

Critical Thinking Assessment Report, Spring 2010

George Mason University

Critical Thinking Assessment Overview

The State Council of Higher Education for Virginia (SCHEV) requires all state institutions to assess student learning in six competencies, including critical thinking. An assessment was conducted in selected synthesis courses¹ in spring 2006 and repeated in spring 2007: faculty who taught synthesis courses across disciplines participated in learning outcomes workshops to develop a definition for critical thinking and identify criteria (rubrics) to rate critical thinking competence; faculty also volunteered their own synthesis courses for assessment. Trained faculty reviewers rated student work (papers, presentations, poster, etc.) from their colleagues' classes. The first two rounds of assessment collected valuable, but limited, information on critical thinking competence at George Mason. They validated the assessment method in two critical areas:

- 1) synthesis courses, designed to provide students with the opportunity to synthesize the knowledge, skills, and values gained from the general education curriculum, are well situated to assess critical thinking (synthesis learning outcomes are available online at: <https://assessment.gmu.edu/Genedassessment/outcomes.cfm>); and,
- 2) faculty-led and course-embedded assessment is effective in "closing the loop" – the assessment results are most likely to be used by the faculty members involved to improve student learning. Several faculty members reported that they modified their course assignments or adapted the critical thinking rubric to use in their own courses.

The first two rounds of assessment were limited by faculty members' voluntary participation. In order to get a more comprehensive picture of the critical thinking skills of Mason students, the third round of critical thinking assessment was conducted *as part of faculty course portfolio assessment* for Mason's general education synthesis courses in spring 2010 using a modified method. A new critical thinking rubric was created and the collection of student work samples was more systematic. The following section summarizes the assessment process and results.

Critical Thinking Assessment Criteria

In spring 2010, a Critical Thinking Across the Curriculum (CTAC) faculty learning community was sponsored by the Center for Teaching Excellence (CTE). It was composed of eight faculty members who taught synthesis courses in that semester and several administrators and assessment professionals from

¹ The purpose of the synthesis course is to provide students with the opportunity to synthesize the knowledge, skills and values gained from the general education curriculum. Synthesis courses strive to expand students' ability to master new content, think critically, and develop life-long learning skills across the disciplines. Some synthesis course are open to all Mason students, some are also required courses in the major and some may be senior capstone courses.

the Provost Office. Among other things, the learning community members discussed and refined the definition of critical thinking for undergraduate education at Mason, developed a guiding rubric for critical thinking, and rated samples of student work collected from synthesis courses.

The faculty learning community adopted the following definition of critical thinking:

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. The capacity to combine or synthesize existing ideas, images, or expertise in original ways; thinking innovatively; and intellectual risk taking – all components of critical thinking - are part of the development of critical thinking (CTAC Faculty Learning Community, 2010).

The Development of Critical Thinking Rubric, proposed by the CTAC Faculty Learning Community, was adapted from the AAC&U VALUE rubrics for critical and creative thinking (see Attachment One). The rubric articulates fundamental criteria for the development of critical thinking, with performance descriptors demonstrating progressively more sophisticated levels of attainment. It provides a vision for the critical thinking competence that a Mason graduate is expected to demonstrate. The rubric includes the following elements:

1. Intellectual autonomy: Developing the critical thinker
2. Explanation of issues
3. Evidence
4. Influence of context and assumptions
5. Student's position (perspective, thesis/hypothesis)
6. Conclusions and related outcomes (implications and consequences)
7. Taking risks
8. Innovative thinking
9. Connecting, synthesizing, transforming

The rubric is designed to be trans-disciplinary and to be used for many different types of assignments. The CTAC Faculty Learning Community piloted the rubric using the student products collected from a representative array of synthesis courses.

Data Collection and Review of Student Work

In spring 2010, 40 synthesis courses (a total of 94 sections) were offered by 77 faculty members with a total enrollment of about 2,400 students. From a population that included almost every course², faculty members were randomly selected by the Office of Institutional Assessment (OIA) to participate in the general education synthesis assessment. Each identified faculty member was asked to create a course portfolio that consisted of a course syllabus, selected course assignments, samples of student work, and

² A few faculty members who participated in the general education assessment in social and behavioral sciences and global understanding in fall 2009 were exempted from the synthesis assessment.

the faculty member's reflection. The remaining faculty members who taught sections of synthesis courses were asked to submit samples of student work from an assignment that could best demonstrate students' critical thinking skills. OIA conducted a random sampling of 4-6 students from each section of the synthesis courses and asked the faculty members to provide one sample per randomly selected student.

By the end of May, 2010, more than 230 student work samples were collected (approximately 10% of the enrolled students). The sample size was further reduced to 151 in consideration of the review workload and the representativeness of the sample. The work samples came from 43 synthesis courses/sections taught by 42 faculty members (see Appendix Two: List of Courses and Sample Size). A majority of the work samples was in the form of written research papers submitted by individual students. The samples also included student presentation slides, portfolios, group papers and projects, and exam questions. Overall, 82% of the student work was completed individually and 19% collaboratively. The group sizes ranged from four to seven students.

Fifteen reviewers rated student work samples in June 2010. The CTAC Faculty Learning Community members made up the majority of the review team. Three faculty members who had participated in the previous critical thinking or scientific reasoning assessment were also invited for their expertise in science or engineering. All reviewers participated in a calibration session, in which they rated a sample paper together, shared their assigned ratings, and discussed discrepancies when they occurred. Following the calibration session, the reviewers broke up in teams and worked on their assigned courses.

Each student work sample was assessed for every element identified above using the following scale: "Novice," "Milestone: Emerging," "Milestone: Showing Strength," and "Expert/Advanced." To acknowledge that some elements in the rubric might not have been addressed in some assignments, a fifth category, "Not Addressed," was added to the grading rubric. Each work sample was reviewed by two reviewers.

Faculty Reviewer Ratings by Course Level (300 vs. 400)

The review results were analyzed and reported by course level because reviewers believed that the level of expectations should be set separately for 300-level courses and 400-level courses, although it should be noted that synthesis courses enroll both juniors and seniors. In 300-level synthesis courses, a majority of the students should demonstrate the level of "Milestone: Emerging," and in 400-level courses, a majority should demonstrate the level of "Milestone: Showing Strength."

Table 1 presents the mean score for each of the nine critical thinking elements and compares the means for 300-level courses with 400-level courses. Overall, students were rated relatively high in four areas: explaining issues, demonstrating intellectual autonomy, selecting and using evidence, and identifying and examining influence of context and assumptions. Student work samples were rated relatively lower in three areas: taking risks, innovative thinking, and connecting, synthesizing and transforming.

Statistically significant differences were found between the two levels of courses in two elements: taking risks (300-level mean = 1.67³ and 400-level mean = 2.08, p<0.01), and connecting, synthesizing, transforming (300-level mean = 1.84 and 400-level mean = 2.07, p<0.05). In both cases, 400-level student work samples demonstrated a *significantly higher level* of competence than 300-level work samples (Table 1).

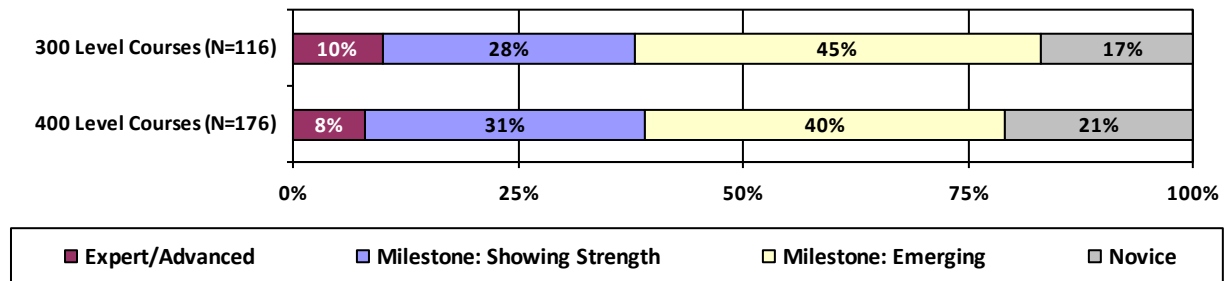
Table 1. Mean Score Comparison for Nine Critical Thinking Elements

Critical Thinking Elements	All Work Samples		300-Level		400-Level	
	Mean	SD	Mean	SD	Mean	SD
Intellectual Autonomy	2.28	0.87	2.30	0.87	2.27	0.88
Explanation of Issues	2.42	0.87	2.37	0.93	2.46	0.82
Evidence	2.24	0.89	2.25	0.85	2.24	0.93
Influence of Context and Assumptions	2.22	0.91	2.17	0.97	2.26	0.86
Student's Position (Perspective, Thesis/Hypothesis)	2.17	0.92	2.18	0.98	2.17	0.88
Conclusions and Related Outcomes	2.07	0.92	2.06	0.92	2.08	0.91
Taking Risks	1.87	0.87	1.67	0.91	2.08	0.78
Innovative Thinking	1.91	0.88	1.80	0.89	1.98	0.87
Connecting, Synthesizing, Transforming	1.98	0.91	1.84	0.92	2.07	0.89

Note. Mean values were calculated on a 1-4 point scale: 1=Novice, 2=Milestone: Emerging, 3=Milestone: Showing Strength, and 4= Expert/Advanced. "Not Addressed" responses were excluded from the calculation.

Figures 1-9 below presents the distribution of ratings for each critical thinking element excluding the "Not Addressed" responses. For Figures 1-9, "N" refers to the count of ratings, not the count of student work samples. Each sample was rated by two different reviewers for each of the nine critical thinking elements.

Figure 1. Intellectual Autonomy: Developing the Critical Thinker



³ Mean values were calculated on a 1-4 point scale: 1=Novice, 2=Milestone: Emerging, 3=Milestone: Showing Strength, and 4=Expert /Advanced. "Not Addressed" responses were excluded from the calculation.

Figure 2. Explanation of Issues

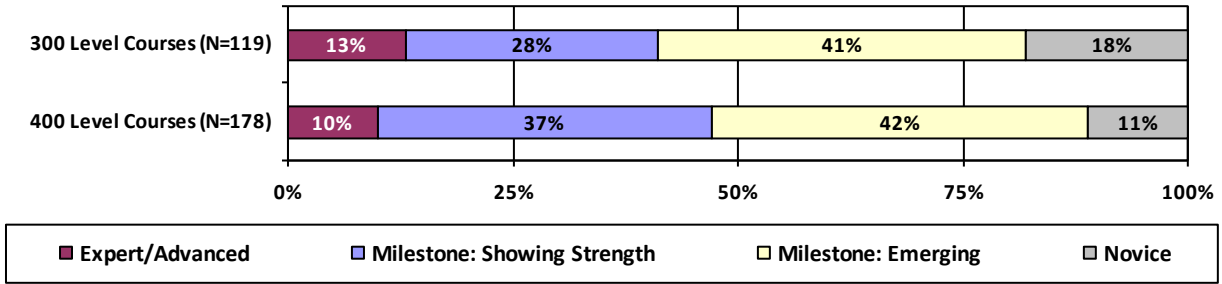


Figure 3. Evidence

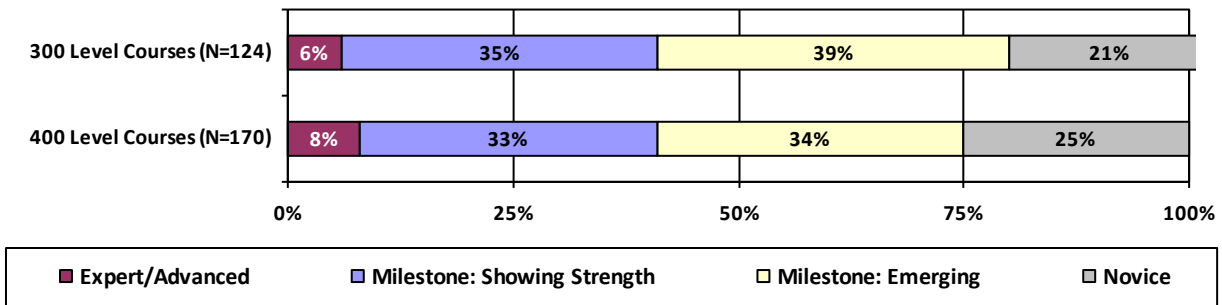


Figure 4. Influence of Context and Assumptions

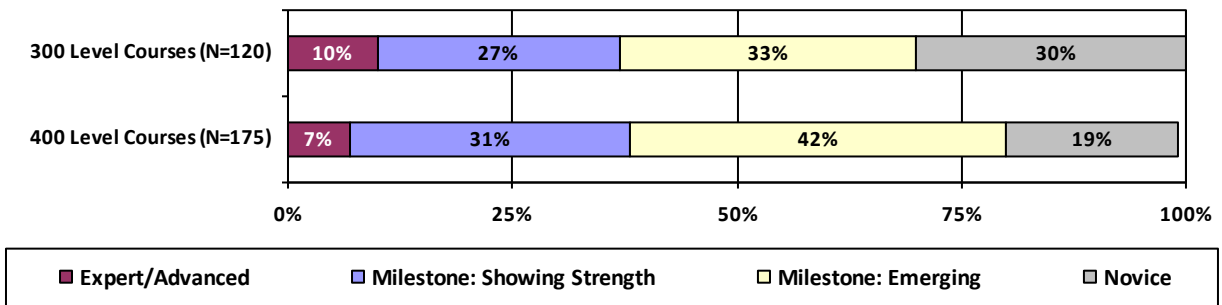


Figure 5. Student's Position (perspective, thesis/hypothesis)

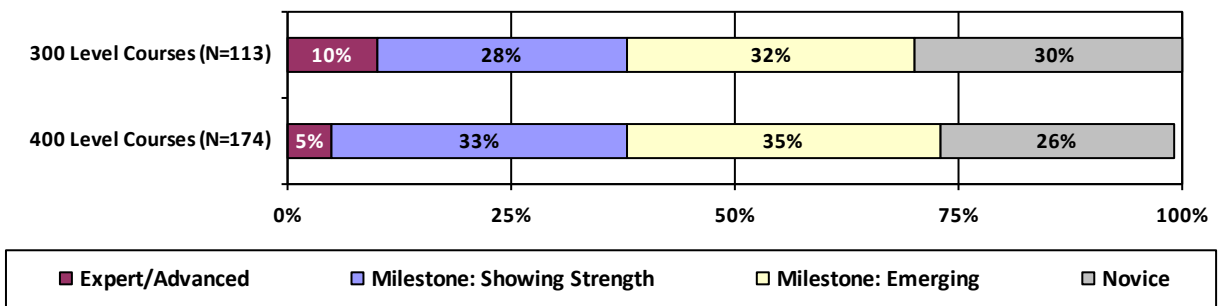


Figure 6. Conclusions and Related Outcomes

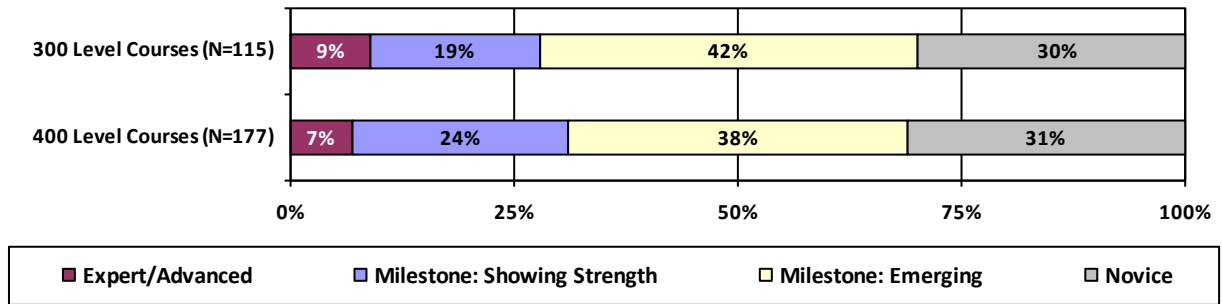


Figure 7. Taking Risks

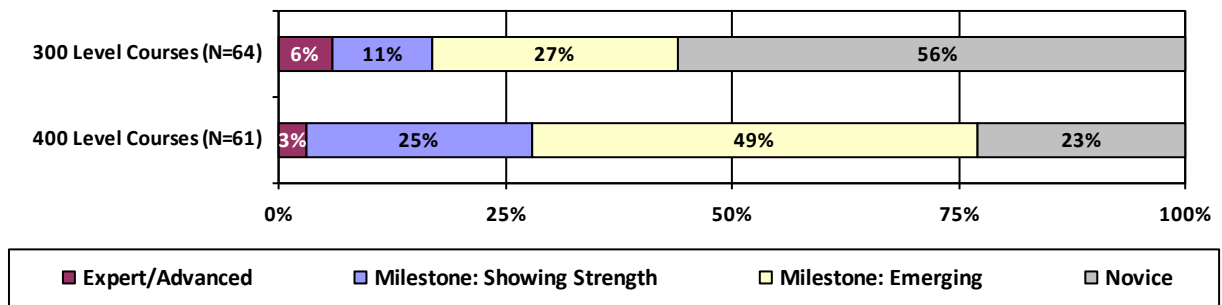


Figure 8. Innovative Thinking

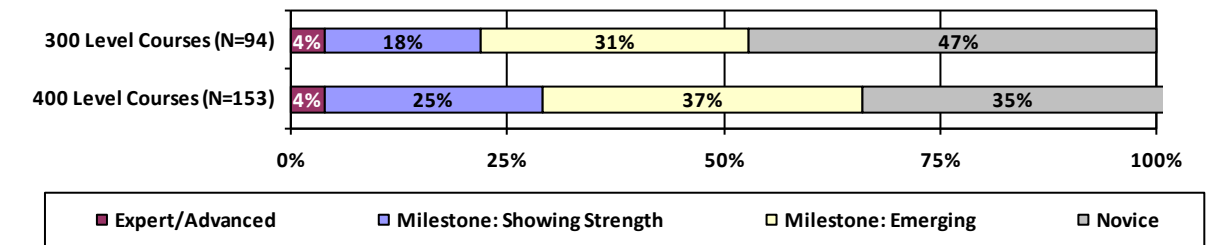


Figure 9. Connecting, Synthesizing, Transforming

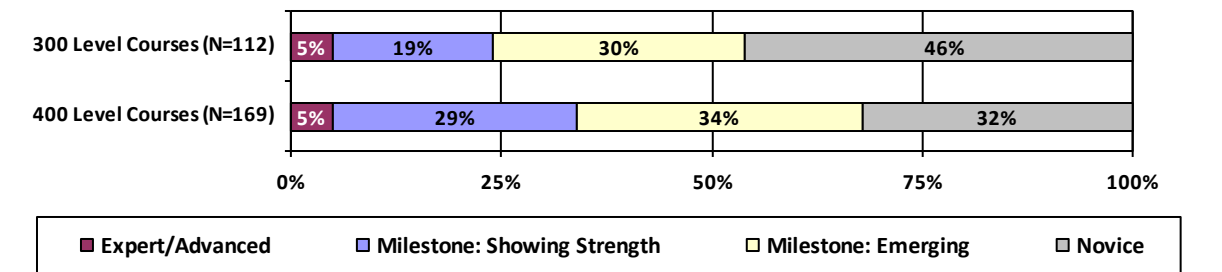
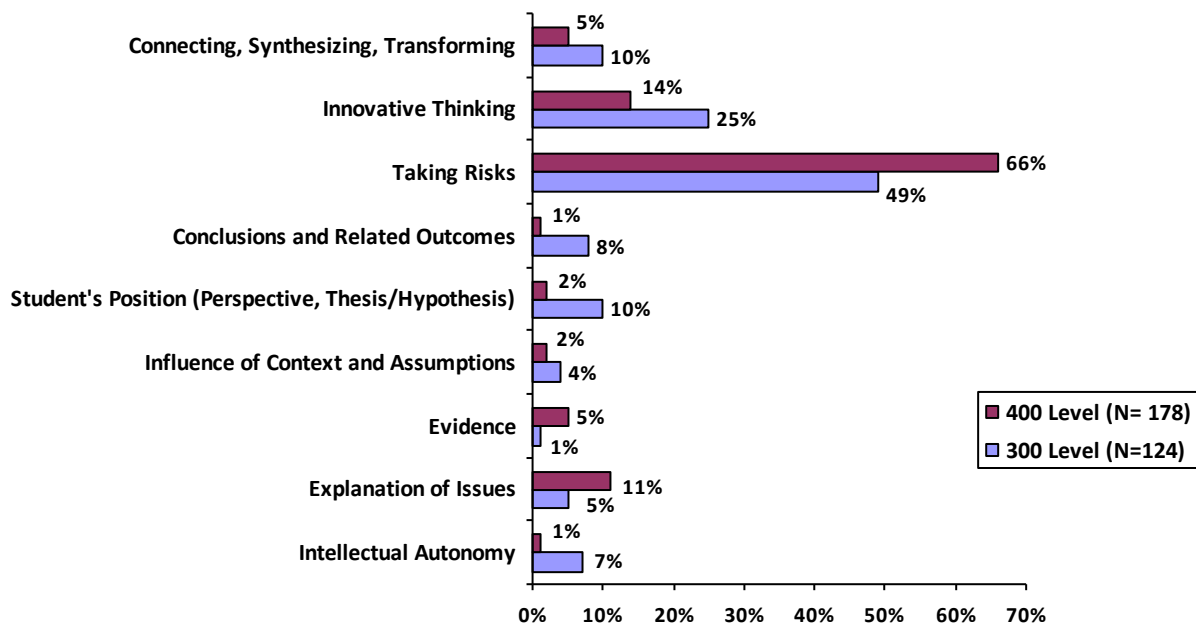


Figure 10 shows the percentage of 300-level and 400-level student work samples that **did not address** each of the identified critical thinking elements. In these cases, it is likely that the assignments, to which the students responded, did not require certain elements. Two thirds of the 400-level work samples and half of the 300-level samples showed no evidence of student taking risks (i.e., incorporating new directions or approaches to the assignment in the final product). Although to a much smaller degree, innovative thinking is another element that a relatively large proportion of the student work samples or the original assignments did not address. Almost all *400-level courses* included four elements: intellectual autonomy, influence of context and assumptions, student’s position, and conclusions and related outcomes. Almost all *300-level courses* asked students to explore, interpret or analyze evidence/source materials.

Figure 10. “Not Addressed” Ratings by Course Level



The assessment data were also analyzed by college (see Appendix Three for details). The charts presented illustrate differences between student work samples by college for each of the nine critical thinking elements. Student work from the **School of Management** (16 project reports submitted by student teams from the Capstone Course, SOM 498: Advanced Business Models) demonstrated a significantly higher level of competence than work from other colleges. College and course level results will be distributed to participating faculty members and the University General Education Committee in fall 2010.

Observations

Interpretation of the data from this assessment is purposely not aggregated into a single “Critical Thinking Score”. That decision is based upon an important goal of the assessment – to provide results enabling faculty to see where student performance is weak, and then use the disaggregated results to inform assignments and teaching efforts. A single score saying that student critical thinking is at a 2.9 level will not tell faculty what to address.

Another factor to consider is that the critical thinking assessment was conducted in tandem with assessment of the synthesis courses to see if they met criteria set by the University General Education Committee. All student work was embedded in these courses, and instructors selected the assignment they considered would best allow students to demonstrate critical thinking. This authentic method of assessment can present a sound picture based on student work rather than an outside, extra-class test.

Overall, students scored the highest in Explanation of the Issues, and lowest in Taking Risks. In 400 level courses, both Taking Risks and Connecting, Synthesizing and Transforming categories were rated significantly higher than in 300 level courses. Every category has some students at both 300 and 400 levels in the Expert/Advanced level.

The expectation that 300 level students would show a majority at “Emerging” or higher was met in all elements except for Taking Risks. The expectation that 400 level students would show a majority at “Showing Strength” or higher was not met. The closest to this rating was Explanation of Issues, with 47% of the samples rated “Showing Strength” or higher.

Besides rating student work, reviewers also provided comments on the assignments from which the student work came. Here are selected examples:

- A well set up internship program. A final summary could be expanded to include some of the above elements [on the critical thinking rubric].
- The assignment asked for very short papers. It was difficult to determine how much the student was able to meet all the critical thinking criteria as listed on the rubric because of lack of space to elaborate.
- Clear assignment & guide for students.
- What a marvelous way to structure a take-home exam, allowing for application of learned material and ways of thinking to new and relevant question, resulting in a live act of critical thinking and true synthesis.
- This course assignment does not call for critical thinking as articulated in the rubric: students are asked to summarize and report on readings and course material. The assignment does not call for position taking, critically engaging course work, or actively scrutinizing material.

As the data show, there is variation in student achievement by class level and by college. For example, the consistently high scores given to the work samples from SOM 498 and SYST 495 may be related to the design of the assignments. SOM 498, both a synthesis and a senior capstone course, has a standard assignment across sections. Students work in teams to analyze a specific industry and a specific firm within the industry. Students apply the framework and models they have learned to analyze a firm’s

external environment, its strengths and weaknesses, business-level and corporate level strategies, and provide recommendations to improve its competitive position. Students present their projects at the end of the course to a panel of SOM faculty and external reviewers. In SYST 495 (Senior Design Project), student teams, mentored by faculty, produced professional level work. Some of the papers were presented at a professional conference held at the University of Virginia. Two student teams gave presentations at a conference held at the U.S. Military Academy at West Point and both won the first place awards in their track. In these courses, collaboration, faculty mentorship, and the pressure from a public presentation have contributed to the quality of student work.

Several assignments from 300-level courses are also successful in fostering critical thinking skills. For example, the assignment from English 325, Dimensions of Writing and Literature, calls for a short essay on representing Nat Turner (history, literature and images). Students are required to do a literature analysis, construct their own interpretation of Nat Turner and the rebellion, and use images to support their thesis. Reviewers also gave positive feedback to the assignments from PHIL 309 (Bioethics) and BIOL 301 (Biology and Society).

Some reasons for variations in student achievement include the following:

- Professors did not have the new rubric as they prepared assignments that were reviewed in this assessment
- Not every element in the rubric is appropriate for every assignment, even though over the span of a course, all elements may be found
- Different expectations for 400 level and 300 level courses are normal
- Synthesis courses can be:
 - general , open to all students
 - major specific, open to those with prerequisites in the major
 - major specific only open to majors
 - senior capstone courses in the major

As occurred in the first two rounds of critical thinking assessment, the reviewers concluded that improving student critical thinking competence should start with designing and improving critical thinking assignments. The Development of Critical Thinking Rubric will be distributed among faculty members who teach synthesis courses and workshops on how to design critical thinking assignments will continue to be offered by the Center for Teaching Excellence. Another CTAC faculty learning community will be held in spring 2011 when a new group of faculty will share their experiences in fostering critical thinking in their courses and revisit the elements of critical thinking.

Appendix One: Development Of Critical Thinking Rubric

~ Adapted for George Mason University from the AAC&U Critical Thinking VALUE Rubric

Overview

This rubric was adapted from the AAC&U VALUE rubrics for critical and creative thinking by an interdisciplinary team of faculty participating in a Critical Thinking Across the Curriculum [CTAC] faculty community. The rubric articulates fundamental criteria for the development of critical thinking, with performance descriptors demonstrating progressively more sophisticated levels of attainment. It provides a vision for the kinds of graduates we want to send into the world; that is, where we want students to be when they leave Mason.

The rubric's uses are twofold. First, it is intended as a framework for faculty to use as they reflect on strategies and assignments they implement to develop students as critical thinkers in their classrooms. Faculty might reflect on the opportunities to set students on this developmental trajectory and to show improvement in the development of critical thinking at course, program, or institutional levels. It provides a macro-level view of how students grow, progress, and/or evolve in the development of their critical thinking during their academic careers. Secondly, the rubric is intended for institutional-level use in evaluating and discussing student learning. It may also afford the opportunity to examine the development of critical thinking competencies within and/or across units.

Scholars in this field point to the key importance of dispositions, or habits of mind, in the development of students as critical thinkers. Thus, the rubric begins with the criterion, intellectual autonomy, *as a precondition* for the development of specific critical thinking competencies as articulated in the remainder of the rubric. The target, for those who teach critical thinking, is to talk with students about the dispositions or habits of mind of the critical thinker as the development of the cognitive skills proceeds and to encourage them to be reflective about themselves as critical thinkers.

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. The capacity to combine or synthesize existing ideas, images, or expertise in original ways; thinking innovatively; and intellectual risk taking – all components of creative thinking – is part of the development of critical thinking.

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 matters of personal and professional contexts, specifically, but not exclusively, the vocations, the professions, industry, and commerce.

Assessment of Work Samples

This rubric is designed for use with many different types of assignments and the suggestions here are not an exhaustive list of possibilities. The development of critical thinking can be demonstrated in assignments that require students to complete analyses of text, data, or issues. Research papers, lab reports, musical compositions, a mathematical equation that solves a problem, or a prototype design are all examples of work samples that could be assessed. 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.

DEVELOPMENT OF CRITICAL THINKING RUBRIC

~ Adapted for George Mason University from the AAC&U 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. The capacity to combine or synthesize existing ideas, images, or expertise in original ways; thinking innovatively; and intellectual risk taking – all components of creative thinking – is part of the development of critical thinking.

NOTE: When used as an assessment tool, evaluators will be asked to note any work sample or collection of work that does not meet novice level performance. Not all elements will be applicable to all teaching situations.

	Entry-level Courses	Synthesis Courses		Capstone Courses
	Novice	Milestone: Emerging	Milestone: Showing Strength	Expert/ Advanced
Intellectual autonomy: <i>Developing the Critical Thinker</i>	Typically a dualistic view of the world (black/white, right/wrong) and is dependent on authority. There is reluctance to examine counter-argument. Student has unrealistic view of self as well as unfocused concern with work organization, study skills, and intellectual habits of mind.	Students begin to recognize multiple perspectives and demonstrate courage as they begin to take risks with ideas. There is a developing determination to succeed and perseverance. Developing self-knowledge, e.g., the acceptance one might be wrong, seeking out knowledge, learning skepticism. Early awareness of study skills and organization weaknesses.	There is developing confidence in reasoning and argument where the student approaches knowledge questions analytically. Qualities include fair-mindedness and an opening up to others' view points and arguments. Shows empathy with the situations of others (fellow- students, writers, artists). Developing definition of self as student through self-discipline (e.g., punctual, taking pride in one's work, no procrastination).	Intellectual integrity is evidenced (e.g., search for counter-arguments, search for evidence); student grasps the contextual character of knowledge and that knowledge is constructed. Student demonstrates intellectual humility through realizing the evolving and temporary character of knowledge. There is realistic self-appraisal of one's strengths and limitations.
Explanation of issues	Issue/problem to be considered critically is stated without clarification or description.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unstated.	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 clearly and described comprehensively, delivering all relevant information necessary for full understanding.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.	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 exploration.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are explored.	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are explored in depth.

	Entry-level Courses	Synthesis Courses		Capstone Courses
	Novice	Milestone: Emerging	Milestone: Showing Strength	Expert/ Advanced
Influence of context and assumptions	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.	Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Identifies and examines own and others' assumptions and several relevant contexts when presenting a position.	Systematically and methodically analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.
Student's position (perspective, thesis/ hypothesis)	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	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) 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).
Conclusions and related outcomes (implications and consequences)	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.	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 logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	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.
Taking risks <i>May include personal risk or risk of failure in successfully completing assignment.</i>	Stays strictly within the guidelines of the assignment.	Considers new directions or approaches without going beyond the guidelines of the assignment.	Incorporates new directions or approaches to the assignment in the final product.	Actively seeks out and follows through on untested and potentially risky directions or approaches to the assignment in the final product.
Innovative thinking <i>Novelty or uniqueness (of idea, claim, question, form, etc.)</i>	Reformulates a collection of available ideas.	Experiments with creating a novel or unique idea, question, format, or product.	Creates a novel or unique idea, question, format, or product.	Extends a novel or unique idea, question, format, or product to create new knowledge or knowledge that crosses boundaries.
Connecting, synthesizing, transforming	Recognizes existing connections among ideas or solutions.	Connects ideas or solutions in novel ways.	Synthesizes ideas or solutions into a coherent whole.	Transforms ideas or solutions into entirely new forms.

Appendix Two: List of Courses and Sample Size

Course	Course/Section Title	Sample Size*
ADJ 303 001	Experiencing the Criminal Justice System	3
ADJ 303 002	Experiencing the Criminal Justice System	3
ARTH 394 001	The Museum	4
AVT 497 001	Senior Project	3
BIOL 301 001	HIV/AIDS	4
BIOL 301 003	Bioethics	4
BIS 490 001	Bachelor of Individualized Study Project	3
CEIE 490 201	Senior Design Project	3
COMM 362 001	Argument and Public Policy	4
COMM 454 002	Free Speech and Ethics	4
CONF 490 001	Integration	4
DANC 490 001	Senior Dance Seminar	3
ECON 309 002	Economic Problems and Public Policies	3
ENGL 325 001	Dimensions of Writing and Literature	4
ENGL 325 003	Dimensions of Writing and Literature	4
ENGL 325 004	Dimensions of Writing and Literature	4
GEOG 303 002	Conservation of Resources/Environment	4
GOVT 490 003	Great Powers and Grand Strategies	4
GOVT 490 004	Science, Technology, International Affairs	4
HEAL 490 001	Internship Community Health Education	1
HHS 465 004	Examination and Integration of Professional and Health Care Issues	4
HHS 465 006	Examination and Integration of Professional and Health Care Issues	4
HHS 465 009	Examination and Integration of Professional and Health Care Issues	4
HIST 300 001	Introduction to Historical Method	3
HIST 300 002	Caesar and Augustus	4
HIST 499 001	Third Reich and Holocaust	4
HIST 499 002	Revolutionary Russia	4
HIST 499 003	Underground Railroad	4
IT 492 002	Senior Design Project I	4
IT 492 005	Senior Design Project I	3
MATH 400 001	History of Mathematics	4
PHED 415 001	Student Teaching in Physical Education	4
PHIL 309 004	Bioethics	4
PHIL 309 005	Bioethics	4
PHIL 378 001	Reason, Science, Faith in Modern Age	3
RUSS 353 001	Russian Civilization	3
SOM 498 002	Capstone Course: Advanced Business Models	4
SOM 498 008	Capstone Course: Advanced Business Models	5
SOM 498 009	Capstone Course: Advanced Business Models	4
SOM 498 010	Capstone Course: Advanced Business Models	3
SPMT 490 001	Internship	1
SYST 495 001	Senior Design Project II	2
TOUR 490 001	Internship in Tourism	2

** Sample size refers to the number of work samples reviewed by the faculty teams.*