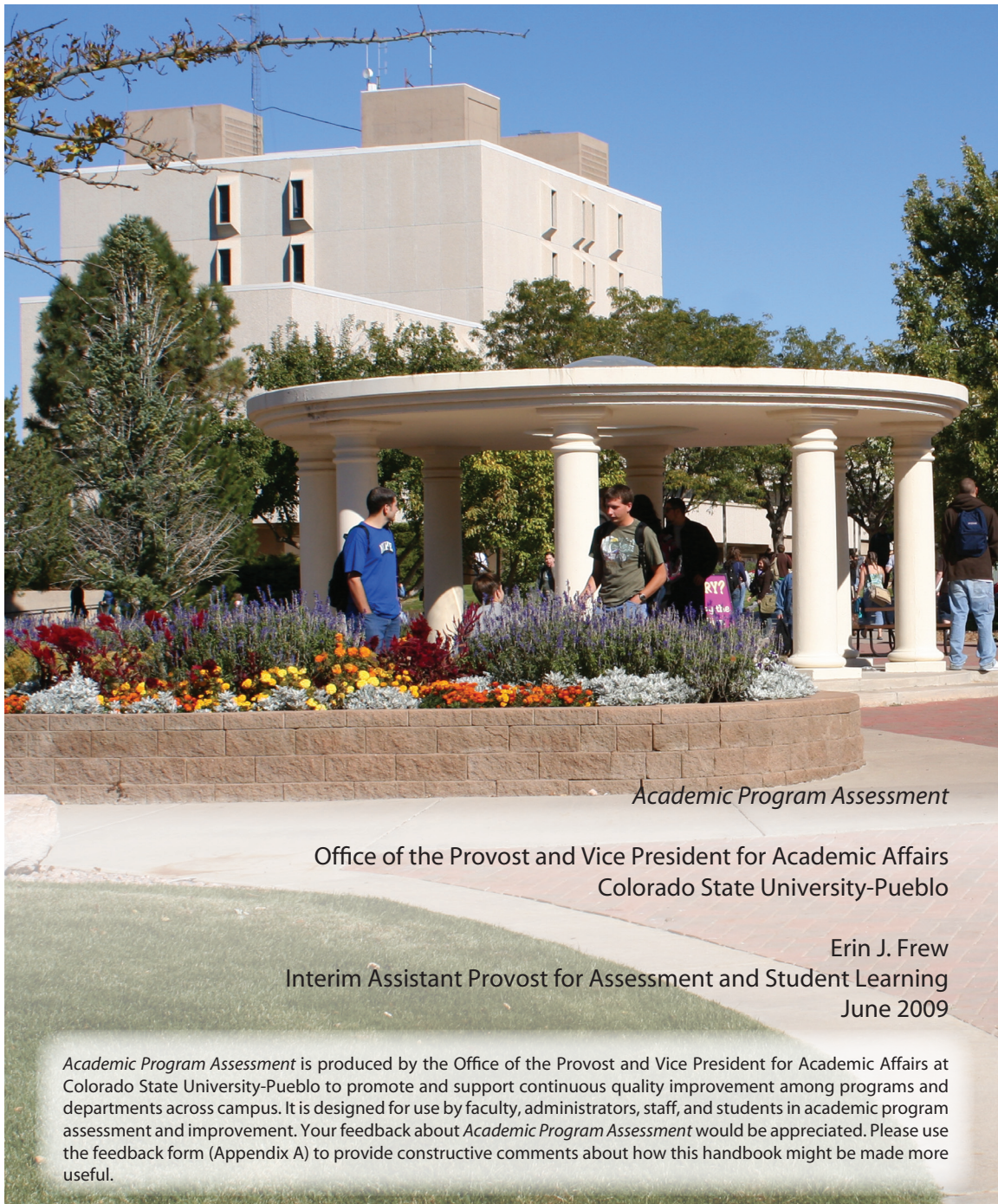


Academic Program Assessment

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Office of the Provost and Vice President for Academic Affairs



Academic Program Assessment

Office of the Provost and Vice President for Academic Affairs
Colorado State University-Pueblo

Erin J. Frew
Interim Assistant Provost for Assessment and Student Learning
June 2009

Academic Program Assessment is produced by the Office of the Provost and Vice President for Academic Affairs at Colorado State University-Pueblo to promote and support continuous quality improvement among programs and departments across campus. It is designed for use by faculty, administrators, staff, and students in academic program assessment and improvement. Your feedback about *Academic Program Assessment* would be appreciated. Please use the feedback form (Appendix A) to provide constructive comments about how this handbook might be made more useful.

June 2009

Colleagues:

In our last accreditation review, the Higher Learning Commission noted that while we have a great deal of assessment activity on our campus, we don't have a centralized structure that allows us to use assessment in the most effective ways. This document is part of our on-going effort to correct that deficiency and report back to the HLC on our progress. More important, though, assessment is a way to help us all reach the most important role of any university: providing our students with the best possible education that will allow them to reach their own goals and become successful once they graduate. In point of fact, that's the only reason for a university to exist, and by looking carefully at whether our programs are meeting the goals we set for them, we will be better able to insure that we are providing that best possible education for our students.

Sincerely,

A handwritten signature in black ink, appearing to read "Russ Meyer", with a long, sweeping horizontal line extending to the right.

Russ Meyer

Provost and Vice President for Academic Affairs



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I. ASSESSMENT

Assessment: What It Is and Why It's Important

Assessment is a systematic process of collecting, analyzing, and reviewing data to improve learning. It provides a framework for discussions about student learning, curriculum, and pedagogy (Allen, 2004). It gives faculty a better understanding of program-level learning that they can use to regularly revisit and update their courses. It's important because it tells us what and how much students are learning and where they're learning it, and it gives us insight into how we might refine our programs to help them learn more. Departments can use assessment to communicate to accrediting agencies, new faculty, students, and employers about their purpose. Individuals and groups of faculty can use before-and-after assessment information to determine the effect of innovations in teaching and in the curriculum.

Assessment is **not** evaluation of *individual* faculty, staff, or students; rather, it tells us how well the entire academic program's curriculum is meeting its purpose. Information from academic program assessment is not used as the basis for closing programs; in fact, it can be used to demonstrate the effectiveness and value of programs and departments to decision-makers. Nor is assessment considered a simple record of course grades. While grades do tell us something about student learning, they don't provide details on aspects of learning across the entire experience of the curriculum.

The best assessment plans also satisfy the needs of external stakeholders such as accreditors and governing boards. Regional and professional accrediting agencies such as the Higher Learning Commission (HLC), the Accreditation Board for Engineering and Technology, and the Association to Advance Collegiate Schools of Business are interested in assessment because it's one measure of post-secondary institutions' ability to achieve their goals. The HLC *Criteria for Accreditation* (2003) includes expectations related to assuring and documenting student learning via assessment activities. And its Assessment Position Statement (2003) articulates the strong role faculty should assume in the process.

Program assessment plans should meet the unique needs of the faculty and programs that design them, but the following tenets outline some common characteristics of the best plans:

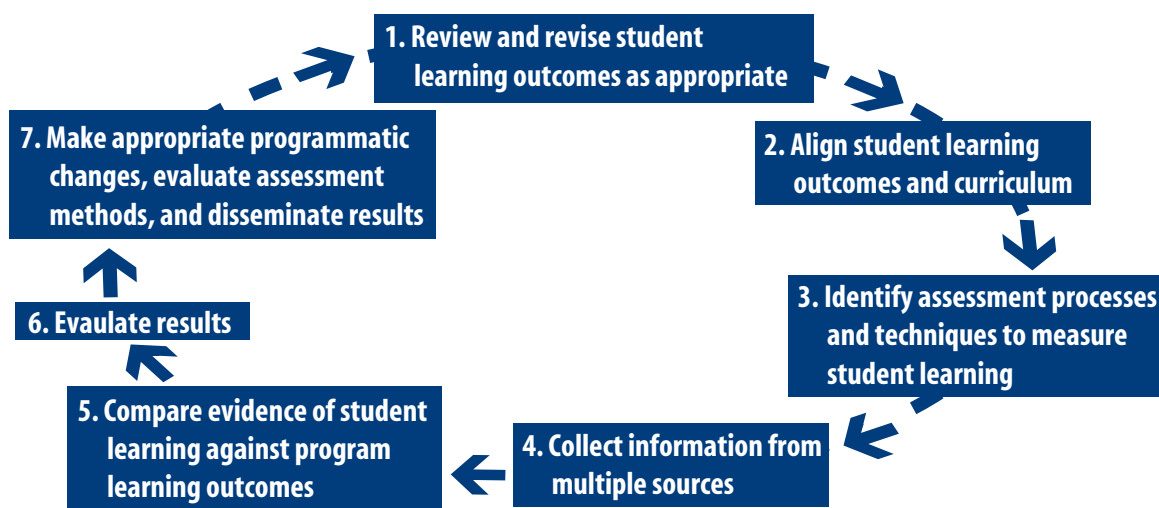
1. The assessment of student learning begins with educational values.
2. Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.
3. Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.
4. Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.
5. Assessment works best when it is ongoing, not episodic.
6. Assessment fosters wider improvement when representatives from across the educational community are involved.
7. Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.
8. Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.
9. Through assessment, educators meet responsibilities to students and to the public.
(*The Principles of Good Practice*, 1992)

Assessment helps us determine if our purpose as an academic institution—educating CSU-Pueblo students—is being achieved. We can use it as a method to explore the relationships between our actions (teaching) and outcomes (learning) (Astin, 1991), establish what is of importance (i.e., program goals and student learning outcomes), and set standards for student achievement. Results can catalyze discussion among faculty within and across programs and ultimately answer questions like, What types and levels of student learning are important to us? How do we know our graduates are learning those things? What can we do to improve learning? What role should assessment play in the scholarship of teaching and learning?

II. The Assessment Cycle

The Assessment Cycle

Although the content of assessment plans will be unique to each program, assessment processes generally assume the following steps:



Assessment is recursive—the focus of efforts will change as departments learn more about assessment and the performance of their students vis-à-vis the program’s student learning outcomes and faculty expectations for performance.

- 1. Review and revise student learning outcomes as appropriate.** The first step in developing an assessment plan is to develop student learning outcomes (SLOs) for each undergraduate and graduate degree program. SLOs are specific, measurable statements of student learning that faculty expect of students. All departments should have three to eight SLOs for each undergraduate and graduate degree program, and because the SLOs are the foundation for assessment, you’ll want to be sure they are relevant and current.

The creation and periodic refinement of SLOs provide an opportunity to involve students, alumni, employers, and other constituents in conversations about student learning. Involving stakeholders will contribute to the relevancy and currency of the SLOs and give you a richer perspective of your programs, their purpose, and their effects. Such discussions may also be a valuable component of the program review process.

The program SLOs are important because they serve as the standard for assessing student learning; that is, student performance will be compared to them to identify program strengths and weaknesses. As such, they should also be explicitly linked to your program's goals and objectives and those of your college, and ultimately, to the campus mission and strategic plan (Lopez, 1997).

Meaningful, measurable SLOs convert program goals into smaller, explicit standards of student behavior that can be observed and measured. Consider the following as you develop them for your program:

- What are the specific behaviors, skills, and abilities students must exhibit?
- What is the minimum level of observable student performance acceptable (the performance standard)?
- Under what conditions or circumstances do you expect the performance to occur?
- What type of evidence would be required to persuade critics that the goals have been met?

Avoid using terms such as "know" or "understand" to characterize student learning. Instead, refer to Bloom's (1964) taxonomy (<http://faculty.washington.edu/~krumme/guides/bloom.html>) to write them in a consistent action-oriented fashion at an appropriate cognitive level. For example, "know how to use XYZ software," would be more assessable if it were rewritten as "access XYZ software and use it to create a XYZ project in the computer laboratory." Or "understand the chronology of events at Gettysburg" might become "develop a timeline of the main events at Gettysburg."

2. Align SLOs and curriculum. Review the curriculum and prepare a curriculum map describing the contribution of each course in the core curriculum to achieving the SLOs (see http://www2.thomasmore.edu/psychology/psychology_map.pdf?group2=Curriculum%20Map and <http://www.anokaramsey.edu/assessment/competencymaps.cfm> for examples). Identifying gaps and overlaps in the curriculum improves faculty understanding of the role each course plays (or does not play) in accomplishing the program SLOs. This exercise will also reveal likely points at which assessment activities could occur (e.g., capstone experiences) or those at which existing assignments (e.g., lab exercises, papers, presentations) and exams might be co-opted for assessment purposes as well. Using classroom assignments to the extent possible to measure the program SLOs will make your assessment process more efficient.

3. Identify assessment processes and techniques to measure student learning. Evidence of student learning takes a number of forms, including surveys, projects, papers, exams, lab reports, portfolios, presentations, and demonstrations. Employing a variety of instruments and techniques to determine the level and type of student learning is helpful to assure validity, but be sure to balance your assessment efforts with your available resources, including faculty and staff time. Otherwise, assessment processes may become unsustainable.

Measures of student learning can be classified as direct or indirect. In general, direct measures allow faculty to determine how much students are learning by directly observing their performance or by evaluating products of learning. Artifacts such as portfolios, capstone courses, standardized tests, and licensure examinations are typically considered direct measures of student learning. All program student learning outcomes should have at least one direct measure. On the other hand, surveys; exit interviews; focus groups; grades; and retention, placement, and graduation rates are *indirect measures*. Indirect measures ask students and others to provide feedback about their learning experience.

It is unnecessary to assess all student outcomes simultaneously; instead, prioritize one or two that are most important—or of most interest—and begin by measuring those. Over three to four years all outcomes should be measured at least once. You will want to consider what proportion of students should be able to perform the objectives. Is it important that all students perform at a particular level or standard, or is a smaller proportion acceptable in your discipline?

The same principles of good research in your discipline apply to assessment. Considerations of validity, reliability, sampling, and data analysis all are relevant here. However, the processes also should be easy to use, convenient, and most importantly, **provide data that are meaningful for your program**. Use techniques with which you are familiar or that lend themselves to your discipline, and approach assessment as a form of scholarship in applied research. There are opportunities to publish assessment-related research in all disciplines (e.g., *Computer Science Education*, *Journal of Management Education*, *Journal of Research in Mathematics Education*, *Music Education Research*, *Nurse Education*).

4. **Collect information (data) from multiple sources.** Collecting information or data from multiple sources, at a variety of times in the educational process, and using multiple methods (triangulating) usually provides more robust and accurate information, and avoids some systematic bias that otherwise might be introduced (Lopez, 1996). For example, a combination of indirect and direct, quantitative and qualitative measures with the involvement of internal (faculty) and external (practitioners) evaluators may prove more valid than using only one type of measure with only faculty evaluators.
5. **Compare evidence of student learning against SLOs.** Comparing artifacts or examples of actual student performance against the program SLOs provides evidence of whether student performance is at, above, or below the level of learning faculty expect. Faculty may elect to employ norm-referenced tests such as the California Critical Thinking Skills Test or the Major Field Tests produced by the Educational Testing Services. These tests allow faculty to compare CSU-Pueblo student scores with the scores of students at other institutions. Criterion-referenced tests are developed internally (e.g., by department faculty) and compare students' scores against an absolute standard.
6. **Evaluate results.** Evaluating the results is at the heart of the assessment process. It is in evaluating gaps between a program's expectations of student learning and actual student performance that faculty become aware of any discrepancies that exist. During the evaluation you will interpret what the data mean to the program and curriculum. Do the results reveal areas of the program that are particularly effective? If so, build upon these. Do the results indicate that students' knowledge, affect, or skills are weak in certain areas? How might that be corrected? Are the results accurate? Is the assessment process itself strong?

Build in some time for faculty to think about the results and what they mean, and how the next assessment process might be changed to capture additional or different data to further inform program improvement. Consider including a variety of constituents in this process—assessment conversations that include multiple perspectives are valuable for their own sake and often result in program innovations. Current students can strengthen this process and ensure that the curriculum and assessment processes are relevant and appropriate. They can help interpret results and design and improve assessment techniques. Encouraging students to participate gives them insight into the challenges of education and perhaps, a new appreciation for their major department's efforts to insure that their education is of the best quality. It also strengthens their ability to speak to their knowledge, skills, and abilities as they interview for employment or for graduate school.

- 7. Make appropriate programmatic changes, evaluate assessment methods, and disseminate results.** Based on the results of assessment, faculty may elect to make changes to the curriculum to move students closer to the type and level of skills and knowledge established by the program. For example, discovering that students' oral communication skills are not up to the program's standards may mean that you want to create additional opportunities for presentations. Faculty can use these presentations to provide feedback and help students become competent speakers. On-going monitoring of these skills will help you determine the effectiveness of changes you make.

Disseminating the results of assessment to all stakeholders promotes organization-level learning. (The campus currently uses the PRISM system as one way of reporting results internally.) It promotes intra- and inter-department dialog and, over time, identifies pitfalls and best practices. It communicates CSU-Pueblo's commitment to maintaining or improving student learning and serves as a statement of its expectations of students. Also consider it an opportunity to celebrate the effectiveness of your program.

Although making program changes, evaluating assessment processes and methods, and disseminating assessment results represent the last phase in our assessment model, it is actually an on-going feedback loop. Continue monitoring your programs through continuous cycles of data collection and evaluation to get the most from your assessment activities.

III. THE ASSESSMENT PLAN

The Assessment Plan

The assessment plan should be reviewed each year and submitted as a component of an annual assessment report if your school/college requires one. The report should communicate assessment findings and your interpretation of their meaning, alert the campus community to program and assessment changes, and demonstrate on-going improvement in academic quality. Schools/colleges determine the form and content of reports from their respective programs, but they often include the following: the SLOs; which students were measured (such as sample size and response rate); how, when, and by whom they were measured; a summary of the data and criterion against which interpretation and conclusions were drawn; and a description of how the assessment loop was closed by explicating the responses and/or actions that have been taken or are planned, either for the improvement of the program or for improvement of the assessment process itself. Where appropriate, report changes resulting from assessment findings from the previous year and any steps taken to address concerns previously expressed by your school/college.

IV. ASSESSMENT AND PROGRAM REVIEW

Assessment and Program Review

CSU-Pueblo is re-evaluating its program review processes to determine if reviews can be made a bit more useful and meaningful to the faculty who prepare them and to the campus at large. One option under consideration is a type of program review that is combined with outcomes assessment. “Outcomes-based program review is a systematic process in which program faculty and/or professionals articulate the intended results of the cumulative contribution of their program” (Bresciani, 2006, p. 14). It intentionally connects what faculty learn about student learning outcomes with program improvements, policy changes, recruiting and retaining students, and allocating resources. It makes sense to connect assessment results with program review in this way because the results of one influence the other and together they move departments into an ascending spiral of understanding where the program is and making improvements based on that understanding. As assessment becomes a continuous source of information about how well the program is doing, program changes become a routine component of the department’s planning and budgeting documents and to those of the campus as a whole.

V. CONCLUSION

Conclusion

As you engage in academic program assessment, please keep in mind its purpose. Assessment is a process used by faculty to evaluate the extent to which students, in aggregate and over time, are meeting their expectations for learning. This information helps faculty shape their programs and their courses. It is not an attempt to standardize the curriculum or to monitor faculty teaching. And the results of assessment do not play an adverse role in promotion and tenure. Engaging in assessment is a manifestation of the intellectual curiosity of faculty in knowing what their students know and, where appropriate, making changes to maximize learning.



VI. REFERENCES

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Feedback on *Academic Program Assessment*

Please use this form to provide feedback about the usefulness of this assessment handbook. Send the completed form to Erin J. Frew, Interim Assistant Provost for Assessment and Student Learning. Thank you.

1. What would make Academic Program Assessment more useful for you? (Please comment) _____

2. What was particularly helpful? _____

3. What was not particularly helpful? _____

4. What topics should be included in updates? _____

5. Other comments: _____



2200 Bonforte Blvd
Pueblo, CO 81005

www.colostate-pueblo.edu

