



**San Luis Obispo County Community College District**

**Institutional Learning Outcomes Assessment Report**

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## **Background to the Institutional Learning Outcomes Assessment Project**

In 2011, the San Luis Obispo County Community College District (SLOCCCD) initiated a project to define and assess Institutional Learning Outcomes (ILOs). The first drafts of the ILOs were developed and presented to the Academic Senate Council in May 2011. In fall 2011, the Student Learning Outcome and Assessment co-coordinators began a process to refine the original drafts of the ILOs while collecting district-wide feedback on the ILO statements. After a number of workshops and other opportunities for feedback, the ILO statements were finalized and then approved by the Academic Senate Council on March 16, 2012. An electronic assessment for the ILOs was distributed to all district degree earners in spring 2012 and spring 2013.

The district has taken the approach that the ILO statements are to be inclusive of the outcomes in the General Education program. The combined ILO statements are the expected student learning outcomes for Cuesta College students either graduating with A.A. or A.S. degrees, or who will transfer to a four-year college or university. These students will be able to demonstrate the knowledge, skills, and attitudes contained within all of the six ILO areas based on General Education and discipline-specific courses at the lower division level. In addition, these ILOs address areas of learning that are specified by the Accrediting Commission for Colleges and Junior Colleges (ACCJC) in Standard II.A.3 that go beyond the current General Education patterns for degrees. Therefore, all students who attend Cuesta College will be exposed to at least one ILO as a result of their overall experiences with any aspect of the college, including courses, programs, and student services.

## **Assessment Administration**

The assessment of student attainment of the ILOs was initiated in spring 2012. An electronic assessment tool was created and delivered to all students who applied for A.A. or A.S. degrees in spring 2012 (746 applicants) and spring 2013 (843 applicants). The assessment contained 16 common questions that were given to all students. The common questions were a blend of student self-report questions on the attainment of the ILOs and questions regarding the impacts of specific attributes of their college experience. In 2013, several free response questions were added to further investigate reading comprehension and technological competency. In addition, the assessment was customized with additional, discipline-specific questions in order to assess students earning degrees in the areas of social and behavioral sciences, arts and humanities, and science and mathematics. The assessment sent to the science and mathematics degree earners contained content-related direct assessment questions to determine the ability of students to use the scientific method for solving problems. Appendix A contains the exact questions on the assessment tools.

The assessment was delivered to the district-issued email addresses of the degree candidates. The students were given 30 days to respond. After one week, a follow-up reminder message was sent. An announcement about the assessment was delivered verbally at the commencement rehearsal.

As an incentive for students to complete the assessment, the Vice President of Academic Affairs arranged for a Kindle Fire tablet or iPod and ten Starbucks gift-cards to be randomly awarded to participating students.

**Assessment Results**

The 2013 ILO assessment was completed by 254 students for a 30.1% response rate (25% in 2012). The data was tabulated by degree areas and by aggregating all assessment subgroups into one category. The following figures present the assessment results from 2012 and 2013.

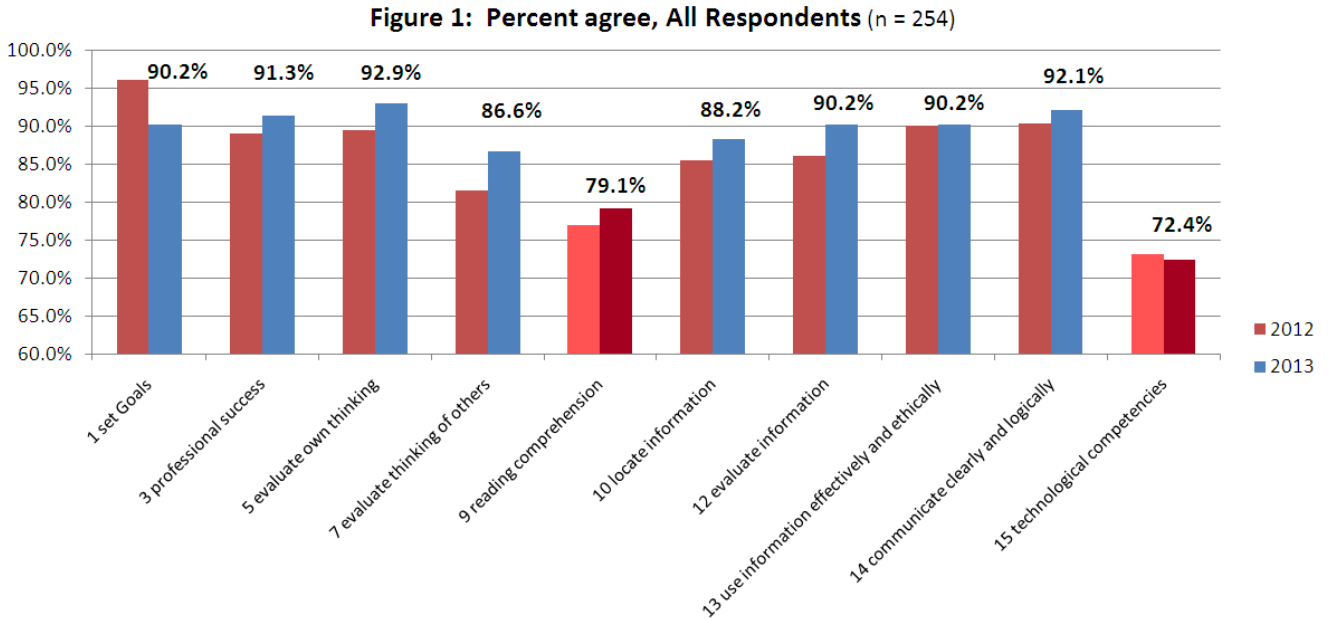


Figure 1: The percentages of students who agree or strongly agree that their abilities in the ILO areas have improved while at Cuesta College. Data labels represent the 2013 assessment results, with the 2012 results in the left-hand bar in each pair.

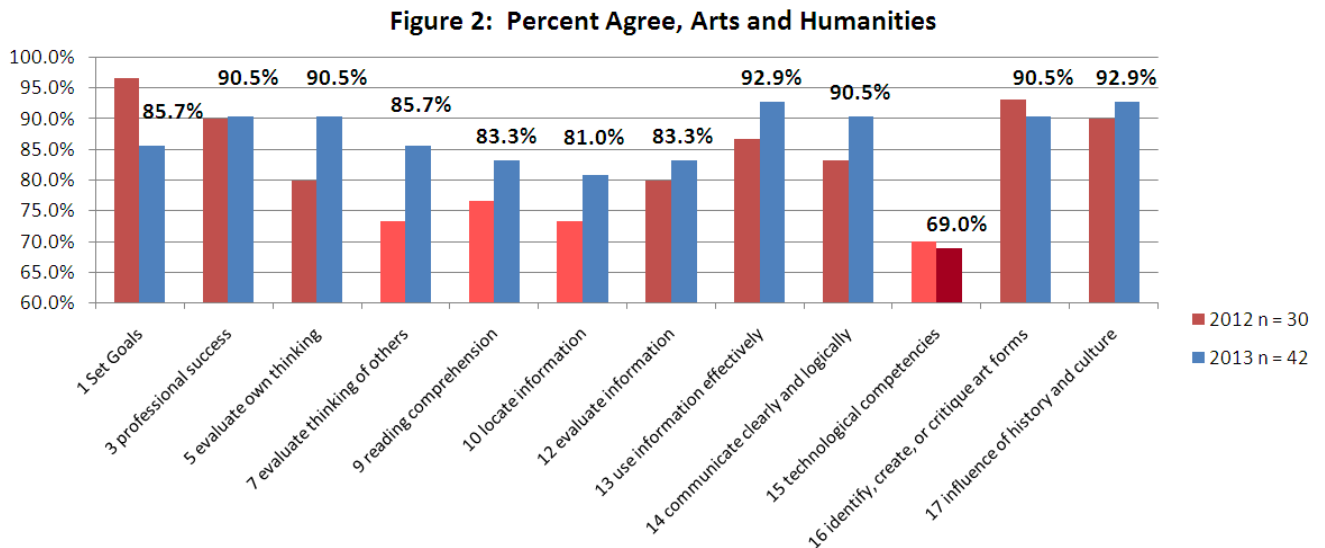


Figure 2: The percentages of students earning degrees in the Arts and Humanities who agree or strongly agree that their abilities in the ILO areas have improved while at Cuesta College. Data

labels represent the 2013 assessment results, with the 2012 results in the left-hand bar in each pair.

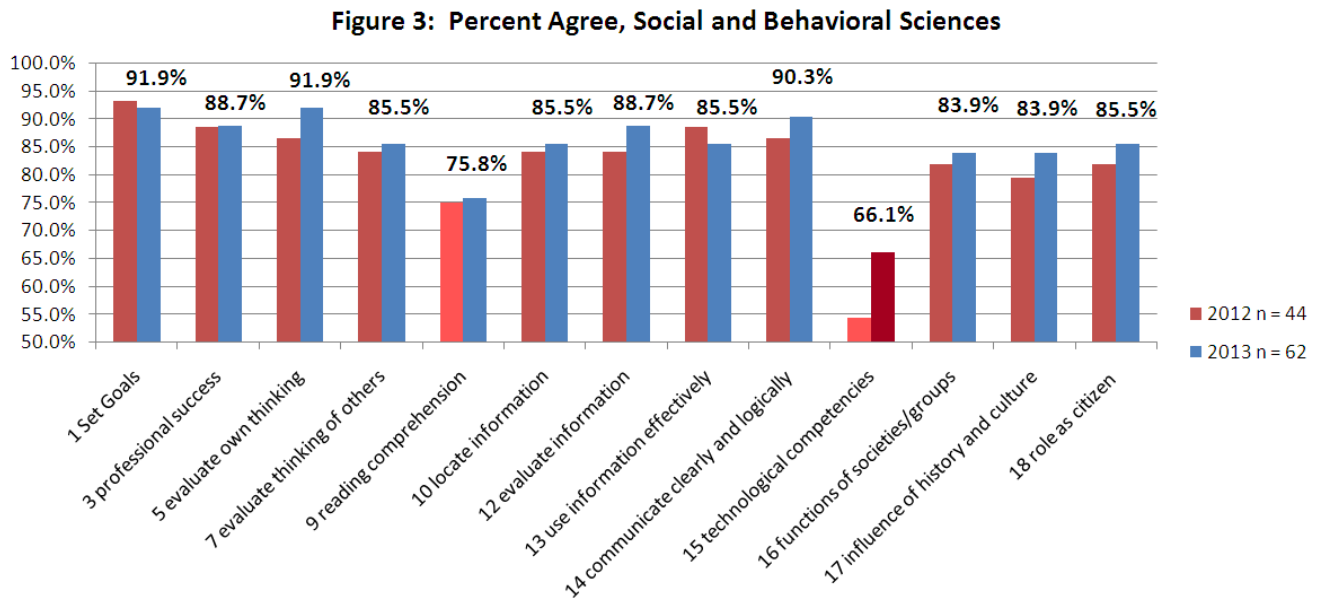


Figure 3: The percentages of students earning degrees in the Social and Behavioral science who agree or strongly agree that their abilities in the ILO areas have improved while at Cuesta College. Data labels represent the 2013 assessment results, with the 2012 results in the left-hand bar in each pair.

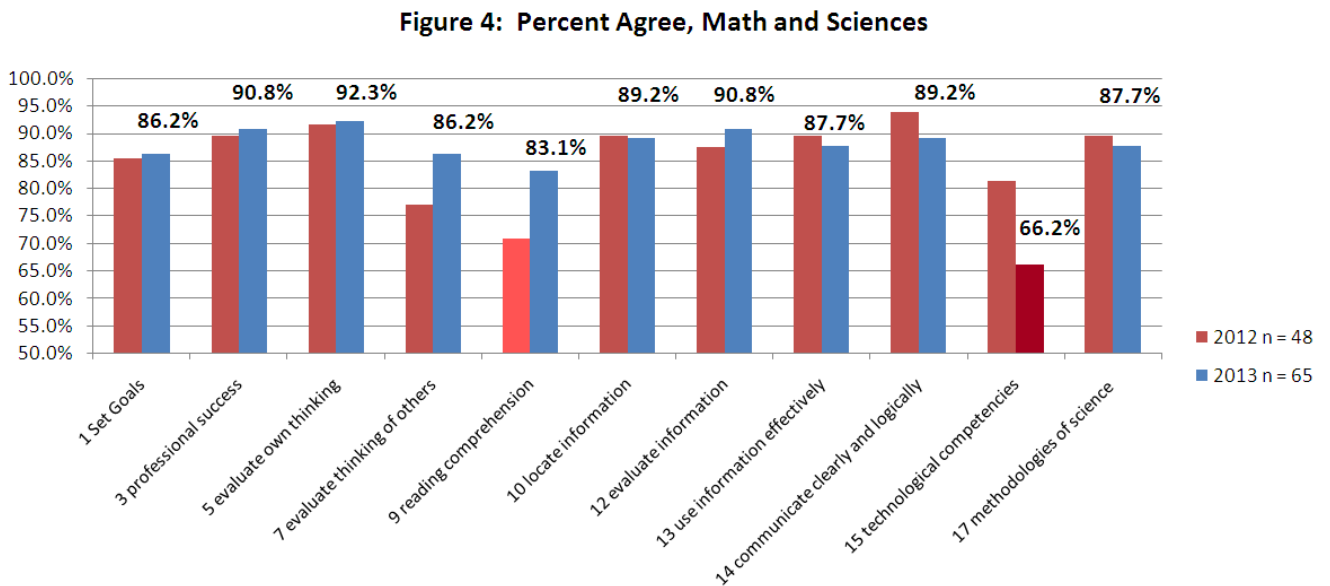


Figure 4: The percentages of students earning degrees in Science and Mathematics who agree or strongly agree that their abilities in the ILO areas have improved while at Cuesta College. Data labels represent the 2013 assessment results, with the 2012 results in the left-hand bar in each pair.

Direct assessment of science and mathematics degree students was conducted through the same electronic mechanism. The three questions were developed via collaboration of science faculty.

Question: "A scientific theory is best defined as:" 45.8% (2012), 44.6% (2013).

Question: Identify a flaw in an experimental design: 83.3% (2012), 87.7% (2013).

Question: Describe the key element of science as a discipline: 75.0% (2012) ,86.2% (2013).

### Discussion of Assessment Results

It is clear from the results that a large majority of students report that their experience at Cuesta College has led to their improvement of their abilities related to the institutional learning outcome areas. In the overall results for both 2012 and 2013, at least 85% of the respondents indicated agreement with the assessment questions for all but three of the ILO areas. Data from both assessments show the lowest agreement of improvement in the same three ILO areas of reading comprehension, evaluating the thinking of others, and technological competencies. The combined results do show some variability in the percent agree, with differences ranging from zero to 5 percentage points in a given ILO area. When the individual degree area assessments are examined, the variability in responses from year to year increases. This is not unexpected, as the sample size decreases.

The overall results for both assessment show that students rated their abilities in two ILO areas much lower than the average response. The questions listed below were rated the lowest among all of the respondents. The two lowest responses (79.1% and 72.4%) are considerably lower than the mean (87.3%), and the importance of further investigation into these two ILO areas.

9. During my time at Cuesta, I improved my ability to comprehend the readings assigned by my instructors. (77.0%)

15. During my time at Cuesta, I gained the technological competencies that are necessary for my future success. (73.1%)

An examination of the 2012 data from the discipline-specific groupings showed that the reading comprehension question (#9) was rated low throughout all three of the sub-groupings, although the science and mathematics cohort scored lowest (70.8%) compared to arts and humanities (76.6%) and social and behavioral sciences (75.0%). In 2012, the science and mathematics cohort scored much higher on the technological competencies question (#15, 81.3%) than the arts and humanities (70.0%) and social and behavioral sciences (54.5%). However, the data from 2013 did not show a similar disparity in reading comprehension but did show a steep decline in how students perceived their technological competency (from 81.3% to 66.2%).

Due to the low responses on the reading comprehension and technological competency questions in the 2012 assessment, two follow-up questions were added in 2013. These questions simply asked students to comment on how they rated their improvements on these two ILO areas.

An analysis of the responses for the science and math degree cohort revealed that 10% of those reporting no improvements in technological competencies ILO area had taken numerous courses in chemistry and physics that included technological applications. Three other students reporting no improvements in this ILO

area stated that their computer skills improved but that they expected or desired more advanced training. This latter comment was repeated by four of the social and behavioral sciences degree earners. Overall, it was clear from the student comments that the range of technological competency expectations is wide and that students may not have a full appreciation of technology skills that are developed or improved during their time at Cuesta College.

The follow up question asking for comments on reading comprehension provided 165 comments, or 65% of all respondents. An analysis of the comments revealed that only 2% all respondents claimed a deficiency of any sort regarding their reading comprehension, with only two students reporting that their comprehension was low. Of the 53 respondents reporting that their reading comprehension did not improve at Cuesta College, 21 students supplied comments that their reading comprehension was strong, with 14 of those 21 reporting that their reading was strong before taking courses at the college. The student comments are an important part of the assessment, providing a narrative for why this aspect of learning scores lower than the other ILO areas.

The direct assessment of the science and mathematics degree students was conducted through the same electronic mechanism. Questions were developed via collaboration of science faculty.

Students were not given any indication that content-specific questions would be asked at the end of the assessment. The question most difficult for students involved the definition of a scientific theory, as 54.2% and 55.4% (2012 and 2013 data, respectively) of students picked an answer that did not define a scientific theory as containing an explanation. Students did well with the questions related to control groups and identifying that data or experiments are a key facet of science, with over 75% of students answering those questions correctly in each assessment year.

In addition to the quantitative data, the ILO assessment project captured student comments from over 60% of the respondents. The students reported significant learning gains, identified inspirational departments and instructors, and gave a very positive description of their experiences at Cuesta College. A selection of the student comments are documented in Appendix B.

### **Actionable Improvement Plans**

#### A: Evaluations of the assessment method:

*From a review of the 2012 assessment:* After reviewing and evaluating the ILO assessment methods, a number of areas of improvement were determined:

1. Response rate. The response rate of 25% was almost certainly higher than what it would have been without the potential prize offerings. However, the response rate would likely be higher if:
  - the district captured the personal email addresses of students and this was retrievable in the Excel file of degree candidates.
  - more advertising was done prior to the survey launch. This could be done through the catalog or in the degree application itself.
  - faculty announced the availability of the survey in classes.
  - more advertising was done on campus, via posters or through student clubs.

#### 2013 Results and action plans.

- No additional advertising was conducted, although students were offered a choice of a Kindle Fire or iPod. The response rate was higher in 2013.

- The potential recommendations for capturing personal email and advertisements are still worth consideration.
- Advertising for the survey will be a priority for 2014.

2. *From a review of the 2012 assessment:* Assessment questions. The survey itself provided useful, differentiated responses that were easily interpreted for areas of success and areas of improvement. The ability of the survey to capture student self-report and direct assessment data was confirmed, as the science content questions were easily scored and provided useful feedback on science instruction. Several areas of improvement were noted:

- Demographic data should be collected, either by student ID number correlation or by actual questions. This information will be essential for disaggregation of the data in future assessments.
- Specific, direct assessment questions are viable in this method, and should be extended to additional subject areas.

#### B: Evaluation of the 2013 assessment results:

- Some demographic data was collected for this assessment, including main campus location (78% SLO, 14% NCC, 8% DE) and main goal after graduation (70% transfer, 20% enter workforce). No additional demographic data was conducted.
- No further direct assessment questions were added, although the pilot studies with the science and math degree students show that incorporating content-specific questions into this assessment is simple, expedient, and produces meaningful and actionable results.
- The data remained differentiated, showing a considerably lower positive response number for reading comprehension and technological competency.
- Open comment fields provided valuable feedback regarding the lower than average results for technological competency and reading comprehension ILO areas. Students report strong reading skills prior to enrolling at Cuesta College, while some confusion exists regarding the expectations or levels of technological competencies.

#### 2013 Action plans

*From a review of the 2012 assessment:* After reviewing and evaluating the ILO assessment results, a number of areas of improvement were determined.

- The results of the science direct assessment questions will be discussed at science division meetings in 2012-2013.
- Results of the ILO assessment will be used to initiate discussions regarding GE course outcomes.
- The discussion of the direct assessment questions was not completed in 2012-2013 and should be a priority in 2013-2014.
- Common strategies to improve student learning are to clarify the expectations we have of students and to improve the language regarding student outcomes. Both can be accomplished by discussing these results.



## Appendix A: ILO Assessment Questions

1. During my time at Cuesta College, I developed my ability to set and achieve academic goals.
2. Rank the impact of how the following experiences improved your ability to set and achieve academic goals:
- 2a. Rank the impact of how the following experiences improved your ability to set and achieve academic goals:
  - Interactions with counselors
  - Interactions with peers
  - Interactions with faculty
  - Attending on-campus skills workshops
  - Other individual research
  - Experiences in courses
3. During my time at Cuesta, I developed the skills and behaviors that will enhance my professional success.
4. Rank the impact of how the following experiences improved your skills and behaviors that lead to professional success
  - Interactions with counselors
  - Interactions with peers
  - Interactions with faculty
  - Attending on-campus skills workshops
  - Accessing online sources such as assist.org
  - Other individual research
  - Experiences in courses
5. In my courses at Cuesta College, I improved my ability to critically evaluate the quality of my own thinking.
6. The following courses most improved my ability to analyze and evaluate the quality of my own thinking. (use 3-4 letter course abbreviate and number code, i.e. POLS225 or BIO209A)
7. In my courses at Cuesta College, I improved my ability to critically evaluate the quality of other people's thinking.
8. The following courses most contributed to my ability to critically evaluate the quality of other people's thinking: (use 3-4 letter course abbreviate and number code, i.e. POLS225 or BIO209A)
9. During my time at Cuesta, I improved my ability to comprehend the readings assigned by my instructors.  
*Added in 2013: Please comment on your response to the previous question (free response).*
10. During my time at Cuesta, I improved my ability to locate information that helps me answer questions or solve problems.
11. Rank the impact of how the following experiences improved your ability to locate information that helps you to answer questions or solve problems.
  - Interactions with librarians
  - Help from the library website
  - English 201A coursework
  - Interactions with instructors
  - Interactions with students
  - Other individual research
12. During my time at Cuesta, I improved my ability to evaluate the quality of information that I locate or receive.
13. During my time at Cuesta, I improved my ability to use information effectively and ethically.
14. During my time at Cuesta, I improved my ability to communicate clearly and logically.

15. During my time at Cuesta, I gained the technological competencies that are necessary for my future success.

*Added in 2013: Please comment on your response to the previous question (free response).*

16. Please provide any additional comments you have regarding your educational experiences at Cuesta College, or this survey

#### Arts and Humanities discipline specific questions

16. During my time at Cuesta College, I have improved my ability to identify, create, or critique key elements of inspirational art forms, such as visual arts, performance arts, or literature.
17. During my time at Cuesta College, I have improved my knowledge of how history and culture influence artistic expression.

#### Social and Behavioral Sciences discipline specific questions

16. During my time at Cuesta College, I have improved my ability to explain how societies and social groups function.
17. During my time at Cuesta College, I have improved my ability to evaluate competing interpretations of historical events.
18. During my time at Cuesta College, I have improved my ability to evaluate my opportunities and obligations as a citizen in a complex world.

#### Science and Mathematics discipline specific questions

16. During my time at Cuesta College, I have improved my understanding of the methodologies of science as investigative tools.
17. A scientific theory is best defined as:
18. An experiment for a new medication was designed with the goal to see if the new medicine was effective in reducing asthma attacks. The patients were divided into two groups. Group one was given the new drug for asthma, while group two was given an herbal supplement whose label reads that it improves breathing. Describe the most significant problem with this experiment, and propose a solution.
19. Science differs from other disciplines, such as philosophy and the arts, because science relies upon...

**Appendix B: A Selection of Positive Student Comments from the ILO Assessment**

*Constructive or critical feedback from students will be consolidated by relevant instructional or service areas and will be presented to these groups for further dialogue and analysis.*

Student comments from the 2013 ILO survey.

Leaving a 4 year university after completing my first year, and then deciding to attend Cuesta for the next 2 years was the best decision I've ever made.

The instructors are magnificent and incredibly helpful.

I have been to a few colleges. One private 4 year and Los Rios community college district in Sacramento. I really enjoyed the class selection Cuesta offers. I got all the classes I needed to finish and that did not happen at my other schools. The professors challenge students and I really enjoyed the way my professors have taught and helped me through my classes.

I had a great experience at Cuesta College. I loved Bret Clark. He was definitely the one professor who truly pushed me academically and mentally and ultimately prepared me for the next level of schooling.

I have found the chemistry staff out shines every other department when it comes to student involvement, with math as a very close second.

I am going to miss Cuesta. I could not have asked for a better community college experience.

Cuesta has been the best community college I've ever attended! I've thoroughly enjoyed these past 3 years. I will never forget them!

My time at Cuesta College was wonderful. I have been to several other colleges and Cuesta was the best. The courses were rigorous and I was taught how to study and comprehend information. I would recommend this college to anyone.

I've been tricked into another test about the scientific method!!!

My microbiology teacher Silvio Favarato was amazing and really got me ready and excited to pursue my career in the health industry. My english teacher Mr. Conklin was a great teacher whom I learned so much from. He inspired me to keep pushing through school.

I love Cuesta College. All my teachers have been very helpful and knowledgeable. I loved all my science classes and my science teachers.

I really enjoy Cuesta College, it is a great school. I have learned a lot while attending Cuesta, an encourage anyone and everyone to attend.

I loved the majority of on-campus classes as I learned more from the interaction of both the instructors and peers, while the on-line courses were very convenient and full of content. Both added up to give me a wide range of learning opportunities.

I thought Cuesta provided a fantastic education. Help was very easy to get and professors really cared.

Since I have only been to Cuesta to receive a college education, I don't have anything to compare my time here to. I will say that I firmly believe that some of the best educators are employed here. Without them, I don't know if I would have found as much passion as I have in the fields of science or the ambition to reach further than I would have otherwise thought possible. I hope that I can someday give something back to the scientific community, students or the world at large. I know it will be a long road to get to a point where I can do that, but I know without a doubt that I have the ability. It's just a matter of time. I'd also like to thank a few of the faculty at Cuesta that had a significant, positive impact on my life. Denise Chellsen, Dr. Greg Baxley, Jeff

Grover, Dr. Joe Vasta, Larry Johnston, Dr. James Eickemeyer and Dr. Robert Schwennicke. For whatever it's worth, thank you.

I really enjoyed most all my classes, but my favorite class was BIO206 with Maliszewski. She really opened our minds to think critically and really wanted us to learn and loved the subject. I will use the skills she taught me for the rest of my life.

The campus is focused on providing superior teachers that I don't find on other campuses, including Cal Poly.

The education I received at Cuesta was more demanding than the education I received from my four-year university!

This is an excellent school with wonderful people to help like in EOPS

There were professors I specifically formed such an amazing relationship with and for that I am forever grateful.

I have been here three years, and my experience had been great! I am very excited to graduate with my degrees from Cuesta College.

Cuesta college treated me well. Loved the campus, teachers I had treated me like I was important and counselor helped me especially EOPS! Great program!

It was a privilege to be in classes that were around 30 students, because I believe that greatly helped my success here at Cuesta. I was able to form strong teacher/student bonds, as well as, collaborate with fellow students. I was also had the pleasure of working on campus in the ASCC Social Club, which brought me closer to the student body, and I was able to see what a great faculty and staff we have here at Cuesta College.

Cuesta is the best community college I've ever attended. The campus is located in a peaceful outdoor open setting. Along with great faculty, Cuesta provides an excellent learning environment for everyone.

Just the experience of being at Cuesta College at this age has helped me grow as a person. The diversity at the school helped me see the worlds of many people all on one campus. For this I'm truly grateful.

Most of the teachers I had have had a significant impact on my life and I'll remember all my lessons for life. Cuesta was an amazing school to attend and I'm happy I had the chance to attend this college.

Cuesta has provided an excellent foundation for my ability to comprehend and analyze many situations. It has provided me the framework to continue on the path of higher education confidently and successfully.

Cuesta athletics also balanced out my experience at Cuesta College.

During my time at Cuesta I learned a little bit, but the biggest impact came from Don Norton's ece202 class. As a parent one needs support and his class along with his expert tutelage provided me with not only methods for developing successful strategies for raising my child, but also gave me insight as to how I could help other families in need. Thank you Don Norton.

I learned so much from every professor. I feel well prepared to take on the 4-year college of Cal Poly. I will always remember the things I've learned from Cuesta College.

My Cuesta College experience was and continues to be unforgettable and life-changing as I was at a very delicate turning point in my life Fall 2010 when I first began anew taking classes at Cuesta following a 20-year hiatus. I have grown immeasurably during the time since then some of it attributable to my Cuesta experience. I have met some amazing instructors like Dennis Judd who have helped transform me and my life.

Teachers should have to use moodle and only moodle for teaching online classes. Teachers should not be allowed to teach from outside of the United States or the California area if they cannot meet students for office hours.

Through using the student support services dept (Tutoring, Writing Desk) it has helped me to improve my skills to become a tutor and writing advisor.

I have over 200 units from California State University Bakersfield and I have been extremely pleased at the quality of teachers at Cuesta. This is a great college. Thanks for the opportunity.

I came back to school to study music, and the music department here is PHENOMENAL.

I've learned a lot in Victor Krulikowski's POLS202 class, and his exceptional presentation/teaching style shines through, even in an online class format.

All of my english teachers have been absolutely phenomenal. they all bring their own personalities and styles to the classroom, and my experience with each of them separately has made my collective experience in the english department richer.

I had some great instructors! Namely Miranda Canestro, Richard Taylor, and Bruce Henderson.

I would recommend nursing program at cuesta college to everyone.

The RN program has definitely geared me toward my future career as an RN. I know that the education process is never-ending the medical profession, but as a new graduate I am confident in my ability to attain an entry level RN position.

Library/Information Technology courses were robust and seemed to cover all significant areas of librarianship. All the instructors were excellent.

The electrical technology program helped me to get a great job with PG&E. The things I learned while taking those courses helped to pass pre employment tests to get a great job.

I'm so appreciative that you have online classes. As a working mom, I never would have been able to get my degree otherwise.

I feel as though the Cuesta Nursing program has adequately prepared me to take the NCLEX and seek a position as a New Grad RN.

I felt that many of the instructors/counselors on campus were genuinely interested in their students. Most of the instructors went out their way to explain assignments and the topics discussed.

I found the RN program to be an outstanding experience, the instructors were all very knowledgeable and the clinical experience starting the first week of the program was well thought out and helped progress in skills along with the theory from classes. The faculty were always available for questions either in office hours or by e-mail and really took the time to insure that any areas of individual weakness in the students were addressed and found ways to strengthen them.

My overall experience was wonderful. The RN educators are absolutely fabulous. They teach with such passion and care- it oozes from them.

Nursing program was excellent. Nursing faculty was exceptional.

I love Cuesta! I recommend Cuesta to anyone I talk to. I tell them how great all my teachers have been, how nice the campus is, what great people I have met there and how good of a fit it was for me. And as I like to say "Cuesta is the best!"

I am really happy that I stayed at Cuesta College, all of the Business Instructors have been great and have really helped me learn and achieve my goals. I know that I will keep in contact with them in the future.

Awesome business instructors, all very professional.

I have been here three years, and my experience had been great! I am very excited to graduate with my degrees from Cuesta College.

WELD 270A with Thoreson was incredibly useful.

I really enjoyed my experience at Cuesta College. Teachers held students accountable for completion of their work and I felt that this is an important trait for a college professor to invest. I am very happy with the quality and the price of my education at Cuesta College.

I love that there is both a North County campus as well as the San Luis Obispo campus. Although I marked that I attended the most number of classes at the North County campus, I really took close to the same number of classes at both the N.C. and SLO campus as well as online classes. I love that the online classes are available as well because the entire time I've been at Cuesta College, I've been a full-time worker so it has been convenient for me to have D.E. classes as an option to better fit my schedule at times.

The people who work for Cuesta, that care, have an immense impact on a student's experience. I was lucky enough to meet and learn from some. Mark Sims was an amazing welding instructor. He gave me the foundation I needed to meet my goals. Not only did Sims make the time to give one on one instruction, but he also broke everything down and simplified the instructions so that we could better understand what we needed to do. Mike Fontes is another amazing person. He cares so much about who we are and what we do. Through the three semesters I had with him, you could tell that his main focus was preparing and getting us to the workplace. His no-nonsense attitude and abundance of information helped many. I left every semester with a huge binder-full of info. He wanted us to know everything about everything. Cuesta should feel blessed to have him as an employee. Even though I didn't have Rob Thoresen as a teacher, I needed his help with a degree problem. He took my form to the dean personally to get it signed and I will forever be grateful for his help and understanding in a sticky situation. I consider Judy Ferrera to be the "Mother Hen" of the welding/engineering department. Many of my peers have commented on the help she gave. When I went to see her I didn't really think that she had any help for me. But I was wrong. She is a perfect example of the people who go above and beyond. Lastly, I would like to show my gratitude to Susan Harris for making sure that I was able to walk at commencement and for her sincerely caring attitude. I was embarrassed about my situation and she made me feel ok about it. The welding program, in general, is put together intelligently. I am glad they have some welding classes offered in north county. But in the end, it is the people, students and instructors alike, who make Cuesta College what it is. A place to discover or share your passions, and a place to gain knowledge.

#### Reading related comments:

My critical thinking class really taught us to delve into our readings and look beyond just the plot and resolutions but to look at reasoning, symbolism, and meanings.

I was very motivated by the instructors to come to class prepared with a base knowledge of what would be covered in class that day.

A majority of the instructors share study tips as well as students. I was able to implement many of these tips to help me become a better student and retain information.

I have never been very good at reading but the courses I took at Cuesta really helped me get to the right level.

Reading goals were set. Knowing what to look out for during the reading helped out.

From when I started Cuesta, comparing my reading ability is like night and day. Through my improved work ethic, knowledge and critical thinking ability, I feel as though I could succeed on any level.

My reading ability improved when teachers began giving clear instructions on what to read and tips on how to approach the reading material.

**Appendix C: Analysis criteria for open-ended and direct assessment questions**

Question 13, Technological Competency

Responses were categorized into five groupings

1. A specific class was identified
2. No improvements
3. No comment
4. Neutral or disagree but with evidence of tech classes
5. DE
6. Tech elsewhere