

Utah Valley University

Emergency Services Department Annual Assessment Report

Report on Student / Program Learning Outcomes (SLOs)

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Department Mission Statement

The Emergency Services Department at Utah Valley University prepares practicing and future emergency service professionals through a program that balances technical skills, critical and ethical thinking, leadership, and effective communication. The department's programs address multiple emergency service educational needs, from professional certifications to degrees.

Executive Summary

This document reports student learning outcomes (SLOs) for Fall 2016 and Spring 2017 for the Department of Emergency Services within the College of Aviation and Public Services. Results show that over 85 percent of students successfully complete their courses. Thirty-five percent of students graduate within six years of starting the program.

This is the second year that Utah State requires students studying to be Emergency Medical Technicians to take the National Registry Exams. While 100% of students are passing the state practical exam, many students are postponing taking the written exam.

Students in the Paramedic Program also take the National Registry Exams. Eighty-nine (89) percent of students pass the exam. Some students pass the courses and graduate, but do not take the Registry Exam because they go to medical school or another graduate program.

All 100% of students completing the Recruit Candidate Academy have passed state exams for Firefighter I and II, Hazardous Materials Awareness, and Hazardous Materials Operations. This pass year several students did not take the exams, because they had previously taken the exam.

The Emergency Services Department has 613 majors in its programs (IRI, Fall 2015). Retention rates are high with 35% of the B.S. students graduating within six years. This compares to a university figure of 15% graduating on time (IRI, 2012). In 2015-2016, 204 students graduated from its programs. Degree programs and individual courses are designed to meet both state and national professional requirements, including those established by the Utah Fire Services Certification Council, the Utah Labor Commission, the United States Occupational Safety and Health Administration (OSHA), the National Fire Protection Association (NFPA), the United States Department of Homeland Security (DHS), the Federal Emergency Management Association (FEMA), the National Fire Academy (NFA), and the National Wildfire Coordinating Group (NWCG).

Bachelor degrees are offered in Emergency Management and Emergency Medical Services. In addition, as part of their programs students can certify as Paramedics, Emergency Medical

Technicians, Firefighters (in the Recruit Candidate Academy), Wildland Firefighters, and Aviation Fire Officers.

Observations:

The 2014-2015 Assessment Report used pass rates as the primary means of measuring Program / Student Learning Outcome success. In the 2015-2016 Assessment Report, improved measures were used for assessing Student Learning Outcomes. The 2016-2017 report focuses more specifically on certain SLOs and uses more comprehensive means to measure the success of these SLOs. National and state exams were used to measure SLOs for the EMT, Paramedic, and RCA programs. In the Bachelor of Science in Emergency Services Administration degree, a rubric was used to measure success in the four key SLOs. Using the rubric, two faculty analyzed the final project of the capstone course (ESMG4650). The results from these measures are described in more detail in the following sections.

Emergency Medical Technician, Paramedic, and Recruit Candidate Academy

This is the second year that graduates from our Emergency Medical Technician program have been required to take the National Registry Exam to certify within the State of Utah. Previously, they took a state exam. Despite the change program learning outcomes were met.

In the EMT program many of students did not take the exam immediately after completing the course. (Students have 24 months following the end of the class to pass the National Registry Exams.)

- In the EMT basic course for 2016-2017, 136 students were recommended for the National Registry written exam and 91 (67%) took the exam by the end of spring semester and passed. All 136 took the practical exam and passed.
- In the Advanced EMT course for 2016-2017, 63 students were recommended for the National Registry exam and 32 (51%) took the written exam and passed. All 63 students took the practical exam and passed.
- Paramedic students have taken the National Registry Exam since 2007. Of 58 students who were recommended for the National Registry Exam, 47 (89%) took the written exam and passed. Students who are accepted into the paramedic program have completed and passed the exam for both Basic and Advanced EMT.
- In 2015-2016, 39 students completed the Recruit Candidate Academy program. All who took the state exams passed all.

Department faculty are exploring ways to increase the number of students taking the EMS exams immediately after completing the courses. One alternative being explored is to require students pass the National Registry exams in order to pass the courses.

AAS Emergency Care

SLO #1	State or National Exams
Outcome	Students will demonstrate knowledge, skills and procedures to perform satisfactorily in their area of study.
Means of Assessment	Upon successful completion of the programs of study, students will take the state or national exams (where offered).
Criteria for Success	Students will pass the state or national exams with a score of 80% or better.
Summary/Analysis of Results	By the end of Spring semester 2016, 51% (32) of the Advanced EMT class had taken and passed the National Registry written exam. 67% (91) of the Basic EMT classes had taken and passed the National Registry written exam. All students in both passed the practical exam.
Use of Results	This is the second-year students have taken the EMT National Registry exams. Significantly more students took the exam this year over the previous year. Many students delay taking the exam, thinking that they need more time to prepare. Faculty are exploring ways to get students to take the exams immediately following completion of the courses. This should increase the success rate.
Connection to ELOs	1, 4

Advanced EMT	2016-2017	2015-2016
Enrolled		48
Recommended (completed all class requirements)	63	40
National Registry Exam - Tested and passed	32	13
% completing course who passed written exam	51%	32.5%
National Registry Practical Exam	63	40
% completing course who passed practical exam	100%	100%
EMT	2016-2017	2015-2016
Enrolled		220
Recommended (completed all class requirements)	136	194
National Registry Written Exam – Tested & Passed	91	24
% completing course who passed written exam	67%	12.3%
National Registry Practical Exam – Passed	136	194
% completing course who passed practical exam	100%	100%

(Note: Students have 24 months following the end of the class to pass the National Registry Exams.)

Certificate of Completion – Paramedics

SLO#1	National Registry Exam
Outcome	Students will demonstrate knowledge, skills and procedures to perform satisfactorily in their area of study.
Means of Assessment	Upon successful completion of the paramedic's program, students will be recommended to take both the written and practical National Registry Exam.
Criteria for Success	80% of Students will pass both the written and practical exam with a score of 80% or better.

Summary/Analysis of Results	89% of students successfully passed the written National Registry exam. No students who took the exam failed the exam. Six students are eligible for a retest.
Use of Results	Paramedic faculty will explore ways of getting students to take the National Registry exam immediately following the course completion. Many students don't take the National Registry exams, because they aren't a requirement for entry into graduate school.
Connection to ELOs	1, 2, 3, 4, 5, 6

Paramedics – National Registry Exam 3rd Quarter 2016 to 3rd Quarter 2017

Students are required to pass the Paramedics National Registry Exam to receive a Certificate of Completion. (Some students do not take the exam, because they are using the Paramedics course for entry into Medical School or other graduate programs.)

Paramedics	2016 - 2017	2007 to 2017
Attempted the Exam	58	382
First Attempt Pass	43 (81%)	285 (75%)
Cumulative Pass Within 3 Attempts	47 (89%)	329 (86%)
Cumulative Pass Within 6 Attempts	47 (89%)	334 (87%)
Failed All 6 Attempts	0 (0%)	0 (0%)
Eligible for Retest	6 (11%)	9 (2%)
Did Not Complete Within 2 Years	0 (0%)	39 (10%)

Attempted the exam: Number of graduates that make at least one attempt at the exam.

First attempt pass: Number and percent of those who attempt the exam that pass on the first attempt.

Cumulative pass within 3 attempts: Number and percent of those who attempt the exam who pass on the first, second, or third attempt.

Cumulative pass within 6 attempts: Number and percent of those who attempt the exam who pass on the first, second, third, fourth, fifth, or sixth attempt.

Failed all 6 attempts: Number and percent of those who fail the exam six times.

Eligible for retest: Number and percent of those who failed their last attempt, but remain eligible for retest (less than six attempts, less than two years from course completion.)

Did not complete within 2 years: Number and percent of those who fail their last attempt and are no longer eligible for retest (more than two years from course completion.)

Certificate of Completion – Recruit Candidate Academy (RCA)

SLO#1	State Firefighter Exam
Outcome	Students will demonstrate knowledge, skills and procedures to perform satisfactorily in their area of study.
Means of Assessment	Upon successful completion of the RCA program, students will take the state firefighter exams.
Criteria for Success	80% of Students will pass the state firefighter exams with a score of 80% or better. (The state requirement is 70% to pass the exams.)
Summary/Analysis of Results	All 20 students in Fall 2016 and all 19 students in Spring 2017 successfully passed state exams at 80% or better.
Use of Results	Faculty teaching in the Recruit Candidate Academy will continue to prepare students to successfully pass the four state exams.
Connection to ELOs	1, 2, 3, 4, 5, 6

Certificate of Completion – Recruit Candidate Academy (RCA)

Recruit Candidate Academy (RCA)	Fall 2016	Spring 2017
Number of students completed RCA program	20	19
Passed Utah State Firefighter I Exam	20 (100%)	18 (95%)
Passed Utah State Firefighter II Exam	20 (100%)	17 (89%)
Passed Utah State Hazardous Materials Awareness Exam	20 (100%)	19 (100%)
Passed Utah State Hazardous Materials Operations Exam	20 (100%)	18 (95%)

Some students did not take all of the exams. All students who took the exams passed.

B.S. Emergency Services Administration

Report of Student Learning Outcomes (SLOs)

Four student learning outcomes have been identified to measure student success in the Bachelor of Science in Emergency Services Administration. In addition to the instructor of record, a second instructor graded the final project of the capstone course (ESMG 4650), using a rubric, which measured success for 20 students in the four student learning outcomes. Under each of the four student learning outcomes were sub-categories which were measured using the rubric (see Appendix C).

SLO 1: Application of Knowledge - Theory and content of emergency administration

- Topic selection
- Existing Knowledge, Research, and/or Views
- Analysis
- Conclusions

SLO 2: Critical Thinking - Students use critical and creative thinking, skeptical inquiry, and problem solving in making ethical and good decisions.

- Solving problems
- Embracing contradictions
- Innovative thinking
- Connecting, Synthesizing, Transforming

SLO 3: Communications - Students will be able to communicate effectively in writing.

- Context of and Purpose for Writing
- Content development
- Sources and evidence
- Control of syntax and mechanics

SLO 4: Global Awareness - Students will recognize, understand, and respect the complexity of socio-cultural and international diversity.

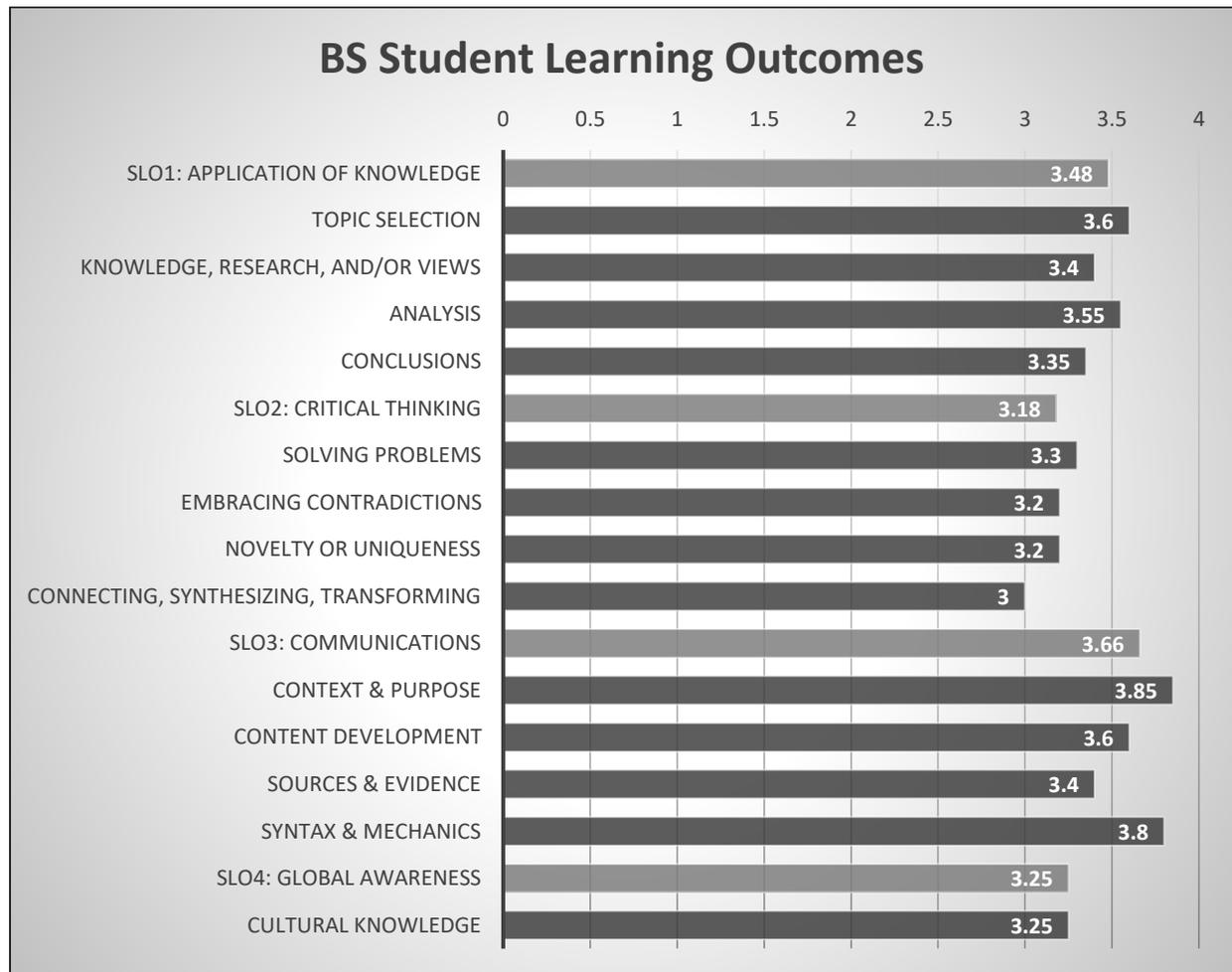
- Knowledge of cultural worldview frameworks

Student scores in 13 areas were averaged and a percentage was calculated. The average score on the capstone project from the instructor of record was 97.1% for Fall 2016 (based on 19 students) and 96.7% for Spring 2017 (27 students). The average for 20 assignments graded by the second instructor, using the rubric, was 85.9%. This compares to overall results for the two faculty of 90.6% and 88.5% for 2015-2016.

Overall Results for Capstone Project

Instructor of record	Number of students	Percentage Score
• Fall 2016	19	97.1%
• Fall 2017	27	96.7%
Instructor 2 using rubric		
• Both semesters	20	85.9%

The following chart shows student results for the sub-categories under the 4 student learning outcomes for the Bachelor of Science in Emergency Services Administration. Written communications showed the highest results for the four student learning outcomes (3.66). The lowest results were in the SLO of critical thinking (3.18). The sub-category of greatest strength is context and purpose in written communication (3.85). The sub-category of greatest weakness is connecting, synthesizing, and transforming under critical thinking (3.0).



Over a four-year period, while each area will be assessed, faculty teaching in the bachelor's program will work with students in each class to improve results in each of the four SLOs. In Year 1 the focus was on SLO 1: Theory and content of emergency administration; in this year, which is Year 2, the focus will be on critical thinking. In Year 3 the focus will be on written communication and in Year 4 global awareness.

In 2017-2018 to improve faculty awareness of student critical thinking faculty will be encouraged to learn more about the topic. In addition, instruction will be offered at faculty meetings. Critical thinking will be the focus of a special unit of instruction that will be available for students online. Faculty will emphasize critical thinking through assignments, comments when grading, and instruction to students. Critical thinking training for students will be offered in other ways, including through tutoring.

Appendix A: Student/Program Learning Outcomes

BS-Emergency Services Administration

SLO #1	Theory and content of emergency administration
Outcome	Students will demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in emergency administration.
Means of Assessment	Rubric was used to measure (a) topic selection, (b) existing knowledge, research, and/ or views, (c) analysis, and (d) conclusions in the final capstone project (ESMG 4650).
Criteria for Success	90% of students will receive scores of 3 or better on the areas measured by the rubric.
Summary/Analysis of Results	95% of students received scores of 3 or higher. 42.5% received 3; 52.5% received 4.
Use of Results	In Year 1 (2016-2017) faculty were trained in applying research and analysis in pedagogy. During 2017-2018, follow-up training will occur in this area.
Connection to ELOs	1, 4

SLO #2	Critical thinking skills
Outcome	Students use critical and creative thinking, skeptical inquiry, and problem solving in making ethical and good decisions.
Means of Assessment	Rubric will be used to measure (a) solving problems, (b) embracing contradictions, (c) innovative thinking, and (d) connecting, synthesizing, and transforming in the final project of the capstone course (ESMG 4650).
Criteria for Success	90% of students will receive scores of 3 or better on the areas measured by the rubric.
Summary/Analysis of Results	97.5% of students scored 3 or better. 77.5% received 3; 20% received 4.
Use of Results	During Year 2 (2017-2018), while research and analysis will continue to be emphasized, faculty will focus on the area of critical thinking. Training will be offered in this topic to faculty and students.
Connection to ELOs	2,3

SLO #3	Communication skills
Outcome	Students will be able to communicate effectively in writing.
Means of Assessment	Rubric will be used to measure (a) context of and purpose for writing, (b) content development, (c) sources and evidence, and (d) control of syntax and mechanics in the final project of the capstone course (ESMG 4650).
Criteria for Success	90% of students will receive scores of 3 or better on the areas measured by the rubric.
Summary/Analysis of Results	97.5% of students scored 3 or better. 28.75% scored 3; 68.75% scored 4.
Use of Results	During Year 3 (2018-2019), more emphasis will be placed on control of syntax and mechanics in writing communications.
Connection to ELOs	2

SLO #4	Global Awareness
Outcome	Students will recognize, understand, and respect the complexity of socio-cultural and international diversity.

Means of Assessment	Rubric will be used to measure knowledge of cultural worldview frameworks in the final project of the capstone course (ESMG 4650).
Criteria for Success	90% of Students will receive scores of 3 or better on the areas measured by the rubric.
Summary/Analysis of Results	100% of students scored 3 or better. 60% scored 3; 40% scored 4.
Use of Results	While students excelled in this area, during Year 4 (2019-2010) faculty will work to improve student global awareness. Students will be offered greater opportunities to develop cultural understanding through projects, service learning, study and travel abroad.
Connection to ELOs	5, 6

Appendix B: Essential Learning Outcomes (ELOs)

1. A student will engage in **discipline-appropriate experiences** with the academic and broader community through integrated and applied learning.
2. A student will acquire a foundation of **intellectual and practical skills** including communication, quantitative reasoning, qualitative reasoning (critical, analytical, and creative thinking), and technical and information literacies.
3. A student will become personally and socially responsible by acquiring, developing, and demonstrating skills in **ethical reasoning and understanding**.
4. A student will demonstrate **professional competence** by meeting the established standards of the discipline, working as a valued member of a team, effectively formulating and solving problems, and actively seeking and honing lifelong learning skills.
5. A student will demonstrate **stewardship of local, national and global communities** by cultivating awareness of: interdependence among those communities; issues within those communities; and organizations and skills that address such issues.
6. A student will demonstrate **knowledge of human cultures and the physical and natural world** in the following areas of essential study: arts, history, humanities, languages, science and mathematics, social sciences. Knowledge Foundation refers to GE Distribution courses and other courses and experiences within the major.

Appendix C: Rubric used to measure results in the capstone course (ESMG 4650) – B.S. Emergency Services Administration.

SLO 1: Application of Knowledge - Theory and content of emergency administration

Capstone 4	Milestone 3	Milestone 2	Benchmark 1
Topic selection			
Identifies a creative, focused, and manageable topic that addresses potentially significant yet previously less-explored aspects of the topic.	Identifies a focused and manageable/doable topic that appropriately addresses relevant aspects of the topic.	Identifies a topic that while manageable/doable, is too narrowly focused and leaves out relevant aspects of the topic.	Identifies a topic that is far too general and wide-ranging as to be manageable and doable.
Existing Knowledge, Research, and/or Views			
Synthesizes in-depth information from relevant sources representing various points of view/approaches.	Presents in-depth information from relevant sources representing various points of view/approaches.	Presents information from relevant sources representing limited points of view/approaches.	Presents information from irrelevant sources representing limited points of view/approaches.
Analysis			
Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities related to focus.	Organizes evidence to reveal important patterns, differences, or similarities related to focus.	Organizes evidence, but the organization is not effective in revealing important patterns, differences, or similarities.	Lists evidence, but it is not organized and/or is unrelated to focus.
Conclusions			
States a conclusion that is a logical extrapolation from the inquiry findings.	States a conclusion focused solely on the inquiry findings. The conclusion arises specifically from and responds specifically to the inquiry findings.	States a general conclusion that, because it is so general, also applies beyond the scope of the inquiry findings.	States an ambiguous, illogical, or unsupported conclusion from inquiry and findings.

SLO 2: Critical Thinking - Students use critical and creative thinking, skeptical inquiry, and problem solving in making ethical and good decisions.

Capstone 4	Milestone 3	Milestone 2	Benchmark 1
Solving Problems			

Not only develops a logical, consistent plan to solve problem, but recognizes consequences of solution and can articulate reason for choosing solution.	Having selected from among alternatives, develops a logical, consistent plan to solve the problem.	Considers and rejects less acceptable approaches to solving problem.	Only a single approach is considered and is used to solve the problem.
Embracing Contradictions			
Integrates alternate, divergent, or contradictory perspectives or ideas fully.	Incorporates alternate, divergent, or contradictory perspectives or ideas in a exploratory way.	Includes (recognizes the value of) alternate, divergent, or contradictory perspectives or ideas in a small way.	Acknowledges (mentions in passing) alternate, divergent, or contradictory perspectives or ideas.
Innovative Thinking			
Novelty or uniqueness (of idea, claim, question, form, etc.)			
Extends a novel or unique idea, question, format, or product to create new knowledge or knowledge that crosses boundaries.	Creates a novel or unique idea, question, format, or product.	Experiments with creating a novel or unique idea, question, format, or product.	Reformulates a collection of available ideas.
Connecting, Synthesizing, Transforming			
Transforms ideas or solutions into entirely new forms.	Synthesizes ideas or solutions into a coherent whole.	Connects ideas or solutions in novel ways.	Recognizes existing connections among ideas or solutions.

SLO 3: Communications - Students will be able to communicate effectively in writing.

Capstone 4	Milestone 3	Milestone 2	Benchmark 1
Context of and Purpose for Writing			
Includes considerations of audience, purpose, and the circumstances surrounding the writing task(s).			
Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.	Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).	Demonstrates awareness of context, audience, purpose, and to the assigned tasks(s) (e.g., begins to show awareness of audience's perceptions and assumptions).	Demonstrates minimal attention to context, audience, purpose, and to the assigned tasks(s) (e.g., expectation of instructor or self as audience).

Content Development			
Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding, and shaping the whole work.	Uses appropriate, relevant, and compelling content to explore ideas within the context of the discipline and shape the whole work.	Uses appropriate and relevant content to develop and explore ideas through most of the work.	Uses appropriate and relevant content to develop simple ideas in some parts of the work.
Sources and Evidence			
Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing	Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.	Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.	Demonstrates an attempt to use sources to support ideas in the writing.
Control of Syntax and Mechanics			
Uses graceful language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.	Uses straightforward language that generally conveys meaning to readers. The language in the portfolio has few errors.	Uses language that generally conveys meaning to readers with clarity, although writing may include some errors.	Uses language that sometimes impedes meaning because of errors in usage.

SLO 4: Global Awareness - Students will recognize, understand, and respect the complexity of socio-cultural and international diversity.

Capstone 4	Milestone 3	Milestone 2	Benchmark 1
Knowledge of cultural worldview frameworks			
Demonstrates sophisticated understanding of the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.	Demonstrates adequate understanding of the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.	Demonstrates partial understanding of the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.	Demonstrates surface understanding of the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs