

Crafton Hills College - Outcomes Assessment Report

Institutional Learning Outcome 1: Critical Thinking

Term Assessed: 2015 Spring

Learning Outcomes Statement

Students demonstrate critical thinking through decision-making, problem-solving, analysis of information, and creative thinking across the disciplines.

Means of Assessment (Measurement Method)

On Flex Day, April 1, 2015, the Institutional Effectiveness, Accreditation, and Outcomes Committee (IEAOC) with the Professional Development Committee (PDC) organized a campus wide meeting to discuss the results collected from SLO Cloud tool on the critical thinking ILO. Twenty-six adjunct and full-time instructional and non-instructional faculty from 20 different disciplines attended the session and chose which ILO group to participate in. Two groups of faculty participated in developing the proposed actions for the critical thinking ILO.

Summary of Evidence

The Office of Institutional Effectiveness, Research, and Planning (OIERP) provided a summary of the ILO results for critical thinking based on faculty mappings to the ILO, the proposed actions, and the list of courses where the outcome was mapped to the critical thinking ILO. A list of proposed actions, courses with outcomes mapped to critical thinking, and the results are illustrated below.

Table 1: List of Proposed Actions for Courses with Outcomes Mapped to ILO #1: Critical Thinking.

Most students were able to accurately calculate their target heart.
1. It appears that students were able to successfully use their compasses and their surroundings to navigate their way around an unknown area, manage time and return successfully to their point of origin. Their mapping skills were pretty accurate based on the few tools they had available to them. Although they were not all expert map makers they were all aware of the directions they were traveling and had a good understanding of time and space. 2. All students were able to increase the distance they traveled in a one hour period on the same trail. This was due to an increase in their personal walking pace. This may have been altered due to an increase in cardio respiratory endurance, muscular strength and endurance or walking mechanics. Some of the students who only scored a 3 may have been capable of more however, quite a few of them hung out in groups or with partners which may have slowed their pace. Regardless, all students improved. 3. Students did an excellent job of preparing their packs each day. The students who received a 3 did so because they did not bring a snack or did not have enough water. Many of them simply forgot to recharge their packs after our longer weekend hikes. Money is also a factor for some of these students. This class has performed better than previous hiking classes and it really appears to be due to good daily attendance and uniform participation in longer off campus hikes. Last semester (Spring), had very poor statistics due to low participation. I believe our new facilities have been an inspiration for students to join our physical education classes and has motivated them to keep coming to class.
1. Find/explore new methods and strategies for teaching punctuation and grammar for better student retainment. 2. Incorporate more peer workshops for essays
A and B students met all criteria. C students need some improvement. 4 D students did not regularly bring in completed work but continued attending until the end of the semester. I believe my class standards are rigorous and I should not change them. For students who are not meeting the SLO's, my plan is to implement more Early Alert intervention for student support services and use my new LRC class time for one-on-one instructor/student tutoring sessions. I hope to use

<p>this time to make the discussion happen because some students avoid office hours or seeking much-needed help and guidance.</p>
<p>Aim to Increase % assessed number so that more student fall into the 3 or higher category.</p>
<p>All SLO's are > 70% and they are meeting the program standard.</p>
<p>Although two students did not answer the correct answer for the SLO in number 1, overall the outcome was satisfactory. I will make a concerted effort to cover the information thoroughly in my future lectures on the subject. At the end of the semester I polled the students on the overall validity of the class material and presentation of the class. I was pleased to hear their comments. The students as a whole requested more time spent on the Interview process as this is the most important part of the testing process. The students felt that the Interview process with real "Sworn Firefighters" was as real as it could get and thought the interview brought together everything they had learned in the classroom. The students were graded on their ability to present themselves before an Oral Examination Board.</p>
<p>An SLO rotation to address the other SLOs needs to be created.</p>
<p>As this was the students last course of their clinical course series, all performance skills were completed in their clinical syllabus. There are no proposed actions at this time.</p>
<p>Continue to push students to give it their all and not give up or look for an easy way out when it comes to their understanding or mathematics</p>
<p>Dedicate a few minutes each class day to reviewing one or more of these concepts.</p>
<p>Dedicate a few minutes each class day to reviewing these mathematical concepts.</p>
<p>For the purpose of this analysis, only the scores of students who completed the assignment and/or exam were calculated.</p>
<p>In reviewing the data, it is clear that overall students who complete the work are grasping the concepts and information we desire them to have. The biggest challenge with this (and some other CD courses) is getting all of the students to complete the work. It is difficult to accurately assess the SLOs when a large percentage of the class simply does not complete the assignment or take the final.</p>
<p>In this assessment, students demonstrated that they were able to successfully design, implement, and test assembly programs in order to solve a given problem.</p>
<p>In this assessment, students demonstrated that they were able to successfully design, implement, and test C++ object-oriented programs in order to solve a problem.</p>
<p>Increased instruction and activities in deductive reasoning and argumentation.</p>
<p>Introduce students to more design training to encourage creativity and aesthetically well thought out layouts.</p>
<p>more practice on limits and explore ideas with other faculty</p>
<p>Most students were able to accurately calculate their target heart.</p>
<p>Notes: For the first SLO, the majority of the students were able to identify the type of differential equation and implement an appropriate method to solve it. Some made minor mistakes in the computational part. For the second SLO, the majority of the students were able to apply reasoning to solve a word problem of a real-life situation. The majority of the students were able to analyze the word problem, set up the appropriate differential equation, and solve the problem. There were very few mistakes. Overall, the results are very positive. I think the target was met because only 26 students out of the 28 were evaluated in the SLOs, two students stopped showing up to class after the drop date and were not evaluated in the SLOs. If the base number for the SLOs is 26 and not 28, the percentages would be 84.6% and 88.5%, which in my opinion are very good result. I have no proposed actions.</p>
<p>One reason for meeting our success rate with Ladders is due to the extra effort by the Fire Academy Instructors. Typically the Instructors will tutor any willing Cadet during their lunch break and on weekends to meet the training challenges the Cadets face during the Academy. One reason for meeting our success rate is due to the extra effort by the Fire Academy Instructors. Typically the Instructors will tutor any willing Cadet during their lunch break and on weekends to meet the training challenges the Cadets face during the Academy. In addition, Instructors and Cadets have secured a state-of-the-art building construction prop which will allow the student to better understand ladder placement.</p>
<p>SLO #2 will be addressed to determine what other teaching methods can be used to improve results. I plan to revise my approach on teaching to improve outcomes for SLO #2.</p>
<p>SLO 1 - The analysis of this assessment indicates additional clarification of the ranges and the related subnet mask is needed. Will revive this concept at the start of the CIS 142 class. SLOs 2-4 - Students have a solid understanding of these core ideas. No changes or reteaching is required.</p>
<p>SLOs 3 & 4 - Results indicate the students have mastered the powers of two however they are still have trouble with the mathematics of conversion. Additional instruction related to this process will be included in subsequent semesters. SLOs 5 & 6 - Students have a solid understanding of this topic. No reteaching is needed. SLOs 7 & 8 - Students understand and have mastered the correct order of the 7 layers of the OSI model. The definitions for each of the layers is lacking. After reevaluating it has been determined that a working knowledge/basic definition of each of the 7 layers of the OSI is important, however this is a concept that is strengthened over the 4 semester course. Additional emphasis will be placed on clarifying the function and purpose of each layer and specifically of the upper 3 layers.</p>

Student performance was strong. Students may need more challenging projects to further develop their skills.
Students demonstrated a solid understanding of the fundamentals. May need to make assessment project more challenging to further develop their skills.
Students meet a minimum criteria of % demonstrated proficiency for tall SLO's in this class. Will continue to work on improvement as 100% proficiency is ultimate goal.
Students performed to expected outcomes.
Students were evaluated one-on-one by the instructor requiring them to perform a beginning level T'ai Chi Ch'üan form. The instructor evaluated forty-one components; the first seven components of another Tai Chi Ch'üan form; and a Chi Kung form, consisting of 37 components. In addition, students were tested on their name recognition of the moves by demonstrating a random sampling of moves prompted only by the move's name. All of this was examined on a component by component basis on a simple scale of acceptable/not acceptable criterion based on a beginner's acceptable level of ability. After completing this type of an evaluation it seems that it is very time consuming and might not be the most time efficient way to evaluate students in the future, depending on the size of the class. This style of testing took multiple days working one on one with students. In this class there were only 11 students who took the final so this detailed type of test worked okay. However, for larger class sizes the method of evaluation will need to be changed. All students scored a 70% or higher(1= less than 70%; 2= 70-80%; 3= 80-90% ; 4= 90% or greater), which means that all students were competent at the beginner level. The reason that scores are so high is that these 11 students are the only ones out of 22 that kept up attendance and made it to the end of the semester. Other students dropped along the way. These remaining students had perfect attendance which showed how successful the training and practice was during class.
The above SLOs relate to the clinical setting and the clinical syllabus that the students must have completed when they finish the respiratory program. Each semester the SLOs are used to track the students progression in getting tasks completed in their syllabus. These SLOs are rated as follows: 1 = no practice attempts, 2 = less than 3 practice attempts, 3 = 3 or more practice attempts, 4 = signoff in syllabus. As seen above, the students are working towards getting the above tasks signed off in their clinica syllabus. The only SLO that the students have not yet completed the sighoff is: The student will demonstrate how to assess a patient in an acute care or alternate care site. This is due to the fact that the students are still becoming familiar with the hospitals and the procedures they need to follow to complete an entire patient assessment. The students will be able to progress towards signoff for this SLO during the Spring 2015 semester. Overall I am satisfied with the results as all 30 of the students have met their minimum requirement of skills signoffs in their clinical syllabus in order to pass the course and move forward to the Spring 2015 semester.
The author and publishers lesson plans were not found to be sufficient for instruction of the class. New research was added to enhance the class. Illustrations and photos were added to power point to stress key instruction for better student learning. The author emphasized building construction that takes place on the east coast of the United State. Instruction was brought back to more of a universal approach throughout the United States. After making the changes, student learning seemed to improve.
The class is not being offered for the Spring, however, if it returns there will be more application of computerized accounting included. The students excelled in all facets of the course and it served as an excellent preparation for Accounting 208.
The greatest challenge of this class was taking over mid-semester from the initial instructor. Overall, the class had a good understanding of the course material and concepts. Upon an open class critique, I received the following recommendations for future classes: 1. More hands on experience / demos 2. Group discussion and workshop environment worked well for student learning. 3. Provide learning environment that challenges the students, allowing student input with feedback comparison to real life scenarios.
The outcomes assessment was successful, so a new SLO will be developed to ensure student progression and learning.
The pass rate for this measure exceeds industry standards. The past assessment was below industry standard at 78% successful and with subsequent analysis by the medical director for content validity and that this scenario presents a realistic and common occurrence in the pre-hospital setting the item was re-measured. There was significant improvement from last semester. The increase may be due to the additional situational awareness and discussion during the class sessions. This item should be repeated for the next paramedic program to show if the additional discussion and classroom actions are helpful over time. Additionally, differing and stochastic patients with continued integration of pathophysiology should be introduced.
The students were able to meet the target in all but one evaluated SLO. The threshold set up for the SLO's for this class was 80%. The SLO's were evaluated through short answer and multiple choice questions presented on the final exam. From the results I have found that the students need better instruction on the following SLO: The student will be able to explain in writing how to perform a minimal leak technique. This will be an item that will be stressed to class in Fall 2015. This item will also be discussed in lab class in the Spring 2015 semester as the students need an understanding of this SLO in order to pass their national exams following graduation from the Respiratory Care Program.
The students were hampered by a poor knowledge of Financial Accounting which directly impacted their performance. The Instructor was required to teach both Financial and Managerial Accounting. A new textbook is now being used that focuses

less on standard cost accounting and more on managerial decision making. In addition, the scope of material has been reduced to allow for more time on each topic.
The threshold set for each SLO for this course was 75%. As the results show above, the threshold was met for each SLO. I am a bit concerned by the results for the following SLO: Identify the physiologic effects of electrolyte disturbances caused by both elevated and reduced levels of various electrolytes and their relationship to acid-base balance interpretation. The overall percent was only 76.9%. This indicates to me that the students did not fully understand/grasp this information when presented in lecture. My proposed action for future courses is to spend more time on this topic as well as distribute additional homework assignments related to this SLO for the students to gain a better understanding of the concept.
There was only one student who needed to compete this course. That student has met the target for all 3 student learning outcomes for this course. There are no proposed actions at this time as the student has passed the course.
This class showed an abnormally low level of critical thinking skills. More workgroup time in class is required for this type of student so that they can discover where their understanding is lacking and seek immediate help. I will incorporate more in class exercises and white board explanations to help alleviate this issue. However, this will not replace the need for more coordination with high schools in preparing students for college level challenges.
This is a new course being taught as an overlay at the same time as Painting I. Teaching two classes at the same time has proven to be quite challenging. During Spring 2015, I plan on experimenting with the project schedule so that the two courses and their schedule sync in a way that allows more one on one time with each student while projects for the other class are underway. With the majority of students meeting/ exceeding the SLOs, lack of general attendance and a resulting lack of completion of projects appear to be connected to students not achieving the highest level of understanding of the course information. The assessment data tells me that the course information was understood and retained by all students who attended the course consistently, therefore meeting or exceeding the slos. I am confident that the slos for this course are in line with the material and that the assessment serves to exemplify the retention of information. Because of this, I will continue to use them in assessment.
This was an online assessment. The assessment tool had multiple components which included both process and actions to decision making. The assessment included the following four (4) content areas: 1) decision making process, 2) decision making styles and attributes, 3) ethical decision making and problem solving, and 4) decision making during and emergency or time compressed environment. This assessment should continue as it demonstrates an external evaluation and the students support this measure through qualitative measures and other outcome statements.
Understanding the creation and analysis of financial statements is the more difficult challenge for most students. More emphasis will be made in future classes on the format and construction of the statements combined with increased analysis of where the information comes from. This will lead to a better grasp of what the statements represent with regards to a company's performance and value.
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Table 2: Number and Percent of students scoring 3 or Higher on the Critical Thinking ILO.

#	Institution Learning Outcomes	# of Students Meeting SLO Rubric				# 3 or higher	% 3 or higher
		1	2	3	4		
1	Critical Thinking: Students demonstrate critical thinking through decision-making, problem-solving, analysis of information, and creative thinking across the disciplines.	478	276	773	1664	2437	76.37%

Table 3: List of Courses where Outcomes were mapped to the Critical Thinking ILO.

ACCT-105	CIS-140	EMS-153	KIN/F-191A	MATH-160	PE/I-164	RESP-133
ACCT-208	CIS-141	ENGL-976	KIN/F-191B	MATH-250	PE/I-173	RESP-209B
ACCT-209	CIS-163	FIRET-113	KIN/S-190A	MATH-266	PHIL-101	RESP-234
ART-200	CIS-180	FIRET-114	MATH-090	MATH-952	PHIL-103	RESP-235
ART-226	CIS-182	FIRET-115	MATH-095	MUSIC-100	RESP-130	RESP-236
CD-105	CSCI-120	FIRET-116	MATH-103	PBSF-127	RESP-131	RESP-238
CD-115	CSCI-240	HIST-100				

Use of Results/Proposed Actions (Implications for Program Improvement & Planning)

There were two different types of actions proposed from the different groups examining the results from the critical thinking results.

One group suggested the following process improvements to the outcomes assessment reporting process:

- When faculty are providing proposed actions it was suggested a common language be used that can be understood across disciplines.
- The campus develop a common understanding of success or how each rubric area is defined (e.g.: 3 is 70% or higher, etc.).
- Create a video tutorial and reference guide sheets to illustrate the outcomes assessment data collection process.
- Directions be added to the proposed action process that recommend that rather mapping every assessment to an ILO/GEO, especially when the same student is assessed multiple times, that a program choose the most macro level assessment and only map that assessment to the ILO.

The second group suggested the following strategies to improve critical thinking among Crafton students:

- Incorporate the student centered critical thinking activities
- As Instructors we need to step back and allow the students to struggle, only quick guidance not the answer.
- Once the student has the epiphany of understanding, allow him/her to share the knowledge w/ the class.