Assessment of Student Learning

2012-13 Annual Report

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Table of Contents

Pueblo Community College

Assessment of Student Learning Annual Report, 2012-13

Executive Summary

High academic standards and valid assessment processes are integral requirements of maintaining and ensuring quality instruction at Pueblo Community College. As an accredited college, assessment is an essential element of the overall academic standards needed to maintain good standing with the Higher Learning Commission. More specifically, assessment also plays an important role in program accreditation and re-accreditation, particularly for career/technical and health science programs. But the benefits of course and program assessment go well beyond maintaining accreditation standards. More importantly, assessment is concerned with continuous academic improvement. Faculty participation in an annual assessment process provides PCC with a systematic focus on the effectiveness and strength of all academic and vocational programs, and it provides a venue to identify new opportunities for the improvement of student learning.

In 2012, the faculty, staff, administration, and students of Pueblo Community College along with several community leaders worked together to develop and implement a new three year strategic plan -- now identified as *Destination 2015*. This plan enumerates the six strategic imperatives that will be the focus of PCC's collective efforts during the next three years. These imperatives include the following: (1) Awareness and Access, (2) Student Engagement and Success, (3) Technology, Equipment, and Infrastructure, (4) Affordability and Financial Stability, (5) Continuous Quality Improvement, (6) High Performance Workforce.

Destination 2015 affirms the commitment of all instructional efforts at Pueblo Community College to continuously pursue higher levels of excellence in our academic programs and in our student outcomes. This excellence can only result from the implementation of sound educational practices at the classroom and laboratory levels. To maintain the most effective student learning outcomes, a dedicated and knowledgeable faculty is needed to carry out the assessment process and to use the information obtained to make course and program improvements. Accordingly, at

Pueblo Community College, assessment of student learning is a faculty responsibility and obligation, as well as an institutional expectation.

Department chairs and faculty develop assessment plans for their courses and programs. These plans specify the knowledge and skills that students are required to demonstrate in the various disciplines. The identified course competencies are formulated to address the two most common student goals: to meet the expectations future employers will require for entry-level employment in specific disciplines and/or to obtain the academic background knowledge students will need to successfully complete their two-year degrees and transition to four-year colleges and universities. Departmental faculty and instructors are expected to follow a defined planning process, to collect relevant data during the assessment period, and to later analyze, interpret, and report their findings. Department chairs and faculty are later required to report the results of the analysis and use the information to improve courses and/or program in the future.

Introduction

The following report provides an overview of the history of Assessment of Student Learning at Pueblo Community College, the current committee structure, an explanation of the process, and summaries of the 2012-2013 assessment results. Assessment plans and reports are accessible to all PCC administrators, instructors, and staff through access to an internal network drive (U:\Assessment of Student Learning). Upon administrative approval, this report will be posted on the PCC website. Outside inquiries about assessment plans, outcomes, and reports may be directed to Mr. Corey Shilling, Director of Institutional Effectiveness at 719-549-3195 or mailto:Corey.Shilling@pueblocc.edu.

History

PCC adopted a formal ASL system in 1999-2000. Based on best practices of the time that were recommended by NCA, Assessment of Student Learning was managed through a faculty committee. The committee met twice a month to review departmental assessment plans, monitor implementation, validate results, and report to internal and external stakeholders. In more recent

years, the full committee has been more focused on oversight of forms, procedures, and timelines.

In the early 2000s, assessment oversight was done by a faculty member on .5 release time. This Assessment Coordinator worked with the ASL committee, but the committee gradually became less active and the Assessment Coordinator took on most of the responsibility of collecting and reviewing assessment documents. For four years, a succession of faculty occupied the position. This structure offered streamlining of the approval and reporting processes, but also resulted in less active participation in the assessment process by faculty. Both the quality and quantity of ASL plans and reports decreased. Without strong guidance in formulating strong SLOs and using valid research techniques, faculty developed a wide variety of assessment processes that often measured overall course or program outcomes rather than actual student learning outcomes.

During the 2008-2009 and 2009-10 academic years, PCC faculty were encouraged to shift from course level to program level assessment. This shift resulted in assessment outcomes taking on the character of program review objectives. There was widespread confusion about the difference between course, program, and institutional SLOs and a general lack of expertise in assessment research practices. Lines of authority and accountability within the assessment program were unclear and there was a participation gap among some full time faculty, adjunct instructors, and branch campuses. Both the faculty and administration recognized that PCC's Assessment of Student Learning program and processes needed to be strengthened. In May of 2010 the faculty voted and received administration approval to move away from the structure of one Assessment Coordinator for the college, and instead to appoint three co-leaders, one from each academic division of the college, to lead the assessment process during the 2010-11 academic year. Job descriptions were developed, new Operating Procedures were drafted, and three Assessment Faculty Leads were identified to lead the assessment process the following year.

The 2010-11 academic year evolved into a year of experimentation and transition as the committee struggled on how to improve ASL participation and also to best manage the process.

With input from each of the Assessment Faculty Leads ("Leads"), the committee began reviewing the reports from the previous year during meetings. After a few such meetings, it became obvious that the full committee review of each report was proving to be too cumbersome. After spending over an hour on the review of just one report, the committee determined that review of the plans could be accomplished more efficiently in sub-committees under the leadership. Sub-committees were formed consisting of at least one committee member from each of the academic divisions working with one Lead. After a few months of following this practice, the sub-committee members often found that divisional differences in program goals, standards, and program-specific terminology were once again slowing the review process. The committee then reshuffled sub-committee members so that each division's representatives reviewed plans with the lead from that division. This approach proved to both more efficient and effective.

During that same year, a full time director of the Office of Institutional Research was hired by the college. The director attended the ASL committee meetings, advised the leads and the committee, and conducted in-house training workshops for all three academic divisions.

Process Highlights

The following refinements of PCC's ASL process occurred during 2012-13:

1. The number of participating disciplines increased from 21 to 32.

2. PCC's previous annual report, published in October 2012, described the release of 2011-12 results and 2012-13 plans in the same document. The intent was to highlight the connection between one year's results and the next year's plans; however, this led to a late release of the annual report. This year, the annual report was also delayed until Fall 2013, but for different reasons. Many faculty did have their results ready to report at the end of the academic year in May of 2012. Several reports were delayed until the Fall 2013 semester had started. The expectation that results and successive plans need to be

connected still exists. However, the separation of the results and plans has proven to be easier to track and manage.

3. The Arts & Sciences division modified slightly last year's process of fall data collection and spring analysis/planning. Most A & S disciplines collected data in the fall, but some chose to collect data during spring semester for reasons of their own. The emphasis on fall collection and spring analysis for most disciplines will continue to be encouraged, but flexibility for some disciplines to collect data in the spring will also be acceptable. The Business & Technology division and the Health & Public Safety division are considering the use of a similar assessment cycle within their divisions.

4. The PCC ASL Committee refined its process of reviewing plans and results prior to "publication." Now a subcommittee—composed of divisional representatives on the ASL Committee—reviews these documents. The process has been much more efficient than last year's full committee review.

5. This year, participating chairs and faculty appeared to have better understanding of the process and to need less assistance from the lead faculty in developing plans and in the analysis and reporting of results.

Current Assessment Process

To initiate the planning process, chairs and faculty review the previous year's SLOs, identify the recommendation from the previous assessment cycle, report on whether some or all of the changes were implemented ("closing the loop"), evaluate the quality of the results, and determine the next steps. After selecting the same or developing new SLOs, chairs can then determine appropriate assessment methods, tools, scoring methods, sampling, performance targets, and timeframes. Faculty members who will be involved are identified, if possible. Finally, strategies and teaching methods for teaching each SLO are proposed.

The Assessment of Student Learning Committee facilitates and supports this process by providing a structure for planning and reporting, a process for review, and personal assistance from the Assessment Faculty Lead. The Assessment Faculty Leads work with faculty within their divisions throughout the year in the planning and reporting cycles. These "Leads" are responsible for providing assistance and support, reviewing plans and suggesting corrections and/or providing feedback, and for submitting final reports. Assessment of Student Learning Committee members from each division assist the Faculty Lead with the review of plans and reports and provide feedback to the various departments.

As part of the plan implementation, each department is responsible for collecting relevant data pertaining to student learning. Toward the end of the assessment cycle, the data are compiled and analyzed. The Assessment Faculty Leads help organize and facilitate this process. Data are summarized in an Assessment of Student Learning Report, which addresses the selected departmental SLOs. In this document, faculty report their assessment outcomes: the actual assessment method used, the timeframe followed, and the learning that resulted. The report ends with conclusions and planned next steps, and the process is repeated for the next assessment cycle.

PCC has numerous programs that are accredited by outside agencies, particularly in the Health Sciences disciplines and Career & Technical Education. These accreditation processes are rigorous for both programs and students. Periodic site visits ensure that curriculum, facilities, equipment, and pedagogy meet high standards in order for programs to renew and maintain accreditation. Most of these programs also require that the students pass a final "certification" exam before they are given the credential, certificate or diploma. These accreditation processes support and enhance the assessment of student learning process, but do not take its place.

Arts and Sciences (A&S) Division

Introduction/Background

The A&S Division applied the assessment methodology adopted by Pueblo Community College in 2010-11. Because there are few actual Arts & Sciences programs, the focus of most departments was primarily on student learning outcomes (SLOs) at the course level. Research-based process for collecting data, measuring outcomes, and analyzing/reporting findings were used. The number of participating disciplines increased this year, adding Library Technician, Education, Literature, and History. Summaries of Arts and Sciences results for 2012-13 follow.

Assessment Summaries by Discipline

The following brief descriptions are based on the full versions of discipline reports prepared by individual departments in the Arts and Sciences Division. The full reports can be found on one of the internal college network drives at U:\Assessment of Student Learning\Assessment of Student Learning 2012-13\2012-13 Reports\Arts & Sciences 12-13 Results.

Advancing Academic Achievement & Reading

Based partly on the 2011-12 results (reported in detail in the Reading Department report), the department decided to focus on inference, vocabulary, and increases in general reading levels. Data for the report were collected from all campuses, and demonstrated achievement of performance targets in making inferences and improving reading levels. Though students did not meet the performance targets in vocabulary, they did demonstrate a significant improvement in this area.

In AAA 098, the department adopted a custom text and the Aplia software. However, due to instructor training issues, student access problems, and costs, the change proved not to be beneficial. The custom text and Aplia were discontinued in spring 2013.

The reading and AAA courses are being redesigned for fall 2013. This revision will involve collaborative and team teaching of English and reading skills using best practices and proven instructional models from both disciplines, and will include new and/or refined SLOs.

Art

Art focused again this year on the institution level SLOs of 1) applying several levels of critical thinking in critiques of artworks and 2) communicating effectively regarding their research and understanding of the various visual techniques used. Instructional techniques were changed this year to focus more on active learning, such as visiting a downtown gallery to conduct description/analysis, and performing direct analysis of a children's illustrative book to teach art techniques. Art students demonstrated strong gains in analysis of principles of art, but were still weak in the area of elements of art. The current plan is to reassess the same SLOs in 2013-14 to study the effectiveness of planned curriculum changes.

Biology/Geology

The Science department chose to assess a higher level class this year, moving up to BIO 106, which was not assessed last year. They looked at two SLOs, one having to do with identification (a lower level academic skill), and the other having to do with analysis. Interestingly, they found that students performed better on the analytical tasks than on the identification/memorization tasks. Next year, Science faculty will emphasize the study of terminology more; they will also reassess the analytical SLO to ensure that this year's results were reliable.

The Geology instructor conducted an interesting comparison between online and on-campus geology students. She sampled the same seven quiz items from both classes and analyzed the results. On-campus students performed significantly better than online students on those seven items. Because one major difference between the two classes is that the on-campus class has a hands-on lab and the online course does not, next year the department will implement a hands-on lab for online geology students. The same SLO will be assessed using the same quiz items to determine if the online students have improved.

Communication (Speech)

In 2011-2, the lead speech instructor discovered that while students were delivering effective persuasive speeches, their use of presentation aids lacked sophistication. This year, the instructor used a rubric focusing on the following aspects of presentation aids: simplicity, continuity, font size, Max 8X8, and color contrast. In addition, students were given extra opportunities to improve their slides using the rubrics. The results show a higher percentage of students meeting the performance targets.

Due to a small sample size, the English/Communications department will try to involve additional instructors/sections in fall 2013.

Early Childhood Education

Because it conducted ASL while simultaneously engaging in an accreditation self-study, the ECE Department learned that its assessment student learning outcomes could be derived from the standards provided by its national accrediting agency, the NAEYC. Therefore, in 2012-13, the department will begin basing its "program level SLOs" on NAEYC standards. This will eliminate duplication of assessment efforts and ensure that student learning is aligned with national standards.

Education

The EDU assessment project was focused on using basic research techniques and the integration of sources into a philosophy of education paper. During a three week period of the semester, philosophy and history of education were taught separately. Direct instruction in APA documentation style was presented in detail during this period. Students developed and submitted first drafts of their papers, which they later had the opportunity to revise and edit before submitting their final papers. Based on assessment results from this project, the instructor determined that the instructional design of the course should be modified so that history of

education and philosophy of education become integrated topics rather than topics taught separately.

English

The English Department set out to assess students' ability to use correct grammar and to integrate source material in research papers. While English faculty discovered a disappointing gap between actual and expected performance in selected essays, they also discovered that their assessment process itself can be refined and improved for 2012-13. Thus, instead of narrowly focusing on particular grammar errors, they will assess the rigor of students' entire revision process, to include global as well as grammatical concerns. They also revised the SLOs related to research papers to enable more accurate identification of problems. This example reminds us that improvements in assessment procedures can be important outcomes of ASL.

One important discovery resulting from the scientific selection of student artifacts was that there is inconsistency in teaching and grading between full time and some adjunct instructors. The department is taking steps to address this issue in 2012-13.

History

The History department selected an extended written response/analysis in HIS 112 courses for their assessment project this year. Their goal was to teach students to recognize and identify a current world trend and to compare and contrast it with a historical event and/or trend so that they can begin to understand patterns in world history. This assessment was conducted through specific writing assignments and/or essay questions on exams.

Students performed well on this task, achieving an 82% proficiency level. The department intends to assess this skill again next year, incorporating other methods of assessment and aiming for even better overall proficiency.

Humanities

This year, Humanities demonstrated perhaps the broadest use of ASL of any A&S discipline. The instructor focused once again on the institution level SLOs of a) applying contemporary forms of technology in the learning process, b) appreciating global cultural values, and 3) behaving professionally. She also added the content based SLO of demonstrating awareness of the classical tradition in the study of humanities.

Though results were positive (see the humanities report for details), the instructor plans to push students to the next level in fall 2013, introducing earlier deadlines and more focused group work. She will also engage branch campus humanities instructors in assessing the same SLOs.

Library Technician

The Library Technician program participated in our new ASL process for the first time this year. Based on the results of assessing one SLO—demonstrating an understanding of the place/use of webpages—the instructor has chosen to modify her lecture and exam for next year. She will also add another SLO to her plan to broaden the use of ASL in her discipline.

Literature

Literature participated in our new ASL program for the first time this year. The instructor focused on one of the most important critical thinking SLOs in that discipline: employing textual evidence to support interpretations of assigned readings. To develop student expertise in this area, the instructor used a Team Based Learning (TBL) approach—a research based critical thinking methodology—and a rubric specifying degrees of success in critical analysis. The performance target was met, but the instructor wants to see improvements next year and so will make exercises and rubrics more specific and focused.

Mathematics

Based on last year's results, the department adopted a change in teaching strategy for fractions and polynomials. Four sections of MAT 045 were selected to pilot the change, which involved a focused pre-test that generated individual study plans, shorter lectures, and class time to work on assignments to attain a "mastery" level. At the end of the semester the department compared results from the pilot sections with results from traditional sections.

They found that for the four pilot sections of MAT 045, the average score on the fraction chapter exam was 74%, as compared to the control group's average of 68%. Homework averages were 93% and 86%, respectively. Exam averages were 76.5% and 63.8%, respectively. The results for MAT 090 were very similar; students in the pilot sections performed better than students in the control sections. These results clearly document significant improvements in student learning.

Because of PCC's developmental course redesign project, next year's SLOs will not be determined until the beginning of fall semester 2013.

Psychology

Psychology repeated and improved its assessment of one of last year's SLOs—analyzing a popular media article for adherence to basic rules of research—which simultaneously addressed course-level and institution-level SLOs. Thus, in addition to applying psychological principles to the article, they are asked to think critically and abstractly.

This year, five additional psychology instructors participated in the assessment of this SLO, a significant broadening of participation. Results fell to an overall average of 68.5%, demonstrating that students need more help understanding the potential for misinterpretation of popular writing if it is taken seriously. Psychology instructors will repeat this SLO next year, but they plan to refine the assessment process in addition to providing more focused instruction on evaluating popular articles.

Business and Technology (B&T) Division

Introduction

The B & T Division used PCC's assessment methodology to assess student learning outcomes at the course and program levels. Participation in the assessment process increased significantly this year from two programs to twelve programs. Summaries of Business and Technology Division results for 2012-13 follow.

Assessment Summaries by Discipline

The following brief descriptions are based on the full versions of discipline reports prepared by individual departments in the Business and Technology Division. The full reports can be accessed on one of the internal college network drives at U:\Assessment of Student Learning\Assessment of Student Learning 2012-13\2012-13 Reports\2013-13 Results\B&T 12-13 RESULTS.

Accounting

Students in ACC 121 and ACC 122 prepared and analyzed financial statements, using extended written responses. In the same two courses, they also analyzed the impact of recording business transactions and adjustment of accounting entries. The performance standard for all tasks was 80%.

In the fall sample of ACC 121, students did not attain overall proficiency on the financial statement task; however, results from the spring were significantly improved and exceeded the standard. For their analysis of the impact of business transactions, payroll journal entries, and journal adjustments, both fall and spring students surpassed the performance standard; however, spring students performed significantly better in all classes.

From fall to spring, ACC 122 students showed improvement in their analysis of business transactions, but neither group demonstrated proficiency on the third test. Although fall students performed slightly better than spring students in their financial analysis of the Stock Project, both groups met the performance standard. A software support program called CONNECT is working well in providing practice for students and its use will be continued.

Automotive Collision Technology

Fall 2012 students in ACT 131 and spring students in ACT 122 were assessed with pre-tests and post tests to measure their improvement in structural and non-structural types of repairs. Assessment methods included selected response, performance, and personal communication. Although student progress was noted in real-time, hands-on testing, neither group met the high performance standard of 90%. To insure better proficiency and meet industry standards in the future, I-CAR (Inter-Industry Conference on Auto Collision Repair) will be implemented. I-CAR is an international training organization focused on education, knowledge and solutions for the Collision Repair Inter-Industry. The primary goal of the organization is to provide complete and safe repairs for the ultimate benefit of the consumer. With this certification, student will have better employment opportunities.

Automotive Technology

The assessment methods used for ASE 221 and 236 were selected responses, performance assessments, and personal communication in students' ability to identify, locate, test, diagnose and properly repair automotive electrical and electronic circuits. Students were short of achieving the overall performance target by a small margin; therefore, the department plans to include EPA testing as part of the grade in the future.

ASE 265 students used pre and post tests with selected responses. The students met the performance target, but still plan to incorporate more ASE style questions into the curriculum so that students can better prepare for certification tests.

Civil Engineering Technology

A performance assessment of critical thinking skills and the use of dimensioning standards were used to evaluate the proficiency of CAD 101 students in using AutoCAD software. Fall 2012 –

Summer 2013) were evaluated. Each group exceeded the national average of 76% by an average of more than 7 points. To achieve even better improvements for the future, the instructor recommended additional assignments and incorporating more technology into the curriculum.

Computer Information Systems

Student test results in two sections of CIS 118 were compared to determine whether using selected response (multiple choice exams in D2L) or a series of in-class performance assessments (including a work of art, a simulation, a lab report, a term paper, and a portfolio) was a more effective way to demonstrate students' ability to use major operating systems. The instructor learned that there was little difference between online exam results and in-class exam results.

In the past CIS 268 performed at 50-75% accuracy on data modeling diagrams. The instructor experimented by trying the "flipped class" approach to instruction. In a flipped class, students do the reading for the class and watch the lecture on line. Class time is spent on doing what would normally be assigned for homework. At mid-term, a modeling exercise was included on the exam to test the ability of student to create proper Entity Diagrams and Entity Relationship Diagrams. In a performance assessment, students demonstrated their ability draw the required diagrams at significantly higher standards than students from previous semesters. The instructor determined that the flipped class was a much more effective way to plan instruction for this course.

Business

Students taking hybrid classes in Spring 2013 ECO 201 and ECO 202 slightly outperformed students in fully online classes on tasks requiring complex mathematically-based solutions to economic problems. Extended written responses and performance assessments were used, but only hybrid sections used the WOW gaming instruction. Next year, more WOW gaming instruction across all sections is planned to determine if improved results are demonstrated in all sections.

Performance assessments on preparation and analysis of financial statements were conducted in MAN 225 (Spring 2013). The preparation phase had significantly better results than did the analysis phase. A stronger component in working with cash flows, reinforced by guest speakers from business is planned.

Culinary Arts/Hospitality Studies

Students in the CUA program were assessed on their ability to apply critical thinking skills in a variety of customer service and industry settings during 2012-13. The settings and skills assessed were defined on a Task List and their critical thinking skills were evaluated with a rubric. Desired results in customer service expectations were achieved, and plans are to continue using this effective component of their curriculum.

The program also planned to assess student use of common technology associated with food service operations. However, the program was unable to follow through with the assessment as planned because the needed technology was not available for their use. Assessment of this SLO will be resumed when needed equipment is made available to the program.

Electronics

Students were assessed in Spring 2013. Those in ELT 258 had hands-on training in programming and troubleshooting using an Allen Bradley SLC 500. They were tested with periodic quizzes, at midterm, and on a final exam with selected responses and a performance assessment using Simutech troubleshooting software. Students performed well on this task since they had multiple opportunities to practice and identify faults.

Similarly, students in ELT 101 participated in performance assessments during their lab practices. They took voltages, measured currents and resistance, and verified OHM's law. Quizzes, a midterm, and a final exam indicated they understood the concept of OHM's law. Future instruction will focus on more quizzes and more practice applying OHM's law.

Health Information Technology

Students in the medical terminology course (HPR 178) were assessed on the effectiveness of their spoken communication using medical terms provided by the instructor (for continuity), during Spring of 2013. These students met the performance target on both their mid-term and final exams, which were performance-based oral exams. This learning outcome is essential for competency in this course and will continue to be assessed in future semesters, with appropriate modifications to curriculum as needed. For example, departmental faculty plan to add verbal testing with narratives provided by the instructor into HPR 232 and HPR 252 to further reinforce student pronunciation and communication throughout the program.

Performance on the Certified Coding Associate (CCA) Exam for students in HIT 268 was also assessed, and of the 2012-13 students, 62.5% of them failed the exam. At this point, there is no correlation between the HIT 268 mid-term and final mock exams and the CCA exams. Unfortunately, CCA exam scores from AHIMA (the national professional sponsoring organization) were not reported to PCC and thus, the official pass rate is unknown as of this writing. Students assessed during the 2012-13 assessment cycle were not in the established course rotation at the time of the assessment. Consequently, faculty determined that the HIT 188 practicum course and the HIT 268 test prep course need to be offered only in the established course rotation and they need to be taken concurrently.

Interior Design

Final projects from interior design courses were assessed in Fall 2012 and Spring 2013. National averages at 80% set the performance goal. In four courses, students performed an in-depth analysis of a design problem, researched ways to solve the problem, and demonstrated creative thinking to deal with the problem. In a different performance evaluation (again on final projects), students in three courses (one different and two the same) were evaluated on their appropriate selection among a broad range of materials and products to complete interior design challenges. In each of these courses, students slightly exceeded the performance standards of 80%, but improvements such as incorporating business principles, addressing customer

satisfaction principles, adding an internship program, and taking students on field trips are planned for the future.

Machining

Machining students were evaluated using performance assessment and personal communication with performance standards of 80%. Students in MAC 130, 131, and 141, students applied mathematics and used NIMS process planning to manufacture parts to meet tolerances and NIMS standards. These students significantly exceeded the performance standards by meeting all tolerances and NIMS standards at 100%. Using Mastercam U software, the goal of MAC 241 students was to become Mastercam certified. Nine of the twelve students who participated met the performance standard, which makes them eligible to take the proctored Mastercam national exam.

Future plans may include the addition of a MET-TEC committee, student projects being evaluated by outside companies, and more instructional emphasis on developing students' theoretical knowledge, especially of WCS (world coordinated system).

Office Administration

Ten students in MAR 106 and BTE 287 were assigned to submit resumes and cover letters, which were then critiqued by the HIT/OFA Advisory Committee. Students had the opportunity for self-evaluation using the same rubrics used by the advisory committee. Additionally, these students were given the same job announcement and were assigned to prepare for interviews – again with professionals from the HIT/OFA Advisory Committee. Although students and faculty found both experiences to be very beneficial to students, they were also time and labor intensive for all involved. The department plans to explore the feasibility of possibly adding an additional course to the curriculum requirements.

Welding

Students in WEL 102 and WEL 124 were assessed using selected response on theory tests, personal communication on interpretation of principles, and performance assessment of the SMAW welding process. Performance expectations were at 75% for the theory tests and 80% on

the set up processes. For both classes, 100% of the students met the performance standards for both theory and set-up; therefore, the Welding department will assess other SLOs next year.

Visual Communications

In the Visual Communications department, even beginning students are expected to demonstrate good understanding of fundamental design concepts before progressing to their upper level courses. To succeed in upper level courses, students also need to be skilled in developing visual and/or written responses that will solve communication problems. The mid-program evaluation is a way to evaluate students on their understanding of good design principles, their developing skill in solving communication problems, and their ability to recognize and address weaknesses well before degree completion. Students at the mid-point of their program should meet the following performance criteria on basic skill sets at the Mid-Evaluation point of their program: Students performing above average will score in the 80% range; students performing at average and on target will be within the 70% range; and students who are below standards will be in the 50% range or less. During Spring 2013, one student was within the average range in MGD 105. Looking forward, the department chair recognizes that students in the program need to be better informed about industry expectations, but is also challenged in finding a manageable way to contact individual students. She hopes to find an explicit and wide-ranging approach to communicate program expectations and deadlines.

Student who are participating in the Capstone class are presented with creating a portfolio similar to that of the Mid-Evaluation. Students should be able to demonstrate the skills necessary to obtain entry level employment in graphic design and production, and should score in the 90% range. Average student performance that shows potential for gainful employment will be within the 78% range. Three students in MGD 289 attained an 84% average, and thus show potential but not necessarily readiness for entry level employment. The department chair plans to continue assessing these SLOs and to develop a more consistent way to evaluate and compare midpoint and capstone portfolios. This information will also be helpful in determining internship placements and preparing students for other professional environments.

Health and Public Safety (H&PS) Division

Introduction

Using assessment methods adopted in 2010-11, the H & PS division focused primarily on course and program student learning outcomes (SLOs). Other than revisions in the planning and reporting forms, the process for collecting data, measuring outcomes, and analyzing/reporting findings remained the same other than minor revisions that were made to the assessment forms. There were eight participating disciplines this year.

Assessment Summaries by Discipline

The following brief descriptions are based on the full versions of discipline reports prepared by individual departments in the Health and Public Safety Division. The full reports can be found on one of the internal college network drives at U:\Assessment of Student Learning\Assessment of Student Learning 2012-13\2012-13 Reports\H & PS Division 12-13 Results.
The following brief descriptions are based on the discipline reporting presented in the departmental reports located on the U-drive.

Dental Assisting

To work effectively in a dental clinic, Dental Assisting students must be prepared to make decisions based on strong professional judgment while assisting with restorative dental procedures. Spring 2013 students in DEA 124 and DEA 128 were evaluated on a performance assessment based upon the outcomes of their professional judgment and decision-making abilities. The attainment of a competency level of 93%, prompted the department chair to plan for additional instructional videos and one-on-one practice to be incorporated into future courses in order to meet the 95% benchmark.

Although Colorado does not require dental assistants to be certified, those who pass the voluntary OSHA and Infection Control procedures gain an advantage in their employment

prospects. In Fall 2012 and Spring 2013, DEA 126 students' performance assessments and personal communications were evaluated and met the 85% benchmark. For the next assessment cycle, the department chair will raise the benchmark to 90% and will also seek PCC Foundation Scholarships to help students defray the cost of the exams needed for certification.

Dental Hygiene

The Professional Practices Grade Sheet is an assessment tool used in DEH 171, 270, and 271 courses. This evaluation tool was used daily in clinical settings to determine if students were able to fully understand and interpret the content of patient records in order to make sound decisions that impact patient care. The population assessed consisted of twenty-nine first and second year students who met the benchmark of 90%. In spite of achieving the desired results, however, DEH instructors decided that improvement in the tracking procedures were needed so that they could better determine which patients actually scheduled the recommended follow-up care.

Students from the same three classes were also assessed on their abilities to evaluate the process of care for periodontal patients. Through performance assessment and personal communication, student results were at 98.6% in May 2013, which was just short of the 100% benchmark. By the end of the summer, however, 100% of the students had achieved the benchmark. The periodontal consultation was initiated this year, and will be continued with future classes.

Emergency Medical Services

EMS students are required to build a program portfolio which includes check-off sheets that document their ability to perform entry level paramedic skills. In both fall and spring semesters, all students met the performance target. However, the department chair wants to further improve the efficiency of the check-off sheets so that multiple check-offs are possible. Also, she wants to improve the students' abilities to evaluate each other on the check off sheets by improving their orientation to the process.

Team leadership as an EMS provider requires a combination of cognitive, psychomotor, and affective skills. Students in EMS 121, 122, and 123 were assessed during practice scenarios during Spring 2013. The instructors found that these leadership skills were extremely difficult to assess and also that these beginning students were struggling with the concepts. They decided at the time to not to grade these scenarios, but will work toward improving their instruction and scenario practices for the future.

Fire Science

Two performance assessments were evaluated for students in the Fire Science program during the spring of 2013. First, students in FST 100 were expected to meet defined standards of professional behavior when wearing clothing that represents their affiliation with the PCC Fire Academy. The instructors introduced the evaluation rubric at the beginning of the semester. However, because they did not reinforce it throughout the semester, they believed their measurement was not valid. Therefore, they determined it best to revisit the rubric standards next semester and also to consider both instructor and student feedback in the grading process.

Secondly, FST 100 students were expected to demonstrate entry level firefighter skills as identified by the National Fire Protection Association (NFPA), and also to pass their state certification test. PCC students exceeded the benchmark of 80% with a 100% pass rate on the NFPA standards, but had only an 80% pass rate on the State Certification test. The instructor found that the students were distracted and anxious at having the JPR skill evaluators observing them, and will explore ways to reduce student test anxiety in the future.

Medical Imaging Technologies

Students in RTE 121 were expected to perform a KUB radiograph in the energized lab with at least 75% proficiency. These students attained proficiency of 93% on their performances. Second year medical imaging students in RTE 221 were expected to read and identify the function of a digital image reader. On three selected response exams, students were expected to achieve an average score of 75% or better. Students achieved an 89% average and no adjustments to the course were identified. The MIT program will select different competencies to assess in the upcoming cycle.

Nursing

Nursing students in NUR 212 were expected to achieve incrementally improved scores on their exams before advancing to the next course. The performance target was established by the national average of 97%, which did not include re-testing. Eventually 100% of the students were able to pass, but half of them required retesting before they met the math calculations competency. Planned adjustments to the course include a plan to introduce a math review during the first third of the course and to complete all math instruction in the first two-thirds of the course. Also, the department chair plans to add medical calculations of increasing complexity to the first two exams so that tutoring and further instruction can be planned as needed.

NUR 230 students were assessed on a selected response exam and their clinical performance during their fourth semester, with the expectation that they could achieve a competency level of 72% or better in providing leadership in healthcare settings. In the "Management of Care" competency, students were able to achieve an average of 77% by the second exam. In the "Team Leading" competency, 100% of the students were able to attain 90% or better. The area needing most improvement was "Updating Daily Plan of Care." The nursing department plans to improve instruction and better integrate the topics of integration of legal rights, advocacy, and referrals throughout the curriculum.

Occupational Therapy Assistant

First year OTA students were expected to develop a therapeutic program for patients based upon standard professional practices. Performance assessment and personal communication were evaluated. The expectation was that 90% of the OTA 121 students would attain at least 3 of the 5 competencies, but 85% was their actual performance. For future improvements, a rubric will be incorporated along with more thorough instruction in using it. In addition, rather than partnering classmates, the department chair will consider using the simulation lab for student assessments.

Exceeding their benchmark of 95% on the AOTA Fieldwork Performance Evaluation, 100% of the advanced students in OTA 280 and 281 were able to demonstrate culturally competent patient care. No adjustments on this competency are planned.

Physical Therapy Assistant

PTA students were assessed on their ability to perform patient assessments and/or modify treatment plans by applying their knowledge of bony landmarks. In a selected response exam, 90% of HPR 117 students were expected to perform at 80% or higher, but only 55% of the students did so. To see future improvements in student knowledge, an additional assessment will be given at the end of the HPR 117 course and the same assessment will be given again at the beginning of PTA 140. Results of this assessment will enable instructors to evaluate the knowledge students retained from semester-to-semester. As this knowledge is integral to PTA practitioners, more instruction will be added that emphasizes bony landmarks and their connection with muscle origins and muscle insertion points.

On a performance assessment during their Final Clinical Internship, students in PTA 282 demonstrated their ability to evaluate patients' medical status and to correctly follow a plan of care. These students exceeded the competency level with overall proficiency of 95.2%. No changes are planned but student performance will continue to be monitored.

Conclusion: Assessment of Student Learning 2012-13

Strengths

1. PCC's Assessment of Student Learning process adheres to widely accepted best practices in student learning assessment based upon information found in the following sources:

    - Victor M. H. Borden and Gary R. Pike 2007). Assessing and Accounting for Student Learning: Beyond the Spellings Commission, New Directions for institutional Research, Assessment Supplement, Edition Jossey-Bass, 94 pp.

    - J. Fredericks Volkwein (2009). Assessing Student Learning: Why, Who, What, How? New Directions for Institutional Research, Assessment Supplement, Edition Jossey-Bass, 171 pp.

2. One model of assessment is used across the entire institution. Standard forms, which use the same definitions of basic terms (SLO, target population, assessment method, etc.) are being used both for planning and reporting across the college.

3. The ASL process is facilitated through an oversight system of "Assessment Lead Faculty," one for each division. Each lead works within his or her academic division to direct and support the unique assessment issues of that division.

4. Assessment plans and reports for 2009-10, 2010-11, 2011-12, and 2012-13 have been organized and made accessible to all campus users at U:\Assessment of Student Learning.

Challenges

1. Branch campus involvement remains a challenge. Distance and lack of day-to-day interaction among chairs and part-time faculty is one contributing factor. A significant change in Branch Campus leadership during the 2011-12 and 2012-13 Academic Years has been another factor. Branch campus attendance at ASL faculty meetings is generally available through polycom, but is cumbersome for all participants.

3. Full compliance of the timely submission of plans and reports continues to be a challenge. For the 2012-13 academic year, there was majority participation from all departments, but not 100% of all departments.

4. Because of the differences between divisions and the need for different deadlines, submission of final reports has been occurring all throughout the year. This complicates both the review process and timeline for completing the Assessment of Student Learning Final Report.

5. Clarification on what assessment information goes onto the website and who is in charge of monitoring it has not been clearly defined.

Recommendations

Based upon feedback from the committee chair and leads, the following are some recommendations for improvement of Assessment of Student Learning at PCC:

1. Broaden assessment focus to include more "terminal" academic skills/competencies, focusing more on the higher level skills/competencies that PCC graduates should possess.
2. Include the more branch campus involvement in assessment.
3. Modify the annual faculty evaluation process to include a criterion focused on meaningful participation in assessment.
4. Devote more time in division/department/All Faculty meetings to the subject of ASL and how its ultimate purpose is to improve student learning.

Next Steps in Assessment of Student Learning at Pueblo Community College

During the 2013-14 Academic Year, department chairs will be encouraged to expand the scope of assessment, as needed, so that additional competencies are identified and assessed within each discipline if appropriate. Departments will be expected to expand the reach of assessment so that most, if not all, disciplines participate in a meaningful assessment process. With guidance from the administration, the deans, and the chairs, the Assessment of Student Learning committee will

discuss and identify appropriate deadlines for each of the divisions, and best practices for ensuring compliance so that institutional reporting can be accomplished in a more timely fashion. Finally, the addition of a Chief Academic Officer for the college starting in Fall 2013 will bolster leadership in the entire Assessment of Student Learning effort across all campuses of the college.

In the future, the Higher Learning Commission will expect more in depth types of data to be reported from colleges. Data will need to encompass three domains of assessment: evidence of student learning, evaluation of student academic performance, and post-graduate outcomes. Level One means measurement of student learning outcomes at the classroom level. Level Two is measurement associated with program standards. Level Three Post-graduate outcomes will require additional data beyond those of the VE 135 reports currently being used. The role of Office of Institutional Research in the overall assessment process, with the development of some additional measurement indicators, will need to be expanded.