parameters and/or limits of position and/or others' points of view are acknowledged within position.	Overall position/thesis is insightful taking into account the complexities of an issue/topic. Parameters and/or limits of position are acknowledged; and/or others' points of view are synthesized within position.
Sufficiency of Relevant Evidence/Data/Detail	Very little relevant or credible information is provided to back assertions.	Some but insufficient relevant or credible information is taken from primary and/or secondary sources to back assertions.	Reasonably sufficient relevant, credible information is taken from primary and/or secondary sources to back assertions.	Sufficient relevant, credible information is taken from primary and/or secondary sources to back assertions—sufficient enough to be persuasive.
Interpretation/Evaluation of Evidence/Data/Detail	Little if any interpretation/evaluation is provided or it is lacking in logic or too generalized or obvious throughout.	Some interpretation/evaluation is provided but may be insufficient, illogical, or too generalized in some places so as not to develop a coherent analysis, synthesis, or argument.	Interpretation/evaluation is reasonably logical and convincing to develop a coherent analysis, synthesis, or argument.	Interpretation/evaluation is logical and convincing (sufficient and credible) to develop a coherent analysis, synthesis, or argument.
Control of Syntax and Grammar	Syntax, wording, and grammar often impede meaning.	Syntax and wording may be garbled in some places. May have grammatical errors that obscure meaning in a few places.	Uses language that generally conveys meaning to readers. May contain a few grammatical errors.	Uses language skillfully, communicating meaning to readers with clarity. Virtually free of grammatical errors.

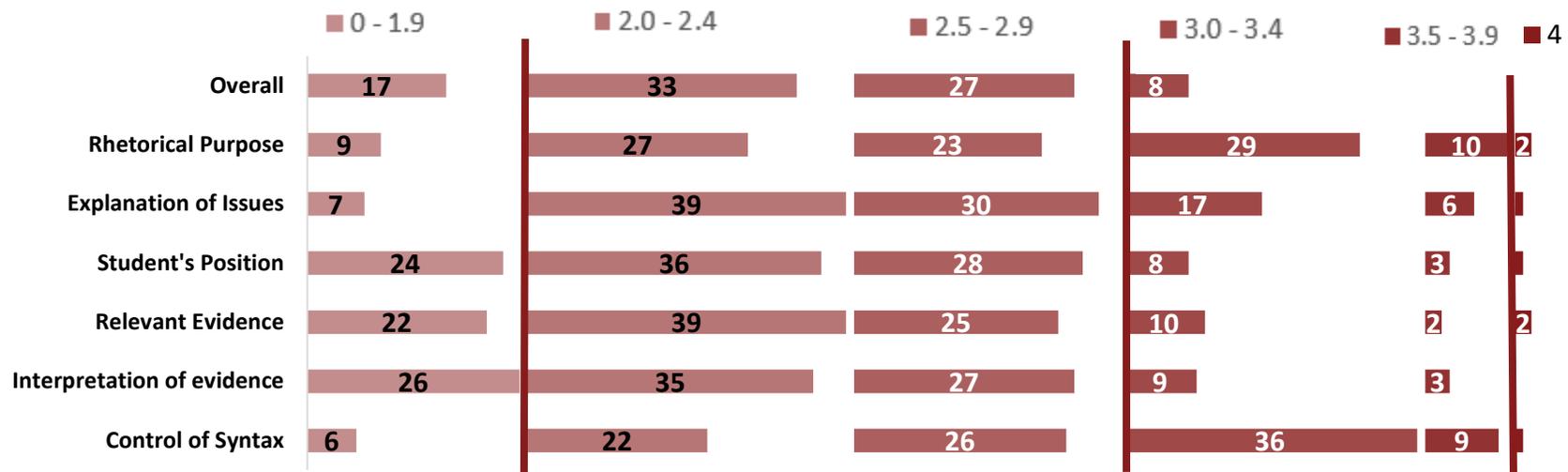
NOTE: Scorers were instructed to score a criterion as "0" if the work did not show evidence of that dimension/criterion.

Results of on-campus scoring of UMass Amherst student work from an assortment of upper-division courses in the major (N=100) and first year writing courses (English 112) (N=100). Note the discernable shift to more scores of 3 to 4 when the first year scores are compared to the upper level scores.

Senior Work in Upper Level Courses: Distribution by Mean Score Ranges (N=100 cases) (Showing % in each category)



First-Year Work (English 112 Courses): Distribution by Mean Score Ranges (N=100 case) (Showing % in each category)



Correlation between Number of Pages, Number of References and Papers' Scores

As in previous years, we tested to see the extent to which the internal scores are related to two characteristics of the papers: paper length and use of references. The first table shows the range across papers in the number of pages and number of references for both the lower-division and upper-division papers used.

Descriptive Statistics: Number of Pages and References in the Samples of Student Work Scored.

	Average	Median	Range
Upper Level Courses			
Number of Pages	7.34 (SD 3.182)	7.00	2-17
Number of References	9.24 (SD 9.166)	7.00	0-51
ENG 112			
Number of Pages	4.39 (SD 1.370)	4.00	2-12
Number of References	5.56 (SD 2.694)	5.00	0-13

The second table shows the correlations between these measures and the paper scores. As the table shows, there is a weak positive correlation between a paper's page length and internal scores, and the same type of correlation for number of references and internal scores. Longer papers and those using more external sources tended to score higher on the rubric's criteria than shorter papers and those using fewer references.

Spearman Correlation (Nonparametric)

Paper Mean	Number of Pages	Number of References
All Upper Courses	.307**	.260**
ENG 112	.400**	.299**

**Correlation is significant at the 0.01 level (2-tailed)

In our 2017 results, the correlations for internal scoring were not significant ($r=.11$ for number of pages and $r=.15$ for number of references). The differences for this year further highlight the impact of using a range of assignment types in 2018, some of which weren't as aligned with the rubric criteria as were the 2017 papers. These correlations suggest that the rubric criteria are intentionally geared to more developed work (e.g., not work of two to three pages). Regarding the correlations between the score and number of external references, it is important to point out that the UMass-Developed rubric is not intended to privilege external, "secondary" references over evidence from primary sources; it is possible the correlations reflect other features of these papers that happened to be related to number of secondary references, although this is just conjecture at this point.