General Education Assessment Report 2019-2020
Prepared by Benjamin Worth, Vice President of Academic Affairs
August 1, 2020

OVERVIEW

Given the similarities in the four Transfer program curricula, one assessment report is compiled for all DSLCC transfer programs and is called the General Education Assessment Report. This report was previously entitled "General Studies Assessment Report" was renamed for 2019-2020 to more closely align with VCCS Transfer Virginia and State Council of Higher Education for Virginia (SCHEV) terminology.

This assessment encompasses the following Associate of Arts and Sciences degrees:

- Business Administration
- Business Administration with a Specialization in Business Foundations
- Education
- General Studies
- General Studies with a Specialization in Administrative Justice
- Science

Per VCCS Policy 5.0.2, *General Education*, DSLCC has adopted six General Education competencies, and these competencies are evaluated on a cyclical basis. Typically, only two competencies are assessed each year with the goal of assessing all competencies every six years. The assessments for student learning outcomes for a competency in any given year are conducted in the Spring semester, and results of the assessment are reviewed by the Office of Institutional Effectiveness and Research and (OIER) delivered as a report to faculty at the start of the Fall semester. Faculty use the results of the report to plan assessment report for the upcoming year. This General Education Assessment report includes the results of the OIER report as well as descriptions of how that report was used by DSLCC faculty to improve the quality of assessment at DSLCC.

As noted below, the Coronavirus Pandemic of 2020 curtailed DSLCC assessment activities. Beginning March 18, DSLCC instruction shifted to an online mode, and the campus closed. As of this writing, the DSLCC campus remains closed to students and visitors with college employees only permitted on site for essential activities. The impact of the Pandemic will be felt more heavily in the 2020-2021 report.

ASSESSMENT

Assessment of General Education competencies was developed and overseen by the General Education Assessment Workgroup which includes the following membership: the Academic Vice President (Ben Worth), Office of Institutional Effectiveness (Associate Vice President Matt McGraw), and full-time transfer faculty members Tondalaya VanLear (English and Education), Tina Dressler (Psychology), Lee Anne Bowling-Angle (Biology and Chemistry), Steve Nicholson (Mathematics), and Ashley Pratt (Mathematics). The assessment follows policies and procedures outlined in the *DSLCC Assessment Plan*.

For the cycle described in this report, the General Education Assessment Workgroup elected to assess the Critical Thinking General Education competency:

> Definition: Critical Thinking is the ability to use information, ideas and arguments from relevant perspectives to make sense of complex issues and solve problems. Degree graduates will locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.
> Student Learning Outcomes: Students will be able to …
>
> 1. Identify, gather, analyze, and evaluate the information/data necessary and sufficient to address the problem or question;
> 2. Identify central issues and assumptions in an argument or situation;
> 3. Consider biases, preconceptions, and perspectives in order to approach a problem with an open mind;
> 4. Evaluate and analyze ideas, arguments, assumptions, and evidence for credibility and relevance to a situation;
> 5. Determine whether certain conclusions or consequences are supported by the information provided;
> 6. Formulate logical and informed conclusions or solve problems based on the analysis and interpretation of information.

INSTRUMENT

The assessment instrument was selected by the General Education Assessment Committee in the Fall 2018 semester and was administered to students at the end of the Spring 2019 semester. At the Committee's recommendation, DSLCC Office of Institutional Effectiveness adopted the ETS HEIghten Critical Thinking test. The assessment was administered to all associated degree earners; 103 of 105 earners completed the assessment, representing 76% of the Associate Degree Graduates from the 2018-2019 academic year. The full report is provided in Appendix B.

The results of the assessment were compiled into the OIER report, *General Education Assessment Critical Thinking* and delivered to the General Education Assessment Committee in September 2019. The full report appears as Appendix A. The report was presented to the General Education Assessment Workgroup in the Fall 2019 and discussed in the September 26 General Education Assessment Workgroup meeting. The agenda and minutes from the General Education Assessment Workgroup are provided in Appendix B.

USE OF DATA TO IMPROVE INSTRUCTION

The results of the assessment were shared with the General Education Assessment Workgroup, which found that the report provided helpful input on critical thinking skills for DSLCC students and show in the Agenda and Minutes from the General Education Assessment Workgroup meetings in Appendix. The results will subsequently used to shape assessment goals and improve instruction as described in the disciplines below.

Biology

To better understand critical thinking in the natural sciences, biology students completed the *Pathogen Research Paper and Presentation* project. In the words of Program Head, Lee Anne Bowling-Angle, "Critical thinking is important in student success in the scientific field and their future careers, however strategies to tackle novel problems can be difficult for students to obtain. The case studies used in this assessment provide support students are able to analyze, but have a more difficult time synthesizing and evaluating with 33% of this group failing to reach the two upper levels of Bloom's taxonomy." Professor Bowling-Angle is planning revisions based on results of this assessment. "In the future, case study evaluation will begin in the first three weeks of the course and continue through the final exam. Using the research cited, I will develop a systematic approach to teaching case studies in hopes it improves their critical thinking skills. Students entering the healthcare field must cultivate these skills to be successful in the next stages of their career." The full report (student names redacted) appears in Appendix C1.

Education

Education students adopted a number of critical thinking strategies. Course assignments and activities provided both individual exploration as well as discussion opportunities, including small group exchange, classroom observations responses (reflective critical thinking), article evaluations, and research development, which incorporated program learning outcomes and the focused assessment.

In the words of Program Head, Tondalaya VanLear, "I am glad to have been asked to review and report on the Education program—it's given me a chance to more clearly put in place the impactful work our EDU students have accomplished and to see the ties that success has to strong program learning outcomes. Writing this narrative has also provided me a chance to speak to the truly remarkable strengths these students have shown in the last few weeks—and the great generosity they already possess as they continue their journey toward their future classrooms. Each of them is going to be an outstanding educator—and I can't wait to see them step into those world-changing roles."

The full report appears in Appendix C2.

Psychology

Program Head Tina Dressler incorporated a variety of critical thinking experiences into psychology courses. In her words, "I feel critical thinking is the most addressed general education competency from social science courses due to the focus on self and interaction with others." Critical thinking activities were added to introductory psychology (PSY 200) and developmental psychology (PSY 230) classes in order to promote general education competencies. Examples include writing assignments and subjective work, which promotes critical thinking. For instance, students write a "movie review" find class topics in a book/movie of their choice and relate them to what they are learning in class.

The full report appears in Appendix C3.

Sociology

Sociology students engaged in many critical thinking assessments. Sociology students completed activity assignments: for all even numbered chapters, they must have a Title Page, 500-Word Body, and a Citation's Page. Topics vary for each chapter such as: gender, marriage and family, religion, etc. Students explore the topic analyze the situation and write a 500-word essay using critical thinking analysis.

The full report appears in Appendix C4.

Quantitative Reasoning

Students in the Quantitative Reasoning and Statistical Reasoning sequence engaged in active learning through interactive lectures, writing projects, and applications with real-world problems. Writing projects developed students' critical thinking skills and written communication skills while supporting quantitative literacy with real problems. Statistics students regularly worked with real data to draw conclusions and answer questions that arise outside of the classroom.

Labs in physics start with the equipment unassembled unlike many other college physics lab settings. This requires the students to not only run the experiments but also to use critical thinking skills to listen to my directions and assemble the equipment and get it into a working form. Also in physics, students demonstrated troubleshooting skills while working with the Arduino electronics kits. During the on-line phase of the spring semester, the instructor used Socrative to engaged the students by asking thought provoking questions where they could answer without feeling intimidated because their answers might seem wrong or unusual.

APPENDICES

Appendix A

- *General Education Assessment Critical Thinking*, September 2019

Appendix B

- B1. General Education Assessment Workgroup Agenda, August 29, 2019
- B2. General Education Assessment Workgroup Agenda, September 26, 2019
- B3. General Education Assessment Workgroup Agenda, February 2, 2020

Appendix C

- C1. Biology Critical Thinking Assessment Report
- C2. Education Critical Thinking Assessment Report
- C3. Psychology Critical Thinking Assessment Report
- C4. Social Science Critical Thinking Assessment Report

General Education Assessment
Critical Thinking
Prepared by Matt McGraw
Associate Vice President
September 2019

Introduction and Data Collection

During the 2018-2019 academic year, DSLCC assessed students on the General Education Competency of Scientific Reasoning. Using the ETS HEIghten Critical Thinking Assessments, students earning Associate's Degrees were asked to complete the assessment in the weeks leading up to graduation. The assessment was administered in the testing centers in the DSLCC Library and Rockbridge Regional Center. 103 of 134 Associate Degree Earners completed the assessment representing 76% of the Associate Degree Graduates from the 2018-2019 academic year. This assessment was selected by the General Education Assessment Committee and endorsed by both the Institutional Effectiveness Standing Committee and the Executive Team.

Intended Use

The following is an excerpt from *The ETS HEIghten Critical Thinking test manual.*

> Description of the Examination: The HEIghten™ Critical Thinking test evaluates college students' ability to demonstrate two central aspects of critical thinking: Analytical and Synthetics kills. For the Analytical dimension, students may be asked to (1) analyze argument structure, which can include identifying features such as conclusions and their supporting steps, functions of specific elements in an argument, or appeals to emotion; (2) evaluate argument structure, which can include identifying unstated assumptions or flaws in reasoning; (3) evaluate evidence and its use, which can include evaluating the evidence within a larger context (e.g., identifying additional information that might be useful in evaluating the argument), evaluating the relevance of evidence offered for a proposed conclusion, or evaluating the strength of evidence offered for a proposed conclusion by identifying information that would strengthen or weaken the argument or its conclusion. For the Synthetic dimension, students may be asked to (1) develop valid (i.e., structurally strong) or sound (i.e., valid and evidentially strong) arguments by selecting information or statements that would constitute or contribute to such arguments for a given position; (2) demonstrate understanding of the implications or consequences of information and argumentation by drawing or recognizing conclusions, extrapolating implications, or recognizing or generating explanations for phenomena that are described. In many cases, a single question may assess multiple analytical or synthetic skills. In addition, some questions may, as part of assessing analytical or synthetic skills, also assess skills in evaluating claims or drawing conclusions pertaining to causation or explanation. Some may assess skills in quantitative contexts, broadly defined, such as statistical issues involving sampling. Format of the Examination The HEIghten Critical Thinking test features three types of tasks. Critical Thinking Sets each present a series of selected-response questions based on a shared multi-part stimulus that reflects real-world,

authentic issues. The stimuli include rich information: a list of facts that may be supplemented by a graph or table, along with two or more arguments and/or statements of opinion related both to one another and to the provided facts. Supplementing the Critical Thinking Sets in each test are short arguments or informational passages with one or two accompanying questions that address skills similar to those assessed in the Critical Thinking Sets, but in smaller steps, and sets that present conditions applicable to a fictional situation and require students to draw conclusions about what is required or permitted by those conditions.

Knowledge and Skills Required

The knowledge and skills assessed in the HEIghten Critical Thinking examination follow. The numbers in parentheses indicate the approximate percentages of exam questions in those dimensions.

Analytical Skills (50%) Evaluate evidence and its use: Students are able to evaluate evidence apart from the position advanced by an argument. For example, they are able to evaluate evidence in a larger context, which may include general knowledge, additional background information provided, or additional evidence included within an argument.

- Identify inconsistencies of conclusions drawn or posited with evidence presented, or inconsistencies within the evidence presented.
- Identify additional information that might be needed to evaluate the argument.
- Evaluate sources, considering such factors as relevant expertise of sources and access to information.
- Recognize potential biases in persons or other sources providing or organizing data, including potential motivations a source may have for providing truthful or misleading information.
- Evaluate the extent to which the evidence provided in an argument is relevant to its conclusion.
- Evaluate how strongly the evidence provided in argument supports the conclusion offered or implied, including identifying circumstances that, if true, would strengthen or weaken the argument being evaluated.•Analyze and evaluate arguments: Students are able to analyze and evaluate the structure of an argument. For example, they are able to:
- Analyze argument structure by identifying stated and unstated premises, conclusions, and intermediate steps.
- Identify a particular statement's role in an argument.
- Identify appeals to emotion.
- Evaluate argument structure, distinguishing valid from invalid arguments, including recognizing structural flaws that may be present in an invalid argument and identifying unstated assumptions.

Synthetic Skills (50%): Understand implications and consequences: Students are able to identify implications and consequences that go beyond the original argument. For example, they are able to: Draw or recognize deductive or supported conclusions when a conclusion is not explicitly stated in an argument or collection of evidence.

- Identify what further consequences are supported or deductively implied by an argument or collection of evidence.
- Conceive of or recognize alternative explanations (i.e., circumstances that, if they obtained, would explain a collection of information provided).
- Develop sound and valid arguments: Students are able to construct or complete arguments that are sound and valid; that is, arguments that are both structurally and evidentially strong. For example, they are able to: Employ reasoning structures that properly link premises and/or evidence with conclusions.
- Select or provide appropriate premises and/or evidence, as part of a valid argument.

Understanding Causation and Explanation: The skills measured in this third dimension are embedded in some of the tasks that also assess the two dimensions listed above.•Students are able to understand, evaluate and create arguments that invoke causal claims or that offer explanations for collections of information. For example, they are able to:

- Create or evaluate arguments that make causal claims.
- Evaluate the extent to which an observed correlation supports a causal claim.
- Recognize, describe, or evaluate the relevance of alternative causes for a collection of evidence.
- Create or evaluate arguments that make explanatory claims.
- Recognize, describe, or evaluate the relevance of alternative explanations for a collection of information

The *Test Manual* is attached to this report.

Interpretation

To determine how students at DSLCC performed on the assessment, we have we can DSLCC student performance to a comparison group of similar students. The individual students' overall scaled scores shows the mean overall, or topline, score. This assessment is scored from 150 (minimum) to 180 (maximum) and are categorized into the following ranges:

- 150-161 Developing
- 162-172 Proficient

- 173-180 Advanced

DSLCC's Mean overall Scaled Score was 160.6 and the comparison group was 160.3. In terms of categorization, DSLCC had two students test as "Advanced", 32 as "Proficient", and 66 as "Developing". Similarly, DSLCC students performed just under the Comparison Group Mean in both Analytic and Synthetic Critical Thinking.

The Institutional Score Report and Sample Questions are attached to this report.

Comparison data for each associate degree program at DSLCC is shown is the graph below. Please note that in some cases the sample size is very small and should be considered as such. Also note that students were asked to self-identify their program of study. For the academic programs, all students listing a program are included in the analysis. As a result, students who listed more than one program of study are included twice, but the "All DSLCC" category is unduplicated. Program heads are encouraged to look at the attached spreadsheet to verify their graduates and do their own analysis using the variables they think are most pertinent. Other descriptive statistics such as range, minimum and maximum scores, standard deviations, and standard error of the mean are provided in that spreadsheet. Outliers were not removed from this dataset. For your own analysis, you may wish to remove outliers. Specifically, column "B" in the spreadsheet shows if the student responded to at least 75% of the questions. Students who did not respond to 75% of the questions scored much lower overall which effects all three scores.

Program of Study	**Number in sample**	**Mean Overall Score**	**Mean Analytic Score**	**Mean Synthetic Score**
All DSLCC	103	160.44	3.67	3.57
Business Administration	5	161.8	3.81	3.94
Business Management	9	159.66	3.68	3.04
Culinary Arts and Management	2	158	3.52	2.35
Education	7	160.42	3.80	3.47
Electrical and Instrumentation	12	158.41	3.11	2.92
Forest Management Technology	6	166.16	5.09	5.26
General Studies	27	163.25	4.28	4.62
Information Systems Technology	4	158.75	2.87	2.73
Nursing	14	157.21	2.73	
Science	15	157.21	3.85	3.48

ETS HEighten

INSTITUTIONAL SCORE REPORT

REPORT DATE: 9/19/2019

Dabney S. Lancaster Community College
Clifton Forge, VA
USA
Test: **HEighten® Critical Thinking Assessment**

REPORTING GROUP:

Cohort: Combined
Close Date: Combined
Students Tested: 103
Records Excluded: 3
Students Included in Report: 100
(See bottom of report to view filters applied)

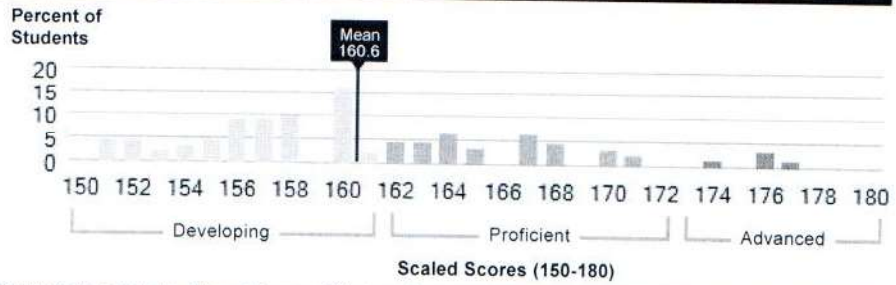
COMPARISON GROUP:

Comparison Group: All Institutions
Institutions: 66
Students Included in Report: 16,224

INDIVIDUAL STUDENTS' OVERALL SCALED SCORES

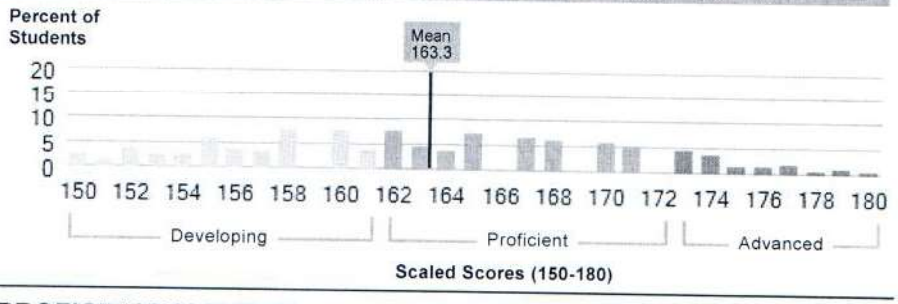
The histograms below show the distribution of individual students' scaled scores within the Reporting Group and the Comparison Group. The dark line indicates the overall mean score for that group.

REPORTING GROUP



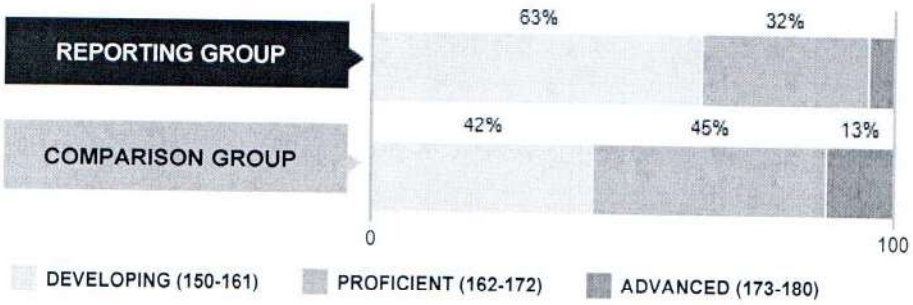
Different students take different forms of this test. On each form, some numbers in the score range are not possible scores. Consequently, the score distributions are not smooth, even for large groups of students.

COMPARISON GROUP



PROFICIENCY LEVELS

This chart shows the percentage of students at each proficiency level within the Reporting Group and the Comparison Group.



When a reporting group proficiency level is less than 6%, the percent value will not display. If the proficiency level information cannot be determined using the chart, administrators may calculate the percentages using the data download report.

PROFICIENCY LEVEL DESCRIPTIONS

DEVELOPING (150-161)

A typical student at the **developing** level may:

- make inferential connections between two explicitly related points
- follow the logic of an explicitly structured argument
- mistake evidence that is broadly related to a topic for evidence that is relevant to a specific assertion
- identify evidence that directly supports or undermines a claim
- have difficulty distinguishing causation from correlation

PROFICIENT (162-172)

A typical student at the **proficient** level has demonstrated the ability to:

- make inferential connections
- follow the logic of an argument
- understand logical relationships between assertions/arguments and supporting information
- identify implicit assumptions and evidence that supports or undermines a claim
- distinguish causation from correlation

ADVANCED (173-180)

A typical student at the **advanced** level has demonstrated the ability to:

- extrapolate implications
- describe the logic of complex arguments
- understand subtle logical relationships between assertions/arguments and supporting information
- identify needed evidence and implicit assumptions
- identify possible alternative causes or explanations

See www.ets.org/heighten/ctproficiency for the complete descriptions.

Report Filters
Major: All | Class Level (Credit Hours): All

Report excludes students who complete fewer than 75% of the questions. See roster for list of students.

For more information about your score report, please go to http://www.ets.org/heighten/scores. For additional resources go to http://www.ets.org/heighten.

ETS HElighten

INSTITUTIONAL SCORE REPORT

REPORT DATE: 9/19/2019

Dabney S. Lancaster Community College
Clifton Forge, VA
USA
Test: **HElighten® Critical Thinking Assessment**

REPORTING GROUP:

Cohort: Combined
Close Date: Combined
Students Tested: 103
Records Excluded: 3
Students Included in Report: 100
(See bottom of report to view filters applied)

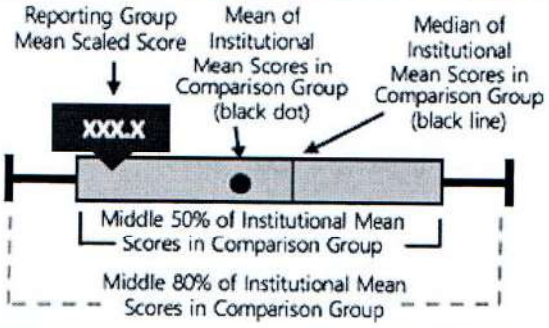
COMPARISON GROUP:

Comparison Group: All Institutions
Institutions: 66
Students Included in Report: 16,224

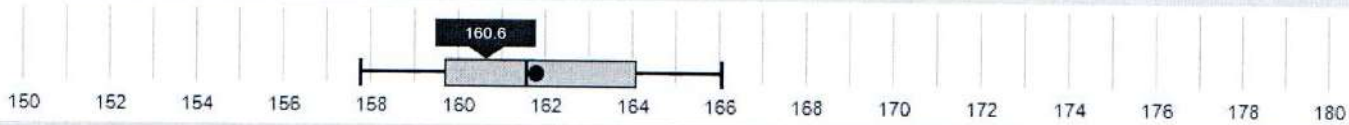
INSTITUTIONS' OVERALL SCALED SCORE AND SUBSCORE MEANS

The chart below enables you to compare the mean scaled scores for your Reporting Group with the mean scaled scores of the institutions in the Comparison Group.

The number in the dark rectangle is the mean scaled score of your Reporting Group. The figure below it is a "box-and-whisker" graph of the mean scores of the institutions in the Comparison Group. The yellow bar (the "box") shows the range of the middle 50% of the institutions. The black horizontal lines (the "whiskers") extend to the range of the middle 80%. The vertical line through the box indicates the median – the point that separates the upper half of the institutions from the lower half. The black dot indicates the mean of the institutions' mean scores.



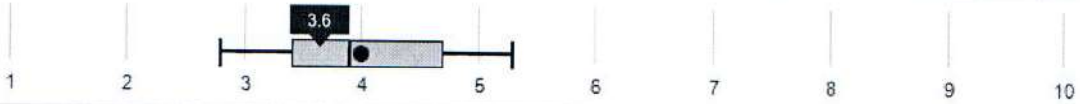
OVERALL SCALED SCORES (Scale of 150-180)



SUBSCORES (Scale of 1-10)

Analytic

Synthetic



Report Filters
Major: All | Class Level (Credit Hours): All

Report excludes students who complete fewer than 75% of the questions. See roster for list of students.
For more information about your score report, please go to http://www.ets.org/heighten/scores. For additional resources go to http://www.ets.org/heighten

HElighten® Critical Thinking Sample Items

Questions 1 - 2 are based on the material below.

1. Records indicate that William Shakespeare was baptized on April 26, 1564, and buried April 25, 1616, in Stratford-upon-Avon, England.
2. There is no evidence that William Shakespeare attended school, but had he done so, it would have been the local grammar school, and he would have left by age 14.
3. Documents show that by the early 1590s William Shakespeare was a managing partner of the Lord Chamberlain's Men, an acting company in London that built the Globe Theatre.
4. A total of 37 plays list Shakespeare as the author, including 13 that are set in Italy and several that make references to London politics.
5. There is no evidence that Shakespeare traveled outside of England.
6. In writings by others during Shakespeare's lifetime, Shakespeare was often referred to as a writer.
7. There is no manuscript of any play in William Shakespeare's own handwriting; only print versions of his plays exist.
8. No one questioned Shakespeare's authorship of the plays attributed to him during his lifetime or for centuries after his death.
9. Christopher Marlowe (1564–1593) was a brilliant poet and dramatist, educated at Cambridge University, who pioneered blank verse (unrhymed lines, almost always in the pattern of stressed syllables called "iambic pentameter") for dramatic plays.
10. Blank verse praised for its beauty appears frequently in the works attributed to Shakespeare.
11. Edward de Vere, 17th Earl of Oxford (1550–1604), whose aristocratic crest of arms depicted a lion shaking a spear, was trained in law, was a court poet, and visited Italy extensively.

Argument 1: (an abstract of an academic paper in a literary journal)

Abstract: "William Shakespeare of Stratford Could Not Have Written the So-called Shakespearean Plays"

We all know that there was a real person named William Shakespeare, who was born in Stratford in 1564, the son of a middle-class glove-maker, and who died in 1616. He was also a well-known actor and managing partner of an acting company in London in the 1590s. Beyond that, there is not a shred of evidence linking him to the 37 plays ascribed to him. How could an uneducated actor from Stratford have such intimate knowledge of court politics, legal matters, royalty, and Italy (the setting of 13 plays including *Othello*, *Merchant of Venice*, and *All's Well That Ends Well*)? Clearly, the plays reflect a sophisticated intellect, a familiarity with London politics, and a deep understanding of Latin and Greek literature—all improbable for a mere actor who grew up in Stratford and who had at best a grammar-school education. Either Edward de Vere (who is known to have visited Italy and was a court favorite) or Christopher Marlowe (who was college educated and the pioneer of blank verse for dramatic plays) was the real author of these brilliant and nuanced plays.

Argument 2: The argument below is a rebuttal in the form of a letter to the editor, published in a subsequent issue of the journal that published Argument 1 above.

It is ludicrous to question Shakespeare's authorship of the plays. The argument presented in this journal smacks of elitism. Other arguments for that position rely on conspiracy theory and convoluted logic. There is a historical record of such a man who was connected to London theater and whose name was given as the author of the plays. No one questioned Shakespeare's authorship until hundreds of years after his death. Those who put forward names of the "real" author—over 60 such names have been suggested—have their own agendas, including the elitism already mentioned, or a preference for a particular alternative author. Circumstantial evidence or outrageous ideas such as that Marlowe faked his own death in 1593 and authored some of the plays afterward, or that the real author, for whatever reasons, wanted to keep his own identity hidden, are flimsy and do not hold up under serious scrutiny.

1. Given the information in the facts list, someone wishing to establish that Marlowe is most likely the author of the plays attributed to Shakespeare would be aided in that task if which of the following were found and determined to be authentic? Select all that apply.

   ☐ 1. Comparisons of Marlowe's plays with Shakespeare's plays that show strong linguistic parallels and similar range of vocabulary

   ☐ 2. Journal entries in Marlowe's handwriting that note plot elements of a Shakespearean play prior to its being performed

   ☐ 3. Historical events that continue into the 1600s and parallel key plot elements in the plays

2. From the following facts excerpted from the list, select the two that together most help to support a claim central to Argument 1.

   ☐ 2. There is no evidence that William Shakespeare attended school, but had he done so, it would have been the local grammar school, and he would have left by age 14.

   ☐ 4. A total of 37 plays list Shakespeare as the author, including 13 that are set in Italy and several that make references to London politics.

   ☐ 5. There is no evidence that Shakespeare traveled outside of England.

   ☐ 7. There is no manuscript of any play in William Shakespeare's own handwriting; only print versions of his plays exist.

   ☐ 9. Christopher Marlowe (1564–1593) was a brilliant poet and dramatist, educated at Cambridge University, who pioneered blank verse (unrhymed lines, almost always in the pattern of stressed syllables called "iambic pentameter") for dramatic plays.

3. The following is an exchange between two contributors to an online literary forum.

Kate: Ursula Seti's undated poem "Eucalyptus," which compares the eucalyptus tree's periodic shedding of its bark to various momentous events in her own life, could not have been written before 1960. Before that date, Seti had never left her native Alaska, where it is far too cold for most species of eucalyptus trees to grow. In 1960, however, she visited Australia, where eucalyptus trees are very common, so the poem must have been written during or after that visit.

Miriam: But Seti could certainly have known that eucalyptus trees periodically shed their bark without having personally observed that process, so she could have written the poem at any time during her career, which began well before 1960.

Which of the following most accurately characterizes Miriam's response to Kate?

(A) It shows that Kate's argument assumes the very point that it attempts to demonstrate.
(B) It draws an opposing conclusion from the evidence cited in Kate's argument.
(C) It refutes Kate's argument by rejecting one of its unstated assumptions.
(D) It calls into question one of the statements Kate makes to support her conclusion.

4. In Longport, a survey of residents showed that more of them had taken continuing education classes in literature than in the arts over the last twelve months. If so, some residents must have taken multiple arts classes, because an examination of enrollment figures showed that overall enrollment in continuing education arts classes was higher than overall enrollment in continuing education literature classes.

The reasoning in the passage depends on assuming which of the following?

(A) There was no substantial enrollment in arts classes by people who were not residents of Longport.
(B) There were no more literature classes than arts classes.
(C) Few, if any, residents took both an arts class and a literature class in the last twelve months.
(D) Most Longport residents took at least one arts class in the last twelve months.

Questions 5 - 6 are based on the information below.

In a benefit concert, seven solo performers—Harris, Jones, McIntyre, Nelson, Strapp, Trevino, and Williams—will each sing once only and one after another. The order in which the performers will sing is governed by the following conditions:

Harris must sing at some time before McIntyre sings.

Strapp must sing at some time before Jones sings.

Trevino must sing either immediately before or immediately after Nelson sings.

Williams must sing third.

5. If McIntyre is to sing immediately before Strapp sings, Trevino can sing

(A) second
(B) fourth
(C) sixth
(D) seventh

6. If McIntyre is to sing fourth, which of the following must be true?

(A) Harris sings at some time before Strapp sings.
(B) Jones sings at some time before Trevino sings.
(C) Nelson sings at some time before McIntyre sings.
(D) Strapp sings at some time before Williams sings.

Keys

1) **1, 2**
2) **4, 5**
3) **C**
4) **A**
5) **A**
6) **D**

General Education Assessment Workgroup
August 29, 2019
11:30-12:30, Warren 403

AGENDA

- SCHEV Response to DSLCC General Education Assessment Plan Report
  Over the summer, Matt and I met with Jodi Fisler from SCHEV.
- Science Assessment Update/Report
- 2019-2020 Assessments: Critical Thinking and Professional Readiness

General Education Assessment Workgroup
September 26, 2019
Warren 403, 11:30 – 12:30

Agenda

(1) Review of Assessment Instruments: Critical Thinking, Professional Readiness
(2) 2019 Critical Thinking General Education Assessment Results
(3) SCHEV General Education Competencies Response

General Education Assessment Workgroup
February 6, 2020
Meeting Agenda

- Review of Student Learning Outcomes for possible revisions

DABNEY S. LANCASTER COMMUNITY COLLEGE

CRITICAL THINKING ASSESSMENT: COURSE BIO 150 – Introduction to Microbiology **INSTRUCTOR** Bowlina-Anale

Assignment: Pathogen Research Paper and Presentation

Critical Thinking Goals and Outcomes

- 1-- discriminate among degrees of credibility, accuracy, and reliability of inferences drawn from given data
- 2-- recognize parallels, assumptions, or presuppositions in any given source of information
- 3—use problem-solving skills;
- 4-- weigh evidence and decide if generalizations or conclusions based on the given data are warranted

Assessment Description/Goal Connection

Formal Assessment: Five critical thinking case studies included in a cumulative exam.

Assessment based on:

- **Analyzation**—demonstrated through identifying the pathogen and disease described
- **Synthesis**—demonstrated through recommending the proper treatment
- **Evaluation**—demonstrated thorough recommendation of future care, providing parental information, and preventative care

Assignment Results:

Student Name	EMPL ID	Total
[redacted]		12
[redacted]		12
[redacted]		12
[redacted]		8
[redacted]		11
[redacted]		8
[redacted]		10
[redacted]		6
[redacted]		12
[redacted]		0
[redacted]		7

[redacted]	11
[redacted]	12
[redacted]	8
[redacted]	9
[redacted]	10
[redacted]	12
[redacted]	11
[redacted]	10
[redacted]	12
[redacted]	9
[redacted]	10
[redacted]	12
[redacted]	12
[redacted]	11
[redacted]	7
[redacted]	12
[redacted]	11
[redacted]	5
[redacted]	12

The average score was 9.8 out of 12 for 82%. Most students were able to fulfill the analyzation by evaluating the case study to determine the pathogen and disease described. The synthesis and evaluation proved to be a bit more difficult for them with 10 out of the 30 (33%) failing to earn the total number of points for this level of critical thinking.

According to Meyer et al., case studies in scientific disciplines encourage critical thinking by incorporating knowledge from a variety of resources and apply a scope of information. Critical thinking is important in student success in the scientific field and their future careers, however strategies to tackle novel problems can be difficult for students to obtain. The case studies used in this assessment provide support students are able to analyze, but have a more difficult time synthesizing and evaluating with 33% of this group failing to reach the two upper levels of Bloom's taxonomy. In the future, case study evaluation will begin in the first three weeks of the course and continue through the final exam. Using the research cited, I will develop a systematic approach to teaching case studies in hopes it improves their critical thinking skills. Students entering the healthcare field must cultivate these skills to be successful in the next stages of their career.

Meyer, C. A., Hall, H., Heise, N., Kaminski, K., Ivie, K. R., & Clapp, T. R. (2018). A Systematic Approach to Teaching Case Studies and Solving Novel Problems. *Journal of microbiology & biology education*, *19*(3), 19.3.95. https://doi.org/10.1128/jmbe.v19i3.1593

EDU Program Assessment: 2019—2020 **Tondalaya VanLear**

With the start of the 2019-2020 year, I employed several changes in course/program interactions in order to increase learning opportunities and provide stronger transfer preparation for DSLCC EDU students. The focus learning outcomes for 2019-2020 (two each year are identified for assessment) were directed to increasing technology skills in the field and exploring/explaining characteristics and standards that contribute to classroom teaching effectiveness. Frankly, we couldn't have had more appropriate emphases and the challenges we were to face with the CoVid 19 pandemic closing of campus midway in Spring 2020.

Through ongoing attention to reflective critical thinking, effective written communication, exploration of standards, and the impact of a strong teaching philosophy, students utilized various technologies to develop and expand their foundational knowledge of what defines (both in concept and action) an effective teacher and a strong learning environment.

Course assignments/activities provided both individual exploration as well as whole-class (on campus and in Zoom) discussion opportunities and included: Small group exchange, classroom observations responses (reflective critical thinking)—on site and online—article evaluations, and research development, which incorporated program learning outcomes and the focused assessment. As students in Spring 20 were in the midst of completing their required observations, I engaged online opportunities for viewing videoed classroom interactions from university professional development sites, and this option enabled several students to complete their required observation hours. This experience also provided a keen look at diverse practices in instruction and evaluation, and we were able to expand our discussion/learning in our Zoom classroom on a variety of technology uses in the classroom. I will continue to use a selection of these videoed classroom interactions in SDV 101 and EDU 200 to encourage broader awareness and critical thinking. EDU 200 students also completed their research project presentations in our Zoom environment, and managed well the "new" technology they were learning to use.

On an additional note, four EDU students participated in a directed Internship in local school systems—one in CPS and three in ACPS. Guided by their host teachers, these students had opportunity to plan and implement lessons for their respective classes, and all four demonstrated their clear commitment to effective teaching as they initiated helping their host teachers when the CoVid 19 pandemic response forced area schools into alternative teaching methods. These EDU students provided virtual tutoring for struggling students and stayed in contact with their host teachers to help with online activities (with host teacher and parental request/approval).

Both the experience and the portfolios that resulted from these internships give these students a clear and firm foundation for their next steps at their transfer institutions. Specifically for EDU students who will be attending Mary Baldwin University, this internship provides documented experience (100+ hours) that MBU recognizes as their first practicum and gives

them 3-credit hours that counts toward their Virginia licensure to teach. At other institutions, this credit is not yet recognized in their department/schools of Education, and students are advised to work with their EDU advisors on those campuses, but with the extensive work, documented time, and reflective responses, my hope is that these other institutions will acknowledge this student achievement and provide credit for licensure.

Overall, our EDU students are gaining clear and effective experiences in their courses as they complete their program pathway and prepare for graduation and transfer. As I review the 2019—2020 results, the challenges created by the CoVid 19 pandemic, and the innovative ways in which EDU students responded to our campus closing, I know we have a strong Education program and effective learning outcomes in place for any student who comes to DSLCC with the desire to enter the Education field.

Critical Thinking in Psychology and Other Social Sciences (HIS, PLS, SOC)

I feel critical thinking is the most addressed general education competency from social science courses due to the focus on self and interaction with others. Social sciences courses include many theories that promote critical thinking. Who says what and why in regards to behavior and mental process, history, politics, sociology? Students' share thoughts regarding theories, since all of them are partially correct. I also encourage students to develop their "theories", and share my "theories" with them. I believe in the motto, Together We Learn, and feel my classroom is a place to discuss openly topics and ideas that pertain to psychology. I learn from my students as they do from me, and I feel this encourages and strengthens critical thinking, as I continue to rein them back in using current research. I try to foster their need to pursue their own research. Since I have recently moved to limited OER resources for both PSY 200 & 230, I have had to create many learning activities to promote general education competencies. I continually make class changes to student requirements and expectations to bring in more critical thinking and scientific literacy. When teaching larger classes (there was a time we had 80-90 in one class), I used more quantitative assessments for my personal sanity. Now that class size is manageable (30), I have incorporated more writing assignments and subjective work, which promotes critical thinking. I also made this change due to student evaluations, and more varied opportunities being requested in regards to my grading. In both PSY 200 & PSY 230 classes, I require a "movie review" for students to find class topics in a book/movie of their choice and relate them to what they are learning in class. Below are some activities from various classes:

In PSY 200 (Principles), we have many activities that promote critical thinking:

- one minute papers which give students a chance to tell me the most important thing they learned, and one thing they are still struggling with
- active learning for defense mechanisms and resolving conflict
- personality and intelligence tests and analyzing of personal results
- stress inventory and moderation techniques and effectiveness as well as other students sharing results
- group essay exam where students exchange digesting of knowledge and their own personal opinions to promote student to student learning

In PSY 230 (Lifespan), we use the following:

- study of moral reasoning and "dilemmas" students have been faced with
- group avatar project to create a life and walk thru physical, cognitive, social and emotional development
- study of culture and how this impacts development – group study of both economically developed countries and developing countries
- rites of passage in adolescents to address physical, educational, economic, religious, legal maturity, etc.
- many "what do you think" sessions due to the varied choices in aging
- life expectancy calculator and review of "bucket list" and a personal narrative on their reflection of "aging well"

In PSY 215 (Abnormal) we use the following:

- Substance use role play
- Bring one thing you learned to class to teach others, and one thing you need more help with (psychological disorders can be daunting) This is similar to the one minute paper in PSY 200..just adapted for zoom instruction
- Group project on a chosen disorder with a required case study
- Discussion board engagement for teacher to student engagement and student to student engagement to learn more about symptoms, prevalence and treatment of disorders
- Videos to bring disorders to life and help with digestion

In addition, Alan Whitehead includes assignments and activities in his PSY class that focus on critical thinking, not just the right answer. One thing I plan to incorporate in future PSY 200 classes is one "critical thinking" question per chapter. With this pandemic, I have become a better teacher. I need to shut my mouth more, and let students talk more. I must do my part to prevent death by lecture! With these types of questions, and an appropriate class atmosphere, students will share their ideas and thinking. I need this and feel it promotes deeper critical thinking and scientific literacy in our students. It also encourages students to pursue their own learning, rather than just depend on the teacher tells them to do.

SLO Report:

Civic Engagement: is the ability to contribute to the civic life and well-being of local, national, and global communities as both a social responsibility and a life-long learning process. Degree graduates will demonstrate the knowledge and civic values necessary to become informed and contributing participants in a democratic society.

- I do believe that SOC 200 covers civic engagement (each semester they are assigned a variety of activity assignments. They are asked to explore a certain topic such as *racism*. They are to do research and write a paper on what they would do to eradicate and/or minimalize racism in American society. Then, they write about some of the opposition they may face by their policy and/or procedures they would implement. Finally, they write about what they would do to try to minimalize opposition and to gain acceptance of their policy and/or procedures.

Critical Thinking: is the ability to use information, ideas and arguments from relevant perspectives to make sense of complex issues and solve problems. Degree graduates will locate, evaluate, interpret, and combine information to reach well-reasoned conclusions or solutions.

- Sociology, in its nature, requires critical and analytical thinking. I try to accomplish this mainly through their activity assignments. For all even numbered chapters, they must have a Title Page, 500-Word Body, and a Citation's Page. Topics vary for each chapter such as: gender, marriage and family, religion, etc. Students explore the topic analyze the situation and write a 500-word essay using critical thinking analysis.

Professional Readiness: is the ability to work well with others and display situationally and culturally appropriate demeanor and behavior. Degree graduates will demonstrate skills important to transition into the workplace and pursuit of further education.

- Throughout the semester, students are required to engage in discussion forums through digital communication where they must engage in conversation with each other. They must have an original post, and they must comment on two other student's posts. The forums cover a plethora of social problems. These social problems deal with aging, politics, religion, etc. They are graded on their knowledge of content. Also, they are graded on their professional and courtesy of others. Part of the rules for forums is that they must be polite and professional in every post. I do not mind that they disagree; however, they must always be professional and polite.

Quantitative Literacy: is the ability to perform accurate calculations, interpret quantitative information, apply and analyze relevant numerical data, and use results to support conclusions. Degree graduates will calculate, interpret, and use numerical and quantitative information in a variety of settings.

- The textbook uses quantitative research throughout the chapters to give students the most accurate data available for what is going on in their environment. Students are required to reflect this data in the forums, activity assignments, quizzes, exams, and their analytical writing assignments.

Scientific Literacy: is the ability to apply the scientific method and related concepts and principles to make informed decisions and engage with issues related to the natural, physical, and social world. Degree graduates will recognize and know how to use the scientific method, and to evaluate empirical information.

- The course requires students to use social science in many ways. The course is designed for them to see their world through a sociological lens. This helps students realize that their world is not as it seems and that they are a product of their environment (extrinsic forces). They are required, at the beginning of the semester, to conduct an experiment on social norms. They interpret people's reactions to the norms that they broke and give a written report on their findings.

Written communication: is the ability to develop and communicate ideas effectively in writing as appropriate to a given context, purpose, and audience. It includes a variety of styles, genres, and media, including computer-mediated communication.

- Students accomplish this in SOC 200 through a variety of different assignments. Since the course is fully online, they engage in written communication through forums. They are graded on knowledge of topic, professionalism of post, punctuation, grammar, etc.
- Students also complete 500-word activity assignments. They must research the topic given. They must write their paper using proper grammar, punctuation, and citations.
- Students must complete one Analytical Writing Assignment. They explore a different religious practice or belief (other than their own), and they must use proper grammar, punctuation, and citations.