

**Ad Hoc Assessment (AHA) Team Report**  
**Liberal Education Program (LEP) Critical Thinking Outcome**  
**Southwest Minnesota State University (SMSU)**  
**October 2015**

**TEAM MEMBERS**

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**OUTCOME**

Be critical thinkers who evaluate information wisely and examine how assumptions and positions are shaped.

- Demonstrate information literacy by accessing, utilizing, formatting, citing, and documenting relevant material accurately and correctly.
- Interpret arguments by correctly identifying relevant premises, conclusions, and key assumptions.
- Evaluate the extent to which evidence is reasonable, relevant, accurate, and sufficient to support intended claims.
- Formulate clear, well-supported arguments.
- Engage in civil discourse, self-reflection, and consideration of other points of view.

**RUBRICS**

- Critical Thinking Rubric (see Appendix A)
- Information Literacy Rubric (see Appendix B)

**RELEVANT COURSES & CO-CURRICULAR ACTIVITIES**

Since this is the first ever assessment report for the critical thinking outcome, the team initially had to identify relevant courses. To do this, during both Fall 2014 and Spring 2015 semesters the team distributed a survey to faculty teaching courses addressing critical thinking (see Appendix C). The survey was used to identify relevant courses, determine if the LEC-approved rubrics for Information Literacy and Critical Thinking were being used, and determine which critical thinking sub-outcomes were being addressed and analyzed in the courses. At the February 2015 Assessment Day, the team also updated the faculty on our quest for data and provided our primary target areas as noted below.

Courses initially identified by the committee as relevant to the critical thinking outcome included:

- All sections of LEP 100: First Year Seminar
- All sections of LEP 400: Contemporary Issues Seminar
- PHIL 101: Critical Thinking

- PHIL 303: Ethical Issues in Professional Life
- ENG 251: Writing in Professions
- Each major's Capstone Course (Table indicates those identified in online catalog as of October 2015)

ACCT	445
AGBU	440
AGRO	415
BIOL	487
BIOL	499
CHEM	420
CHEM	470
COMM	450
COMM	488
COMP	492
COMP	493

CULG	490
ENG	492
ENVS	400
EXCS	475
EXCS	499
FIN	492
HIST	487
HOSP	460
JUAD	498
LIT	495
MATH	480

MGMT	491
MKTG	491
NURS	450
PE	497
PHIL	432
PSYC	420
SOCI	495
SWRK	485
THTR	430

- Each major's Communication/Critical Thinking Course (often called "Core Skills Course")  
(Table indicates those identified in online catalog as of October 2015)

<b>ACCT</b>	445
<b>AGBU</b>	440
<b>AGBU</b>	495
<b>BIOL</b>	487
<b>BIOL</b>	499
<b>CHEM</b>	420
<b>CHEM</b>	470
<b>COMM</b>	360
<b>COMM</b>	410
<b>COMM</b>	425
<b>COMP</b>	492

<b>COMP</b>	493
<b>ENG</b>	360
<b>ENVS</b>	400
<b>FIN</b>	492
<b>HIST</b>	487
<b>LIT</b>	306
<b>LIT</b>	321
<b>LIT</b>	322
<b>MATH</b>	480
<b>MGMT</b>	492
<b>MKTG</b>	491

<b>MUS</b>	370
<b>NURS</b>	450
<b>PE</b>	497
<b>PHIL</b>	432
<b>PSYC</b>	309
<b>PSYC</b>	312
<b>PSYC</b>	320
<b>PSYC</b>	333
<b>SOCI</b>	495
<b>SWRK</b>	402
<b>THTR</b>	435

Although our group didn't pursue data from ENG 151: Academic Writing and COMM 110: Essentials of Speaking and Listening, it was discussed at the end of our assessment cycle that these courses could also be considered for assessing critical thinking. Additionally, it is likely that there are other courses instructors could identify as being relevant to this outcome as we move along in the systematic assessment cycle.

As this is the initial report for the critical thinking goal, curricular changes have not occurred as a result of the outcome's assessment. In this initial assessment no co-curricular activities were identified as directly associated with this goal.

## LEP 100: First Year Seminar

### Assessment Measures

LEP 100 was a new course in the redesigned Liberal Education Program (LEP). Along with LEP 400: Contemporary Issues Seminar, this course serves as a bookend course for the Liberal Education Program. Each section of LEP 100, also known as First Year Seminar or FYS, emphasizes the basic skills of critical thinking, information literacy, the meaning of a liberal arts education, and the importance of campus involvement. The following core objectives are central to the course:

1. An introduction to university education, and also the social and intellectual community of Southwest Minnesota State University.
2. **An introduction to** critical thinking. This includes the ability to construct arguments, evaluate claims and evidence, and consider multiple points of view.
3. **An introduction to** research skills and informational literacy, including use of our library's collection of books, periodicals, and online resources.
4. A greater understanding of the section's theme.

After courses in the revised Liberal Education Program were first offered in Fall 2010, the Liberal Education Committee (LEC) focused initial assessment efforts on LEP 100 First Year Seminar. The Faculty Assembly had had difficulty coming to consensus regarding the critical thinking outcome's objectives and placement in the curriculum. With almost all entering freshmen required to take this new course, the LEC wanted to determine how well the intended curriculum was operating programmatically in addition to accomplishing the critical thinking outcome associated with the course. Although SMSU had participated in a trial of the *College Learning Assessment* (CLA) exam with other MnSCU institutions, the LEC did not think the test accurately measured critical thinking as outlined in the SMSU objectives. Consequently, the LEC decided to pilot the *Critical Thinking Assessment Test* (CAT). Overall, the results of

the pilot study indicated some, albeit modest and inconsistent, evidence of improvement toward the critical thinking outcome of FYS students at SMSU. However, after several administrations of the test and comparison of what the test measured to how critical thinking is discussed and taught in the LEP sections, the LEC determined that the CAT exam was not the best instrument. The CAT focuses heavily on inductive reasoning and not the deductive reasoning and argument analysis that many of the FYS instructors teach in the class, per the SmSUFA-approved approach to critical thinking. Given the mismatch of the CAT with LEP 100's critical thinking outcomes, the LEC decided to require an adapted version of *The Ennis-Weir Critical Thinking Essay Test*. This measure is a better match with the curriculum. The use of this method was first required in all sections in Fall 2013.<sup>1</sup>

Beginning in Fall 2013, all instructors of LEP 100: First Year Seminar were required to give and grade a modified version of *The Ennis-Weir Critical Thinking Essay Test*. According to the test instructions, "*The Ennis-Weir* is a general test of critical thinking ability in the context of

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<sup>1</sup> This paragraph has been adapted from the "SMSU 2014 Higher Learning Commission Self-Study," 181-182.

argumentation.”<sup>2</sup> “The test is intended to evaluate a person’s ability to appraise an argument and to formulate in writing an argument in response, thus recognizing a creative dimension in critical thinking ability.”<sup>3</sup> Although the version of the test SMSU instructors are required to give has been modified to make it easier to grade, it still evaluates the same abilities as the original test. The original test requires evaluation of an eight paragraph letter to the editor called “The Moorburg Letter.” Test takers are to write a paragraph evaluating the reasoning in each of the eight paragraphs and then write another paragraph evaluating the reasoning in the letter as a whole. The modified version of the test calls for students to identify the specific conclusion of the letter, make short judgements on the reasoning in each of the eight paragraphs of the letter, and then write a paragraph evaluating the reasoning in the letter as a whole. The best score one can get on the modified Moorburg Letter test is twenty-nine (29).

According to the “Instructors Manual for LEP 100: First Year Seminar (FYS)” that was compiled by the Southwest Minnesota State University Liberal Education Committee and instructors of First Year Seminar in April 2015, “FYS instructors will be asked to assist with assessment of the LEP by administering a common critical thinking assessment tool and other assessment measures. Instructors must give and grade the Modified *Ennis-Weir* assessment using ‘The Moorburg Letter’ as a pre-test and post-test. The pre-test should occur in the first 1-2 weeks of the course and the post-test in the last 1-2 weeks of the course. Although students may receive their scores on ‘The Moorburg Letter’ pre-test, instructors *cannot* go over the letter with their students after the pre-test as that would corrupt data from the post-test. After the post-test, however, instructors may go over ‘The Moorburg Letter’ with their students. At the end of each semester pre-test and post-test scores for each student must be forwarded to the Liberal Education Committee for assessment purposes.”<sup>4</sup>

For a copy of “The Moorburg Letter,” “Directions for the Modified Moorburg Letter,” “The Modified Moorburg Letter Scoring Sheet,” and “The Modified Moorburg Letter Scoring Sheet with Answers,” see Appendices D-G.

### Summary of Assessment Measures Data

At the time this report was written in October 2015, the modified *Ennis-Weir Critical Thinking Essay Test*, also known as “the modified Moorburg Letter,” had been required in sections of LEP 100 for four (4) semesters: Fall 2013, Spring 2014, Fall 2014, and Spring 2015. During that time period twenty-one (21) different instructors taught thirty-six (36) different sections of LEP 100. Although two (2) of the instructors have since retired, all of the other nineteen (19) LEP 100 instructors were contacted for their

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<sup>2</sup> Robert H. Ennis and Eric Weir, *The Ennis-Weir Critical Thinking Essay Test* (Pacific Grove, CA: Midwest Publications, 1985), 1.

<sup>3</sup> *Ibid.*

<sup>4</sup> “Southwest Minnesota State University Liberal Education Committee and Instructors of First Year Seminar Instructors Manual for LEP 100: First Year Seminar (FYS),” (April 2015): 7-8

Moorburg Letter data; eleven (11) of these instructors provided data on the modified Moorburg Letter.<sup>5</sup> The eleven (11) instructors provided data for twenty-one (21) of the thirty-six (36) sections of LEP 100. This means we have modified Moorburg Letter data from 58% (11/19) of current LEP instructors and 58% (21/36) of all sections of LEP 100 taught in 2013-2014 and 2014-2015. The following table summarizes the type of assessment data submitted.

### Types of Moorburg Letter Assessment Data Submitted for LEP 100

Instructor	Sections Taught	Type of Data Submitted	Was the Data Analyzed?	Evidence the Instructor is Using This Data to “Close the Loop”? <sup>6</sup>
1	1	Raw numbers	No	No
2	1	Raw numbers, average, and percent change	No	No
3	3	Range, average, median, and mode	Yes	Yes
4	2	Average, high, low, standard deviation	Yes	Yes
5	4	Average, median, high, low, mode, and statistics on conclusion identification	Yes	Yes
6	1	Mean, median, mode, range	No	No
7	1	Raw numbers, net change	No	No
8	2	Median, mean, high, low, and statistics on identifying the following: arguments from non-arguments, argument forms, implied premises, conclusions, and fallacies	Yes	No
9	2	Raw numbers and mean	No	No
10	2	Raw numbers	No	No
11	1	Raw numbers	No	No
12	1	Raw numbers and mean, but for original version of test	No	No

Of the eleven (11) instructors who submitted data on the modified Moorburg Letter, 64% (7/11) provided raw numbers and/or the mean or average and no analysis (1, 2, 6, 7, 9, 10, 11). Another 9% (1/11) provided information such as the median, mean, and other statistics and analyzed that data (8).

<sup>5</sup> Another instructor (#12) submitted data, but the data was for the original version of *The Ennis-Weir Critical Thinking Essay Test*. Because that version uses a different scoring method, that instructor’s data does not appear in the table titled “Overall Summary of All Moorburg Letter Assessment Data Submitted for LEP 100” on the next page. Counting this data, we have data from 63% (12/19) of LEP instructors and 61% (22/36) of the sections of LEP 100.

<sup>6</sup> In retrospect, our request for “data” might have been interpreted as only numbers rather than numbers, analysis, and evidence of closing the assessment loop. We didn’t specifically ask for evidence that instructors were closing the assessment loop. However, we did receive this kind of information from three instructors. This suggests that if instructors had this kind of information, they gave it to us.

Finally, another 27% (3/11) provided information such as the average, analyzed that data, and provided evidence that the instructor is using that data to “close the loop” (3, 4, and 5). In short, only 27% (3/11) of the instructors submitting data and 16% (3/19) of current LEP instructors overall appear to be collecting data about average scores on the modified Moorburg Letter pre-test and post-test, analyzing it, and using this information to make changes to how they teach the course.

**Overall Summary of All Modified Moorburg Letter Assessment Data Submitted for LEP 100**

<b>Instructor</b>	<b>Pre-test Average</b>	<b>Post-test Average</b>	<b>Increase</b>	<b>Percentage Increase</b>
1	3.89	5.58	1.69	43.44
2	15.09	17.23	2.14	14.18
3	6.85	10.95	4.1	59.85
3	8.10	9.85	1.75	21.60
3	7.25	9.37	2.12	29.24
4	12.95	16.77	3.82	29.49
4	16.00	18.00	2.00	12.50
5	8.88	10.95	2.07	23.31
5	9.61	13.35	3.74	38.92
5	7.62	10.74	3.12	40.95
5	10.11	11.23	1.12	11.08
6	8.25	17.4	9.15	110.91
7	6.35	7.92	1.57	24.72
8	9.08	13.96	4.88	53.74
8	9.61	16.05	6.44	67.01
9	6.06	9.24	3.18	52.48
9	8.80	11.96	3.16	35.91
10	14.64	14.81	.17	1.16
10	13.00	13.68	.68	5.23
11	8.77	10.60	1.83	20.87
<b>Averages</b>	<b>9.55</b>	<b>12.48</b>	<b>2.94</b>	<b>34.83</b>

**Analysis of All Moorburg Letter Assessment Data Submitted for LEP 100**

We have Moorburg Letter data (in the modified and original versions) from 63% (12/19) of current LEP instructors and 61% (22/36) of the sections of LEP 100 taught in 2013-2014 and 2014-2015. The information provided by these LEP instructors—including instructor #12 who used the original version of the test instead of the modified version—indicates that their students’ critical thinking abilities improved. Students in the twenty-one (21) sections given the modified Moorburg Letter exam averaged 9.55/29 on the pre-test and 12.48/29 on the post-test. The average increase was thus 2.94, and the average percentage increase was 34.83%. While this committee wishes it had modified Moorburg Letter data from the seven (7) other LEP instructors and more specific data (for example, data about how many students were able to correctly identify the specific conclusion of the letter in the pre-test vs. the post-test), the available data suggests that LEP 100 does improve students’ critical thinking abilities. Students did better on the modified Moorburg Letter (and original Moorburg Letter) after they

had studied critical thinking for at least six (6) weeks, the minimum amount of time LEP 100 instructors are required to spend on critical thinking.<sup>7</sup>

### **Recommendations for Closing the Assessment Loop**

1. The Liberal Education Committee and/or Committee for Institutional Assessment (CIA) should periodically educate instructors on recommended critical thinking assessment measures for LEP 100, such as the modified Moorburg Letter.
2. The Liberal Education Committee (LEC) should require that all LEP 100 instructors live up to their agreement to “participate in the FYS assessment process” by giving the modified Moorburg Letter as pre-test and post-test and providing assessment data to the LEC.<sup>8</sup>
3. To facilitate the gathering of useful data, this committee recommends that the Instructors Manual for LEP 100: FYS provide guidance regarding what kind of assessment data should be gathered and how it can be analyzed and used to close the loop. For example, the manual should include the “LEP 100: First Year Seminar: Modified Moorburg Letter Assessment Template” (see Appendix H) as a means of gathering such information as the mean, median, and mode of each test, along with statistics on conclusion identification. The assessment template also requires that all LEP 100 instructors analyze their own data and use that information to close the assessment loop.
4. The “LEP 100: First Year Seminar: Modified Moorburg Letter Assessment Template” should be completed and passed on to the Liberal Education Committee within six (6) weeks of the end of the course.
5. Departments should not schedule instructors who refuse to participate in the assessment process and/or fail to submit the assessment template on time to teach LEP 100 until these instructors fully participate in FYS assessment by submitting assessment data such as the “LEP 100: First Year Seminar: Modified Moorburg Letter Assessment Template” to the LEC and/or CIA.
6. Should a signature assignment (in addition to completing the modified Moorburg Letter Assessment and Modified Moorburg Letter Assessment Template) be considered across all sections of LEP100? Such an assignment could be evaluated with the critical thinking rubric.

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<sup>7</sup> “Instructors Manual for LEP 100: FYS,” 3.

<sup>8</sup> *Ibid.*, 11. See pages 7-8 as well.

## LEP 400: Contemporary Issues Seminar

### Assessment Measures

The Contemporary Issues Seminar (CIS) is an inter-disciplinary offering that serves as a bookend course, along with LEP 100, for the Liberal Education Program. Since Fall 2011, the course has been a graduation requirement. The first sections were taught in Summer 2013. The following chart highlights the number of sections taught, in what mode, and how many students took the course during the first two years it was offered:

Semester	# of Sections	# Online	# Hybrid	# Face to Face	Total # of Students
Summer 2013	3	3	0	0	37
Fall 2013	6	3	0	3	146
Spring 2014	14*	2	2	10	272
Summer 2014	4	4	0	0	115
Fall 2014	5	4	0	1	124
Spring 2015	12*	2	0	10	276

\* indicates two of these sections were stacked courses; those sections included partial registration for LEP400 and partial registration for the corresponding major course

CIS is taught by faculty from across the university. Faculty are required to submit a proposal addressing how the course will meet the Creative Thinking Student Learning Outcome (the primary outcome of the course) as well as agree to the following:

- This class will focus on the LEP outcome of creative thinking.
- This class will explore connections across all Learning Outcomes of the LEP.
- This class will explore connections between academic majors and other disciplines.
- This class will emphasize active, participative learning over lectures.
- This class will participate in university assessment of the Core Skills of the LEP.

To date, 25 faculty members have suggested 26 different topics for LEP 400 which have been approved by the Liberal Education Committee.

As requests for assessment data went out to faculty teaching LEP 400, there was confusion about what assessment data was being requested. The Creative Thinking Assessment committee was also soliciting assessment information at the same time as this Critical Thinking committee. Since the primary focus of LEP 400 is the creative thinking outcome perhaps that is where the assessment emphasis was directed as the critical thinking team received minimal data.

Although creative thinking is the primary outcome, it should be noted that as part of that approval process, faculty agree to participate in assessment of the Core Skills of the LEP – one of which is critical thinking. Along with the checkbox noted above, the LEP 400 Proposal Form states:

Another objective of Contemporary Issues Seminar is to provide an opportunity to conduct formative and summative assessments of the core skills of communication, critical thinking, and



information literacy in our students. This assessment process begins in the First-Year Seminar and concludes in the third or fourth year when students take CIS. These two courses are the “bookends” of our Liberal Education Program.

From the four LEP 400 sections that submitted critical thinking assessment data, the measures used included course exit surveys and final projects assessed using the SMSU Critical Thinking Rubric.

**Summary of Assessment Measure Data**

The two sections that utilized an exit survey took different approaches. Both exit surveys required students to be self-reflective about what they learned in the course and to discern if they believed the student learning outcomes were met. One section listed the student learning outcomes for the course (none of which explicitly ask about critical thinking) and asked open-ended questions for students to address in an online discussion forum. The other section also asked open ended questions, but requested responses for each individual student learning outcome. The final question in the survey asked: *Do you think what you learned in this course has the potential to alter choices you may make in the future? Explain.* Responses relevant to critical thinking were included.

The course projects that were assessed in three sections using the SMSU Critical Thinking Rubric provided specific results related to critical thinking. The faculty provided data summarizing where students were on the rubric, but did not include a narrative about how those results would influence teaching in future sections. The data gathered in LEP 400 using the critical thinking rubric is extremely valuable for considering curricular adjustments; however, the limited number of sections utilizing the rubric is inadequate to make recommendations.

One section of LEP 400 utilized the entire rubric to assess a project presentation. Results and narrative for the 25 students in that that section were:

CRITICAL THINKING ASSESSMENT RESULTS LEP SPRING 2015 (25 Research-Based, PowerPoint Presentations Assessed)			
	Emerging	Developing	Advanced
1. Interpret Problems, Questions, Issues or Arguments	1	3	21
2. Evaluate Reasons and Evidence	2	4	19
3. Construct Arguments/Formulate Hypotheses	1	4	20
4. Reasoned Approach to Using Information	4	8	13
5. Dispositions Towards Critical Thinking	1	3	21

*Instructor's Narrative Response:* "I evaluated each PowerPoint during and/or right after the student's presentation. I did not expect to find any 'Emerging' traits in a senior-level class. This was concerning. These were the easiest to document, however, in that weaknesses of this degree are glaring in a room full of seniors. The weakest link (number 4) came in the form of students being proud of having found a ton of research in their area yet failing to evaluate the validity of their sources or to offer the breadth of differing perspectives on the topic."

The second section utilized two portions of the critical thinking rubric to assess specific learning outcomes. This section assessed a presentation and annotated bibliography, for 24 students and found the following outcomes:

Outcome 4.4 Formulate clear, well-supported arguments

- Assessed using SMSU LEP Critical Thinking Rubric Criteria #3. Construct Arguments/Formulate Hypotheses
- Results: 50% (12 students) were at the Developing Level and 50% (12 students) were at the Advanced Level

Outcome 4.1 Demonstrate information literacy by accessing, utilizing, formatting, citing, and documenting relevant material accurately and correctly

- Assessed using SMSU LEP Critical Thinking Rubric Criteria #4 Reasoned Approach to Using Information
- Results: 25% (6 students) were at the Developing Level and 75% (18 students) were at the Advanced Level

The third section utilized the entire critical thinking rubric, but did not provide narrative data to the assessment team. The rubric was used to assess 24 oral presentations.

<b>Critical Thinking Rubric</b>	<b>Emerging</b>	<b>Developing</b>	<b>Advanced</b>
1. Interpret Problems, Questions, Issues or Arguments	4	6	14
2. Evaluate Reasons and Evidence	3	8	13
3. Construct Arguments/Formulate Hypotheses	1	12	11
4. Reasoned Approach to Using Information	1	17	6
5. Dispositions Towards Critical Thinking	1	12	11

Looking at all three sections that utilized the critical thinking rubric, this is the summary of the data:

<b>Critical Thinking Rubric</b>	<b>Emerging</b>	<b>Developing</b>	<b>Advanced</b>
1. Interpret Problems, Questions, Issues or Arguments	5	9	35
2. Evaluate Reasons and Evidence	5	12	32
3. Construct Arguments/Formulate Hypotheses	2	28	43
4. Reasoned Approach to Using Information	5	31	37
5. Dispositions Towards Critical Thinking	2	15	32
<b>TOTALS</b>	<b>19</b>	<b>95</b>	<b>179</b>

The limited amount of data retrieved from four sections of LEP 400 does not support making significant curricular changes. The data demonstrates the majority of the students in these limited number of LEP 400 sections are at the Advanced Level on the assessed critical thinking measures, but a significant number remain at the developing level. The data at the Emerging level is particularly concerning considering students have to have a minimum number of credits, meet a number of prerequisites, and be in their third or fourth year of college to enroll. Without a larger sample, it is difficult to discern the significance of each set of numbers.

### **Recommendations for Closing the Assessment Loop**

1. For LEP 400, a consistent use of the LEP rubrics (Critical Thinking, some portions of the Information Literacy Rubric, and the Writing Rubric - if a major writing assignment is included) across all LEP 400 sections would be useful in gathering assessment data. Enough data has not been gathered to make curricular recommendations.
2. After a few semesters of regularly collected data using the rubric(s), agreement should be made about benchmarks for each of these rubrics. For example, what are the expectations in meeting critical thinking outcomes for this graduation-required course?
3. While the LEP 400 proposal document does indicate in two places that the core skills are a portion of this course and need to be assessed, this may need greater emphasis if assessment data is to be gathered from this course.
  - a. The LEC should consider altering the proposal form to include a section specific to how the Core Skills will be addressed.
  - b. The LEC could include a more specific statement about the use of the LEP rubrics in the course proposal document.
  - c. Previously approved LEP 400 course instructors need to have the Core Skills aspect of the course emphasized.
4. Should a post-test be considered to gauge growth from LEP 100?

## **Capstones, Core Skills, and Other Course Data**

### **Assessment Measures**

Requests for data from the capstones, core skills, and other relevant critical thinking courses did not result in much data or analysis of data. Four program areas (Biology, Communication Studies, Psychology, and Professional Writing & Communication) provided information ranging from program assessment reports, project scores using the critical thinking and/or information literacy rubrics, and major capstone course projects mapped to the critical thinking outcomes.

### **Summary of Assessment Measure Data**

Data that was gathered is useful for individual areas to make curricular adjustments, and assessment narratives indicate that is (or will be) happening. In order for the data to be useful at the

university level for assessing the liberal education critical thinking outcome, more faculty participation is needed.

Due to the large variety of courses and the different types of assignments made in each course it would be difficult to make any consistent form of assessment that could be applied to all the courses. Not all courses require a paper to be written, but perhaps individual assignments could be made to assess at least a couple of the critical thinking sub-outcomes in each course. The faculty-approved rubrics for critical thinking and information literacy are assessment tools that could be utilized by more faculty to help gauge the overall level of critical thinking skills in our students. By their nature, both the capstone and core skills courses should be addressing aspects of critical thinking.

### **Recommendations for Closing the Assessment Loop**

1. Discussions within departments (particularly those who have rotating faculty teaching the capstone and core skills courses) should take place to ensure consistent assessment data is being collected.
  - a. Each department might consider if a signature assignment within each course would help alleviate this.
  - b. Each department should discuss whether, and how, current course assessments for their core skills and capstone courses could be mapped onto the critical thinking rubric. It may be possible to make adaptations to current course assessments that would provide valuable critical thinking assessments.
2. As a means of analyzing core skills data across the university, all faculty should engage in a dialogue about what the capstone courses entail. For example, should a policy for including specific core skills learning outcomes be included in each capstone course?

### **Conclusion**

This initial report for the Critical Thinking Outcome provides opportunities to increase faculty awareness about assessment of this outcome. While the data and analyses collected thus far do not lend to significant curricular changes, they highlight the need for the following:

- Greater faculty participation in assessment
- Increased faculty education about assessment
  - How to gather data
  - Ways of analyzing the data
  - How to provide evidence of closing the loop
- The use of the Liberal Education faculty-approved rubrics as an assessment tool needs greater awareness and education
- A consideration of the use of templates both to collect and submit data
- A realignment of the critical thinking sub-outcomes with the critical thinking rubric
- A more systematic means of collecting data needs to occur
  - Requests for critical thinking data can't occur on a three-year cycle, but need to be retained annually or by semester

Appendix A

Critical Thinking Rubric

	Emerging	Developing	Advanced
<b>1. Interpret Problems, Questions, Issues or Arguments</b>	Does not distinguish arguments from non-arguments. Does not correctly identify problems, questions, or issues, even in simple contexts. Confuses premises (initial conditions, data, statements of fact, etc.) and conclusions. Takes authoritative statements as fact and/or equates opinions with evidence.	Identifies a range of deductive and inductive arguments in simple contexts. Correctly identifies problems, questions, or issues. Distinguishes between premises (initial conditions, data, statements of fact, etc.) and conclusions, but equates opinions with evidence and fails to recognize hidden assumptions.	Correctly identifies and translates problems, questions, issues, or arguments in complex contexts. Distinguishes between premises (initial conditions, data, statements of fact, etc.) and conclusions. Recognizes and articulates hidden assumptions. Understands the influence of contexts, frames, and world views.
<b>2. Evaluate Reasons and Evidence</b>	Does not correctly judge deductive validity and inductive strength or weakness. Does not correctly identify common fallacies and cannot explain why such reasoning is faulty.  OR  Makes unwarranted or unsupported claims as to the meaning of data/evidence. Ignores alternative explanations of the data/evidence.	Employs appropriate criteria of relevance, reasonableness, accuracy and sufficiency for evaluating the reasons/evidence provided in a limited range of basic argument types. Correctly identifies a range of common formal and informal fallacies in a variety of formats.  OR  Draws appropriate conclusions from data/evidence, but uses weak or fallacious reasoning. Recognizes there might be alternative explanations, but superficially evaluates those alternatives.	Employs appropriate criteria for judging inductive strength and deductive validity and soundness in a wide range of contexts and complexities.  OR  Draws reasonable, non-fallacious conclusions from the data/evidence. Demonstrates knowledge of alternative explanations of the data/evidence and the ability to analyze/evaluate the strengths of those alternatives.
<b>3. Construct Arguments/Formulate Hypotheses</b>	Has little to no ability to construct arguments. Is not aware of assumptions and contexts when constructing an argument or formulating a hypothesis. Does not consistently relate information to conclusions.	Constructs coherent arguments of a few premises. Identifies and begins to question contexts as well as own and others' assumptions. Connects information presented with conclusions; recognizes opposing viewpoints.	Constructs logically coherent extended arguments. Thoroughly analyzes own and others' assumptions and evaluates relevant contexts. Performs an informed evaluation of evidence and relates it logically to conclusions. Anticipates and responds to objections.
<b>4. Reasoned Approach to Using Information</b>	Takes information from sources without interpretation or evaluation, with the intention of finding right answers to display for credit. Accepts viewpoints of experts as fact, without question. Ignores contradictory perspectives.	Takes information from sources with some interpretation; begins to use texts to acquire a foundation of knowledge and to develop a coherent analysis or synthesis. Subjects viewpoints of experts to a limited amount of questioning.	Interprets and evaluates evidence to develop a comprehensive analysis or synthesis. Evaluates texts for their scholarly significance and relevance. Thoroughly questions the viewpoints of experts. Seeks out sources with differing perspectives.
<b>5. Dispositions Towards Critical Thinking</b>	Does not challenge own point of view or that of others; demonstrates an intellectual laziness—"it's all just opinion."	Demonstrates a willingness to work through complexities and frustrations inherent in thinking through different views on important issues.	Demonstrates a preference for reasoned discourse; shows a willingness to challenge ideas even when it is unpopular to do so; exhibits intellectual humility.

Preparation of this rubric drew heavily from an unpublished draft critical thinking rubric prepared by SMSU's Philosophy faculty and from the following sources:  
 Association of American Colleges and Universities. (2010) "Critical Thinking VALUE Rubric." Retrieved from [www.aacu.org/value/rubrics](http://www.aacu.org/value/rubrics). Excerpted with permission from *Assessing Outcomes and Improving Achievement: Tips and tools for Using Rubrics*, edited by Terrel L. Rhodes. Copyright 2010 by the Association of American Colleges and Universities.

## Appendix A

Association of American Colleges and Universities. (2010) "Reading VALUE Rubric." Retrieved from [www.aacu.org/value/rubrics](http://www.aacu.org/value/rubrics). Excerpted with permission from *Assessing Outcomes and Improving Achievement: Tips and tools for Using Rubrics*, edited by Terrel L. Rhodes. Copyright 2010 by the Association of American Colleges and Universities.

Facione, P., Facione, N. (1994) "Holistic Critical Thinking Scoring Rubric." Retrieved from [www.insightassessment.com/pdf\\_files/rubric.pdf](http://www.insightassessment.com/pdf_files/rubric.pdf).

Wolcott, S.K. (14 November 2009) "Critical Thinking Rubric." Presentation document at SMSU.

### Information Literacy Rubric

ACRL Standard	Beginning Indicators	Proficient Indicators	Advanced Indicators
1. Determine and articulate extent of information needed	<ul style="list-style-type: none"> <li>• stated topic imprecise and unfocused</li> <li>• identifies a small number of information sources</li> </ul>	<ul style="list-style-type: none"> <li>• stated topic adequately precise and focused</li> <li>• identifies an adequate number of potential and appropriate information sources</li> </ul>	<ul style="list-style-type: none"> <li>• stated topic clear, suitably narrowed, and nicely articulated</li> <li>• identifies a wide-spanning and exhaustive number of potential and appropriate information sources</li> </ul>
2. Access the needed information effectively and efficiently	<ul style="list-style-type: none"> <li>• search strategy inappropriate to task and haphazardly designed</li> <li>• unable to refine search strategy</li> <li>• unable to manage information and its sources effectively</li> </ul>	<ul style="list-style-type: none"> <li>• search strategy appropriate to task and somewhat considered</li> <li>• can identify problems in search strategy</li> <li>• manages information and its sources somewhat effectively</li> </ul>	<ul style="list-style-type: none"> <li>• search strategy appropriate to task and carefully considered</li> <li>• problems in search strategy are identified and remedied</li> <li>• manages information effectively and efficiently</li> </ul>
3. Evaluate information and its sources critically and incorporate into knowledge base and value system	<ul style="list-style-type: none"> <li>• unaware of critical criteria used to examine information and its sources</li> <li>• has difficulty recognizing context of information and its sources</li> <li>• puts forth little effort into synthesizing information into new, more abstract concepts</li> <li>• unable to determine whether or not information satisfies research needs</li> </ul>	<ul style="list-style-type: none"> <li>• applies adequate critical criteria to examine information and its sources</li> <li>• can recognize the context of information and its sources</li> <li>• puts forth some effort into synthesizing information into new concepts</li> <li>• can adequately determine whether or not information satisfies research needs</li> </ul>	<ul style="list-style-type: none"> <li>• applies critical criteria rigorously and well to information and its sources</li> <li>• recognizes context of information and its sources—and the implications this context has on research needs</li> <li>• synthesizes information into new, abstract concepts that may require additional supporting information</li> <li>• recognizes need for additional information; revises topic as needed to reflect information found</li> </ul>
4. Use information effectively to accomplish a	<ul style="list-style-type: none"> <li>• has difficulty assimilating prior and new</li> </ul>	<ul style="list-style-type: none"> <li>• can adequately transfer knowledge from</li> </ul>	<ul style="list-style-type: none"> <li>• capably incorporates past and present</li> </ul>

Appendix B

<p><b>specific purpose</b></p>	<p>information to plan and create a specific product</p> <ul style="list-style-type: none"> <li>• unable to revise research/development process</li> <li>• has difficulty communicating information in product form (paper, performance, etc.)</li> </ul>	<p>prior experiences into the planning and production of new research</p> <ul style="list-style-type: none"> <li>• revises research/development processes as needed</li> <li>• communicates information in product form moderately well</li> </ul>	<p>knowledge into planning and creating a new product, utilizing multiple technologies and formats</p> <ul style="list-style-type: none"> <li>• through conscious critical reflection, proactively revises research/development processes to optimize outcome</li> <li>• communicates information in product form clearly and in a distinct voice, with an eye to design and communication principles</li> </ul>
<p><b>5. Understand economic, legal, and social issues surrounding use of information; access and use information ethically and legally</b></p>	<ul style="list-style-type: none"> <li>• unable to identify nor discuss issues related to privacy, security, censorship, fair-use, intellectual property, copyright, or free vs. fee-based access to information</li> <li>• has little knowledge or respect for laws, institutional policies, or etiquette related to using and accessing information</li> <li>• does not consistently or appropriately acknowledge use of “outside” information resources (citation, paraphrasing, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• can identify and discuss a few issues related to socio-economic, ethical, and legal use of information</li> <li>• has some knowledge and respect for laws, institutional policies, and etiquette related to using and accessing information</li> <li>• appropriately acknowledges use of information sources most of the time</li> </ul>	<ul style="list-style-type: none"> <li>• adeptly identifies and discusses most issues related to socio-economic, ethical, and legal use of information</li> <li>• shares knowledge and demonstrates respect for laws, institutional policies, and etiquette related to using and accessing information</li> <li>• takes care to cite information sources appropriately and consistently</li> </ul>



## Appendix B

### Sources:

*The Information Literacy Competency Standards for Higher Education*. Approved by the Board of Directors of the Association of College and Research Libraries on January 18, 2000.

Endorsed by the American Association for Higher Education and the Council of Independent Colleges. Available at:

<http://www.ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm#stan>

Big6 Associates, LLC. *Rubric for Assessment: Integrated Problem Solving Model*. 2002.

Colorado Department of Education. *Rubrics for Assessment of Information Literacy*. December 1998.

Indiana University Bloomington Libraries. "An Assessment Plan for Information Literacy." May 1996. Available at:

[http://www.indiana.edu/~libinstr/Information\\_Literacy/assessment.html#LS%20basic](http://www.indiana.edu/~libinstr/Information_Literacy/assessment.html#LS%20basic)

**AHA Team Assessment Data Survey for SMSU Liberal Education Program Student Learning Outcome #4: *Be critical thinkers who evaluate information wisely and examine how assumptions are shaped.***

The AHA Team charged with assessing LEP Outcome #4: Critical Thinking requests your help. Please answer the following questions (see both sides of this sheet) about the courses you teach which support this outcome. The information you provide will help us write our summary report on the university's efforts to help students make real progress in critical thinking. If you indicate that you have assessment data for any of the sub-outcomes (or will have it after the course is taught in Spring 2015), the Critical Thinking AHA Team may contact you for that data. **Please return the completed form to the person who gave it to you by Friday, October 17<sup>th</sup>.**

Thank you for helping us assess SMSU's Liberal Education Program.

Sincerely,

The Critical Thinking AHA Team: Frankie Albitz, Lori Baker (CIA co-chair), Tumpa Bhattacharyya, Sandy Craner, Brett Gaul, and Pam Sukalski (LEC co-chair)

Instructor: \_\_\_\_\_

Class: \_\_\_\_\_  LEP 100  LEP 400  Capstone  Core Skills  Other

**Section I: Rubrics**

The Critical Thinking and Information Literacy rubrics that were approved for the Liberal Education Program at SmSUFA assemblies can be found at <http://www.smsu.edu/academics/liberaleducationprogram/?id=6070>.

1. Do you use the LEP Critical Thinking Rubric to assess critical thinking in this course?

No  Yes

If "Yes," do you have assessment data based on your use of the LEP approved Critical Thinking Rubric?

No  Yes, but it isn't analyzed yet.  Yes, and it is also analyzed.  I will after course is taught.

2. Do you use your own Critical Thinking Rubric to assess critical thinking in this course?

No  Yes, and I'm willing to share it with the team.  Yes, but I'm not willing to share it with the team.

If "Yes," do you have assessment data based on your use of your own Critical Thinking Rubric?

No  Yes, but it isn't analyzed yet.  Yes, and it is also analyzed.  I will after course is taught.

3. Do you use the LEP Information Literacy Rubric to assess information literacy in this course?

No  Yes

If "Yes," do you have assessment data based on your use of the LEP approved Information Literacy Rubric?

No  Yes, but it isn't analyzed yet.  Yes, and it is also analyzed.  I will after course is taught.

## Appendix C

4. Do you use your own Information Literacy Rubric to assess information literacy in this course?

No  Yes, and I'm willing to share it with the team.  Yes, but I'm not willing to share it with the team.

If "Yes," do you have assessment data based on your use of your own Information Literacy Rubric?

No  Yes, but it isn't analyzed yet.  Yes, and it is also analyzed.  I will after course is taught.

### Section II: Sub-Outcome Assessment Data

5. Do any of your course products (exercises, assignments, tests, papers, presentations, etc.) address sub-outcome 4.1? (4.1 *Demonstrate information literacy by accessing, utilizing, formatting, citing, and documenting relevant material accurately and correctly.*)

No  Yes

If "Yes," do you have assessment data on sub-outcome 4.1? (*Demonstrate information literacy by accessing, utilizing, formatting, citing, and documenting relevant material accurately and correctly.*)

No  Yes, but it isn't analyzed yet.  Yes, and it is also analyzed.  I will after course is taught.

6. Do any of your course products address sub-outcome 4.2? (*Interpret arguments by correctly identifying relevant premises, conclusions, and key assumptions.*)

No  Yes

If "Yes," do you have assessment data on sub-outcome 4.2? (*Interpret arguments by correctly identifying relevant premises, conclusions, and key assumptions.*)

No  Yes, but it isn't analyzed yet.  Yes, and it is also analyzed.  I will after course is taught.

7. Do any of your course products address sub-outcome 4.3? (*Evaluate the extent to which evidence is reasonable, relevant, accurate, and sufficient to support intended claims.*)

No  Yes

If "Yes," do you have assessment data on sub-outcome 4.3? (*Evaluate the extent to which evidence is reasonable, relevant, accurate, and sufficient to support intended claims.*)

No  Yes, but it isn't analyzed yet.  Yes, and it is also analyzed.  I will after course is taught.

8. Do any of your course products address sub-outcome 4.4? (*Formulate clear, well-supported arguments.*)

No  Yes

If "Yes," do you have assessment data on sub-outcome 4.4? (*Formulate clear, well-supported arguments.*)

No  Yes, but it isn't analyzed yet.  Yes, and it is also analyzed.  I will after course is taught.

9. Do any of your course products address sub-outcome 4.5? (*Engage in civil discourse, self-reflection, and consideration of other points of view.*)

No  Yes

If "Yes," do you have assessment data on sub-outcome 4.5? (*Engage in civil discourse, self-reflection, and consideration of other points of view.*)

No  Yes, but it isn't analyzed yet.  Yes, and it is also analyzed.  I will after course is taught.

## THE MOORBURG LETTER

230 Sycamore Street  
Moorburg  
April 10

Dear Editor:

Overnight parking on all streets in Moorburg should be eliminated. To achieve this goal, parking should be prohibited from 2 a.m. to 6 a.m. There are a number of reasons why any intelligent citizen should agree.

1. For one thing, to park overnight is to have a garage in the streets. Now it is illegal for anyone to have a garage in the city streets. Clearly, then, it should be against the law to park overnight in the streets.

2. Three important streets, Lincoln Avenue, Marquand Avenue, and West Main Street, are very narrow. With cars parked on the streets, there really isn't room for the heavy traffic that passes over them in the afternoon rush hour. When driving home in the afternoon after work, it takes me thirty-five minutes to make a trip that takes ten minutes during the uncrowded time. If there were no cars parked on the side of these streets, they could handle considerably more traffic.

3. Traffic on some streets is also bad in the morning when factory workers are on their way to the 6 a.m. shift. If there were no cars parked on these streets between 2 a.m. and 6 a.m., then there would be more room for this traffic.

4. Furthermore, there can be no doubt that, in general, overnight parking on the streets is undesirable. It is definitely bad and should be opposed.

5. If parking is prohibited from 2 a.m. to 6 a.m., then accidents between parked and moving vehicles will be nearly eliminated during this period. All intelligent citizens would regard the near elimination of accidents in any period as highly desirable. So, we should be in favor of prohibiting parking from 2 a.m. to 6 a.m.

6. Last month, the Chief of Police, Burgess Jones, ran an experiment which proves that parking should be prohibited from 2 a.m. to 6 a.m. On one of our busiest streets, Marquand Avenue, he placed experimental signs for one day. The signs prohibited parking from 2 a.m. to 6 a.m. During the four-hour period, there was **not one accident** on Marquand. Everyone knows, of course, that there have been over four hundred accidents on Marquand during the past year.

7. The opponents of my suggestions have said that conditions are safe enough now. These people don't know what "safe" really means. **Conditions are not safe if there's even the slightest possible chance for an accident.** That's what "safe" means. So, conditions are not safe the way they are now.

8. Finally, let me point out that the Director of the National Traffic Safety Council, Kenneth O. Taylor, has strongly recommended that overnight street parking be prevented on busy streets in cities the size of Moorburg. The National Association of Police Chiefs has made the same recommendation. Both suggest that prohibiting parking from 2 a.m. to 6 a.m. is the best way to prevent overnight parking.

I invite those who disagree, as well as those who agree with me, to react to my letter through the editor of this paper. Let's get this issue out in the open.

Sincerely,

Robert R. Raywift

## Directions for The “Modified” Moorburg Letter Assessment Tool

Developed by Brett Gaul

The “Modified” Moorburg Letter assessment tool is a modified version of *The Ennis-Weir Critical Thinking Essay Test*. Instead of having students write nine paragraphs about The Moorburg Letter as *The Ennis-Weir Critical Thinking Essay Test* does, it instructs students to indicate and explain whether the reasoning in each the eight paragraphs of The Moorburg Letter provides strong, moderate, or weak support for the conclusion of Robert R. Raywift’s argument. Students must then write a paragraph giving their *overall* evaluation of the strength of Raywift’s argument, stating and explaining whether the argument overall is strong, moderate, or weak.

Give LEP 100: First Year Seminar students The Moorburg Letter assessment **twice** during the semester. Allow students 50 minutes for each attempt. Instructors should give it once at the beginning of the semester *before* they cover any of *The Workbook for Arguments* and once at the *end* of the semester after they have covered *The Workbook for Arguments*. Do not go over the correct answers to the letter with students until *after* the assessment has been given for the second time.

To complete this assessment tool, students will need a pen or pencil, The Moorburg Letter, and The Moorburg Letter Scoring Sheet. After students have used The Moorburg Letter to complete The Moorburg Letter Scoring Sheet, instructors should collect all copies of both documents and evaluate the students’ responses using The Moorburg Letter Scoring Sheet with Answers. Each student will receive a score out of 29. For questions about evaluating students’ responses or anything else related to this assessment tool, contact Brett Gaul (email: [brett.gaul@smsu.edu](mailto:brett.gaul@smsu.edu); office phone: 537-7141).

Keep a record of how each student performs on both attempts at The Moorburg Letter and email this record to Liberal Education Committee Co-Chair Will Thomas ([will.thomas@smsu.edu](mailto:will.thomas@smsu.edu)) at the end of the semester for assessment purposes.

Thank you for helping the Liberal Education Committee assess LEP 100!

Name: \_\_\_\_\_ Total Score: \_\_\_\_\_ Graded By: \_\_\_\_\_

**The “Modified” Moorburg Letter Scoring Sheet**  
 Developed by Brett Gaul

What is the specific conclusion of the argument in The Moorburg Letter?

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The numbers 1-8 correspond to paragraphs 1-8 in The Moorburg Letter. For each number, indicate whether you think the paragraph with that number provides strong, moderate, or weak support for Robert R. Raywift’s conclusion. Then explain *why* you think the paragraph provides strong, moderate, or weak support. Be specific and thorough.

<b>Your assessment of the support provided by each paragraph</b>	<b>The reason(s) why you think the reasoning in that paragraph provides strong, moderate, or weak support for the argument’s conclusion.</b>
1. <input type="radio"/> Strong <input type="radio"/> Moderate <input type="radio"/> Weak	<hr/> <hr/> <hr/> <hr/>
2. <input type="radio"/> Strong <input type="radio"/> Moderate <input type="radio"/> Weak	<hr/> <hr/> <hr/> <hr/>

Appendix F

<p>3. <input type="radio"/> Strong <input type="radio"/> Moderate <input type="radio"/> Weak</p>	<hr/> <hr/> <hr/> <hr/>
<p>4. <input type="radio"/> Strong <input type="radio"/> Moderate <input type="radio"/> Weak</p>	<hr/> <hr/> <hr/> <hr/>
<p>5. <input type="radio"/> Strong <input type="radio"/> Moderate <input type="radio"/> Weak</p>	<hr/> <hr/> <hr/> <hr/>
<p>6. <input type="radio"/> Strong <input type="radio"/> Moderate <input type="radio"/> Weak</p>	<hr/> <hr/> <hr/> <hr/>
<p>7. <input type="radio"/> Strong <input type="radio"/> Moderate <input type="radio"/> Weak</p>	<hr/> <hr/> <hr/> <hr/>
<p>8. <input type="radio"/> Strong <input type="radio"/> Moderate <input type="radio"/> Weak</p>	<hr/> <hr/> <hr/> <hr/>





Student's Name: \_\_\_\_\_ Total Score: \_\_\_\_\_ Graded By: \_\_\_\_\_

**The “Modified” Moorburg Letter Scoring Sheet Answer Key (29 total points)**  
Developed by Brett Gaul, with help from Steve Kramer and Maureen Sander-Staudt.

**What is the specific conclusion of the argument in The Moorburg Letter? (0-2 points)**

To get the full two points here, the answer must indicate that the conclusion is about overnight parking and all streets.

Give 2 points for “Overnight parking on all streets in Moorburg should be eliminated.”

Give 1 point for “Parking should be prohibited from 2 AM to 6 AM.”

Give 0 points for anything else.

**Actual 2 point answers:**

*“The conclusion is in order to prevent overnight parking on all streets, parking should be prohibited from 2am-6pm.”*

*“Overnight parking should be prohibited from 2 am to 6 am on all streets.”*

These answers recognize that the conclusion is about eliminating overnight parking on all streets.

**Actual 1 point answers:**

*“There should be no cars parked on the roads between 2 am and 6 pm.”*

*“That cars should not be allowed to park from 2AM to 6 AM because it affects driving conditions.”*

Problem: While these answers recognize that the author calls for prohibiting parking between 2 am and 6 pm, they don't mention eliminating overnight parking and all streets.

**Actual 0 point answers:**

*“Eliminate parking on busy streets overnight from 2AM-6AM to prevent accidents.”*

Problem: The conclusion is about all streets, not just busy ones.

*“The conclusion is that to have safer streets, they must eliminate parking in the streets.”*

*“The conclusion was for parking to be prohibited in all streets in Moorburg due to safety issues and to improve traffic.”*

*“The person who has written the letter wants it to be made illegal that cars should not be allowed to park on the streets of Moorburg.”*

Problem: The conclusion is about overnight parking. These answers fail to note that.

*“There should not be parking on streets with a lot of traffic what are too narrow for both sides of street parking.”*

Problems: The conclusion is about all streets, not just ones with a lot of traffic. Also, the conclusion is about overnight parking. This answer fails to note that.

*“The conclusion is the author inviting people to disagree with his argument.”*

Problem: This is not the conclusion of the argument. It is simply how the letter ends.

The numbers 1-8 correspond to paragraphs 1-8 in The Moorburg Letter. For each number, indicate whether you think the paragraph with that number provides strong, moderate, or weak support for the argument’s conclusion. Then explain *why* you think the paragraph provides strong, moderate or weak support. Be specific and thorough.

<p><b>Your assessment of the support provided by each paragraph.</b>  <u>(0-1 point) 1 point for right answer (in bold), 0 points for wrong answer</u></p>	<p><b>The reason(s) why you think the reasoning in that paragraph provides strong, moderate, or weak support for the argument’s conclusion.</b>  <b>(0-2) points</b>  <u>Give 2 points for good justification.</u>  <u>Give 1 point for average justification.</u>  <u>Give 0 points for bad justification. A 0 in the left column entails a 0 for this column.</u></p> <p>To figure out a student’s total score for each paragraph, add the score from the box on the left with the score from the box on the right. The best score for each paragraph is 3 points (1 point for the correct assessment of strong, moderate, or weak, and 2 points for good justification). It is difficult for students to get the full 3 points. Many students will get 0 points simply because of incorrect assessments of strong, moderate, or weak in the left box. Again, a 0 there entails a 0 for their justification.</p>
<p><b>Paragraph 1: Assessment of support</b></p> <ul style="list-style-type: none"> <li>○ Strong (0 points)</li> <li>○ Moderate (0 points)</li> <li>○ Weak (1 point)</li> </ul>	<p><b>Paragraph 1: Justification of support: (0-2 points):</b> The reasoning in this paragraph provides <b>weak support</b> for the conclusion because there is equivocation with the word “garage” or a bad analogy here. In short, the author shifts the normal meaning of “garage.” While it would be illegal for someone to build a garage in the streets, just parking overnight on the street is not equivalent to building a garage in the street. <i>Don’t give points here for just introducing other reasoning such as wondering where else people are supposed to park.</i></p> <p><b>Actual 2 point answers:</b>  <i>“Just because people park in the street overnight does not mean they are treating it as a garage. You need all the tools and storage too.”</i></p> <p><i>“A garage is a solid structure. Someone who parks on the street is not putting a building in the road.”</i></p> <p><b>Actual 1 point answers:</b>  <i>“I think he has a weak argument because I feel he is twisting the thoughts of putting a car in a garage as the same thing as parking on the street. “</i></p> <p><i>“It is simply nonsensical. It is an appeal to an analogy that doesn’t correlate at all.”</i></p> <p><b>Actual 0 point answers:</b>  <i>“Bad example. Not a realistic argument. Some people have more than one vehicle.”</i></p> <p><i>“The wording confused me slightly and it is a common sense statement about garages being illegal in the street.”</i></p>

<p><b>Paragraph 2: Assessment of support</b></p> <ul style="list-style-type: none"> <li>○ Strong (0 points)</li> <li>○ Moderate (0 points)</li> <li>○ <b>Weak (1 point)</b></li> </ul>	<p><b>Paragraph 2: Justification of support: (0-2 points):</b> The reasoning in this paragraph provides <b>weak support</b> for the conclusion because afternoon parking/traffic on three streets is irrelevant to eliminating overnight parking/traffic on all streets.</p> <p><b>Actual 2 point answers:</b>  <i>"This does not support why parking should be banned overnight, but during the day, especially because traffic is heavier during the day. Therefore it is unfair to give this as a reason to ban overnight parking."</i></p> <p><i>"He is arguing overall that 'overnight' parking shouldn't be allowed. In paragraph #2 he is talking about afternoon parking which has nothing to do with the overall addressed issue."</i></p> <p><b>Actual 1 point answer:</b>          Not available.</p> <p><b>Actual 0 point answer:</b>  <i>"Obviously rush hour will extend the time of a trip. Claiming this is because of cars on the side of the street does not work without actual evidence."</i></p>
<p><b>Paragraph 3: Assessment of support</b></p> <ul style="list-style-type: none"> <li>○ Strong (0 points)</li> <li>○ <b>Moderate (1 point)</b></li> <li>○ Weak (0 points)</li> </ul>	<p><b>Paragraph 3: Justification of support: (0-2 points):</b> While the reasoning in this paragraph is strong, it only applies to <i>some</i> streets. Given this, the paragraph only provides <b>moderate support</b> for the conclusion (which is about eliminating parking on <i>all</i> streets). It makes sense that if certain streets have a lot of cars parked on them and there is a lot of traffic on those streets just before 6 AM, then there would be more room for traffic if cars couldn't park on those streets from 2 AM to 6 AM. In short, the best the paragraph does is show that it might be a good idea to eliminate overnight parking on those streets traveled by the 6 AM shift factory workers. <i>To get the full two points here, answers have to explain why the reasoning rises above weak, but also why it isn't strong.</i></p> <p><b>Actual 2 point answer:</b>  <i>"If traffic on some streets is bad in the morning, then maybe parking should just be eliminated on those streets, not all streets."</i></p> <p><b>Actual 1 point answers:</b>  <i>"He argues that early workers are making their way to work. There are not that many early workers so it shouldn't be that busy. He doesn't address the volume of car driving at that time."</i></p> <p><i>"This is slightly better, offering a valid reason if the factory is the main place of employment."</i></p> <p><b>Actual 0 point answer:</b>  <i>"Showing morning traffic schedule by stating 6am workers, but he already used traffic time in previous paragraph. This is just another example, so it's a supporting paragraph."</i></p>

<p><b>Paragraph 4: Assessment of support</b></p> <ul style="list-style-type: none"> <li>○ Strong (0 points)</li> <li>○ Moderate (0 points)</li> <li>○ <b>Weak (1 point)</b></li> </ul>	<p><b>Paragraph 4: Justification of support: (0-2 points):</b> The reasoning in this paragraph provides <b>weak support</b> for the conclusion because the paragraph just asserts that overnight parking is bad and undesirable. It doesn't give any reasons to support <i>why</i> this is so. There is also negative loaded language—"There can be no doubt that..."</p> <p><b>Actual 2 point answers:</b>  <i>"He is just being judgmental. It's not always bad. Not well-supported."</i>  <i>"This is just his opinion. There are no facts to back this up."</i></p> <p><b>Actual 1 point answer:</b>  <i>"Not enough supporting evidence. It leaves much to be desired and again is common sense."</i></p> <p><b>Actual 0 point answers:</b>  <i>"Too hypothetical of reasoning."</i>  <i>"Only premise #3 supported this conclusion and it only affects one group of people—factory workers with a 6am shift. What about the rest of the population?"</i></p>
<p><b>Paragraph 5: Assessment of support</b></p> <ul style="list-style-type: none"> <li>○ Strong (0 points)</li> <li>○ <b>Moderate (1 point)</b></li> <li>○ Weak (0 points)</li> </ul>	<p><b>Paragraph 5: Justification of support: (0-2 points):</b> The reasoning in this paragraph provides <b>moderate support</b> for the conclusion because although prohibiting parking from 2 AM and 6 AM would reduce accidents between parked cars on streets and moving vehicles and reducing accidents is a good thing, we don't know if the occurrence of this kind of accident at that time period is really a problem. We need to know the background rates for accidents involving parked and moving vehicles. How many accidents have there been from 2 AM to 6 AM between parked and moving vehicles? Other considerations: Would the benefit of preventing these kinds of accidents by eliminating overnight parking be outweighed by the inconvenience to car owners? Are there other ways to eliminate this type of accident? Also, students may point out the phrase "All intelligent citizens would agree" as an example of negative loaded language, but that phrase doesn't interfere with the reasoning here. <i>To get the full two points here, answers have to explain why the reasoning rises above weak, but also why it isn't strong.</i></p> <p><b>Actual 2 point answer:</b>  <i>"It's true that accidents would be 'nearly eliminated between parked and moving vehicles' because there would be no parked cars! But how many were there in the first place? Maybe none or one?"</i></p> <p><b>Actual 1 point answer:</b>  <i>"Reduced number of cars could result in fewer accidents. Accidents between moving cars?"</i></p> <p><b>Actual 0 point answers:</b>  <i>"Too vague for an argument. 'All.'"</i>  <i>"Using the phrase 'All intelligent citizens is out of place.' What is an intelligent citizen?"</i></p>

<p><b>Paragraph 6: Assessment of support</b></p> <ul style="list-style-type: none"> <li>○ Strong (0 points)</li> <li>○ Moderate (0 points)</li> <li>○ <b>Weak (1 point)</b></li> </ul>	<p><b>Paragraph 6: Justification of support: (0-2 points):</b> The reasoning in this paragraph provides <b>weak support</b> for the conclusion because one four hour period without any accidents does not provide enough evidence to prove that parking should be prohibited from 2 AM and 6 AM on all streets to eliminate overnight parking. In short, the sample size is not large enough. We also don't know if the over 400 accidents on Marquand Avenue were between parked and moving vehicles or if the accidents occurred overnight. If these accidents weren't between parked and moving vehicles and/or didn't occur overnight, they are irrelevant to the conclusion.</p> <p><b>Actual 2 point answers:</b>  <i>"First of all, few things can be completely proven. This experiment might be said to suggest, but certainly not prove. Also, one day is not enough to draw any real conclusions."</i></p> <p><i>"One four hour period is not enough. He doesn't provide statistics for how many accidents normally happen in those four hours."</i></p> <p><b>Actual 1 point answer:</b>  <i>"Experiment only lasted 4 hours."</i></p> <p><b>Actual 0 point answer:</b>          Not available.</p>
<p><b>Paragraph 7: Assessment of support</b></p> <ul style="list-style-type: none"> <li>○ Strong (0 points)</li> <li>○ Moderate (0 points)</li> <li>○ <b>Weak (1 point)</b></li> </ul>	<p><b>Paragraph 7: Justification of support: (0-2 points):</b> The reasoning in this paragraph provides <b>weak support</b> for the conclusion because given the proposed definition of "safe"—conditions are not safe if there is even the slightest possible chance for an accident—conditions can never be safe. There is always the slightest chance for an accident when one is around moving vehicles.</p> <p><b>Actual 2 point answers:</b>  <i>"Raywift has just unwittingly hurt his own argument. Life is a risk. To say that safety is only when there is no chance of danger is to effectively say nothing has ever been safe."</i></p> <p><i>"The only way to truly achieve safety, as the author sees it, is to eliminate traffic entirely."</i></p> <p><b>Actual 1 point answers:</b>  <i>"Couldn't the maintenance of the cars have an influence on safety? What about 'Acts of God?' Proof?"</i></p> <p><i>"He is not giving a reason to prohibit overnight parking. He just states what safe means."</i></p> <p><b>Actual 0 point answer:</b>  <i>"While I agree that it is important to include the opposing viewpoint, opinions are not. 'Safe' is left to be decided by the opposition."</i></p>

<p><b>Paragraph 8: Assessment of support</b></p> <ul style="list-style-type: none"> <li>○ Strong (0 points)</li> <li>○ <b>Moderate (1 point)</b></li> <li>○ Weak (0 points)</li> </ul>	<p><b>Paragraph 8: Justification of support: (0-2 points):</b> The reasoning in this paragraph provides <b>moderate support</b> for the conclusion because Kenneth Taylor, Director of the National Traffic Safety Council and thus an appropriate authority on this issue, recommends that overnight parking be prevented on busy streets the size of Moorburg. However, students must note that the Director recommends preventing overnight parking on busy streets, not <i>all</i> streets. <i>To get the full two points here, answers have to explain why the reasoning rises above weak, but also why it isn't strong. Give only 1 point here if the student says that the authority is appropriate but then fails to point out the busy streets restriction.</i></p> <p><b>Actual 2 point answers:</b>  <i>"They suggest only 'on busy streets' whereas the writer wants 'all' streets.</i>   <i>"Obviously prohibiting parking is the best way to prevent overnight parking. But does every road need to prohibit overnight parking?"</i></p> <p><b>Actual 1 point answers:</b>  <i>"Restating his concern and mentioned he's not the only one who wants to ban parking in the area. Paragraph was moderate."</i>   <i>"Gives evidence of other people agreeing with him that parking from 2am to 6pm is a bad idea."</i></p> <p><b>Actual 0 point answers:</b>  <i>"Appeals to authority."</i>   <i>"They should just take the signs down and put no parking is allowed and then build a parking lot for people so they can visit their friends and family."</i></p>
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**9. Write a paragraph giving your *overall* evaluation of the strength of Raywift's argument. State whether the argument overall is strong, moderate, or weak. Be specific and thorough. (0-3 points)**

**Give 3 points** for saying that the argument is weak overall but has some strong points *if* the student does a good job of explaining the weak and strong points. **To get the full three points here, students must note that at most the argument shows only that it might be a good idea to limit overnight parking on *some busy streets* by prohibiting parking from 2 AM to 6 AM.** The strong points in the article do not provide support for limiting overnight parking on *all* streets, however.

**Give 2 points** for saying that the argument is weak overall but has a couple of strong points if the student does only an average job of explaining the weak and strong points.

**Give 1 point** for saying that the argument is weak overall even if the student doesn't say much else.

**Give 0 points** for saying that overall the argument is strong no matter what the explanation is.

**LEP 100: First Year Seminar: Modified Moorburg Letter Assessment Template**

This document is designed to help instructors better assess critical thinking development in LEP 100. According to the FYS Handbook, all FYS instructors must administer the Modified Moorburg Letter critical thinking assessment activity twice during the semester. Students take the Modified Moorburg Letter activity once (the pre-test) **before** using Morrow and Weston’s *A Workbook for Arguments* textbook and once (the post-test) **after** the instructor is finished with the textbook. After both the pre-test and the post-test have been scored, use that information to complete this form. Please complete one form for each section taught.

FYS Instructor Name:

FYS Title:

Term Offered:

Was the post-test given at the end of the course or earlier in the course when you were finished with the critical thinking text?

**MAIN STATISTICS**

	<b>Average Score</b>	<b>Median Score</b>	<b>Highest Score</b>	<b>Lowest Score</b>	<b>Mode</b>
<b>Pre-test</b>	#/29	#/29	#/29	#/29	#
<b>Post-test</b>	#/29	#/29	#/29	#/29	#
<b>Average Score Increase</b>	#	#			
<b>Average Score Percent Increase</b>	#				

Average Score = the total of the scores divided by the number of students who took the test

Median Score = the score at which half of the scores are above it and half are below it

Average Score Increase = the average post-test score minus the average pre-test score

Average Score Percent Increase = the average score increase divided by the average pre-test score. Then multiply by 100.

**OTHER STATISTICS**

How many students took both the pre-test and the post-test? #

What was the biggest improvement? #

What was the smallest improvement (or even decrease)? #

What percentage of students scored higher on the post-test than they did on the pre-test? #%

What percentage of students scored the same on the post-test than they did on the pre-test? #%

What percentage of students scored lower on the post-test than they did on the pre-test? #%

### **STATISTICS ABOUT IDENTIFYING THE CONCLUSION**

In the **pre-test**, what percentage of students correctly identified the specific conclusion? (“Overnight parking on all streets in Moorburg should be eliminated.”) #%

In the **pre-test**, what percentage of students partially identified the conclusion? (“Parking should be eliminated from 2am to 6am”). #%

In the **pre-test**, what percentage of students incorrectly identified some other statement as the conclusion? #%

In the **post-test**, what percentage of students correctly identified the specific conclusion? (“Overnight parking on all streets in Moorburg should be eliminated.”) #%

In the **post-test**, what percentage of students partially identified the conclusion? (“Parking should be eliminated from 2am to 6am”). #%

In the **post-test**, what percentage of students incorrectly identified some other statement as the conclusion? #%

### **STATISTICAL ANALYSIS**

*In this space, please analyze your statistics. What do your statistics show? (Did students do better on the post-test than they did on the pre-test? Were students better able to identify the specific conclusion of the argument on the post-test as compared to the pre-test? What other conclusions can be drawn from your data?)*

### **CLOSING THE LOOP**

*In this space, please discuss how you will use what you learned from your statistical analysis to revise how you teach the course. (What seems to be working? What does not seem to be working? What skills do students need more practice at? How might those skills be better developed?)*