



Evaluating Teaching Effectiveness Task Force

December 30, 2015

1. Introduction

This report offers recommendations from the 2015 University Distinguished Teaching Scholars/TILT Task Force on assessing teaching effectiveness. The Task Force considered how departments at Colorado State University might develop processes for assessing teaching effectiveness. The report builds on the report issued by the 2011 UDTS/TILT Task Force on Assessing Teaching Effectiveness, which offered recommendations regarding the use of teaching portfolios, classroom observations, and reflective statements in the assessment process. This report moves beyond the 2011 recommendations by focusing on the campus-wide adoption of valid, rigorous processes for assessing and rewarding teaching activities. It provides recommendations for departments to consider as they develop processes for defining student learning outcomes, enhancing faculty teaching skills and knowledge, and evaluating faculty within the context of professional and department goals.

This report focuses on evaluating teaching effectiveness in courses. While the members of the task force recognize the important roles played in student learning by advising and mentoring outside of the context of university courses, our focus is on evaluating the teaching that occurs within the context of formal university courses.

The recommendations offered in this report build on the guidelines for evaluating teaching effectiveness found in section E.12.1 of the *Academic Faculty and Administrative Professional Manual* (excerpted below). The University's periodic departmental review process, which now requires departments to establish student-learning outcomes for each of their programs, has also shaped these recommendations.

The recommendations in this report reflect an understanding among the task force members that teaching practices and conditions vary widely across disciplines and that no simple, "one-size-fits-all" approach is likely to be appropriate for all departments. It is clear, however, that several characteristics of effective teaching transcend disciplines and can ground the evaluation of teaching effectiveness in programs across the University.

RECOMMENDATIONS

1. Good teaching should be rewarded. In particular, evaluations of teaching effectiveness should contribute to decisions regarding compensation, promotion, retention, and recognition.

2. Teaching effectiveness should be assessed using evidence-based approaches, such as analysis of data from course management systems, analysis of student work, observation of teaching, and analysis of curricular materials.
3. Evaluations of teaching effectiveness should involve the use of multiple sources of evidence and multiple assessment tools.
4. Evaluations of teaching effectiveness should involve a peer-review process (defined later in this report) comparable to the process used in assessing research, scholarship, and artistry.
5. Evaluations of teaching effectiveness should include peer review of reflective statements from the faculty members who are being evaluated.
6. Evaluations of teaching effectiveness should entail the use of evidence-based processes and strategies that are appropriate to and recognized by scholars within a given discipline or profession.
7. Departmental evaluation processes should reward faculty members for engaging in professional development activities related to teaching and learning.
8. CSU should promote the design and implementation of additional professional development resources and scholarly research initiatives related to understanding and enhancing learning and teaching effectiveness across the institution.

2. Assumptions and Rationale

FOUNDATIONAL PRINCIPLES

The recommendations in this report reflect four foundational principles.

We are a community of teachers and scholars.

- As a university community, our teaching practices should be evidence-based. In particular, they should be informed by research on teaching and learning.
- We should value and support the scholarship of teaching and learning, discipline-based educational research, and learning science.
- We should disseminate scholarship on teaching and learning in ways that improve educational practice and student learning.
- We should support innovation in teaching and learning.
- We should recognize teaching excellence.

We should promote student learning and student success.

- Our curricula should incorporate evidence-based, high-impact practices that promote active, engaged teaching and learning.
- Recognizing that traditional forms of assessing student learning outcomes (e.g., grades, standards-based testing) are not necessarily synonymous with learning, we should adopt comprehensive, evidence-based strategies to assess student learning.

- Recognizing the importance of success beyond the classroom, we should gather information from CSU graduates that will help us identify teaching and learning strategies that have contributed to the success of alumni in the workforce and in society.

Evaluations of teaching effectiveness should be conducted within the context of faculty governance.

Section E.12.1 of the *Academic Faculty and Administrative Professional Manual* provides a framework within which departments and faculty shall work to assess teaching effectiveness. The section states in part:

Departments shall foster a culture that values and recognizes excellent teaching, and encourages reflective self-assessment. To that end, departmental codes should, within the context of their disciplines, (1) define effective teaching and (2) describe the process and criteria for evaluating teaching effectiveness. Evaluation of teaching should be designed to highlight strengths, identify deficiencies, and improve teaching and learning.

Evaluation criteria of teaching can include, but are not limited to, quality of curriculum design; quality of instructional materials; achievement of student learning outcomes; and effectiveness at presenting information, managing class sessions, encouraging student engagement and critical thinking, and responding to student work. Evaluation of teaching shall involve multiple sources of information such as course syllabi; signed peer evaluations; examples of course improvements; development of new courses and teaching techniques; integration of service learning; appropriate course surveys of teaching; letters, electronic mail messages, and/or other forms of written comments from current and/or former students; and evidence of the use of active and/or experiential learning, student learning achievement, professional development related to teaching and learning, and assessments from conference/workshop attendees. Anonymous letters or comments shall not be used to evaluate teaching, except with the consent of the instructor or as authorized in a department's code. Evaluation of teaching effectiveness should take into account the physical and curricular context in which teaching occurs (e.g., face-to-face and online settings; lower-division, upper-division, and graduate courses), established content standards and expectations, and the faculty member's teaching assignments, in particular the type and level of courses taught. The University provides resources to support the evaluation of teaching effectiveness, such as systems to create and assess teaching portfolios, access to exemplary teaching portfolios, and professional development programs focusing on teaching and learning

Building on the guidance in this section, the University's periodic program review process requires departments to establish student-learning outcomes for each of their programs. These programmatic learning outcomes are expected to inform curricular design, which, in turn, must be considered when assessing teaching effectiveness.

Evaluation of teaching effectiveness requires departmental commitment and significant investments of faculty time.

Methods for evaluating teaching effectiveness vary widely across departments. In some cases, departments have established strong processes that are consistent with the guidance provided in Section E.12.1 of the *Academic Faculty and Administrative Professional Manual*. The members of this task force are aware, however, that significant barriers exist to wider adoptions of these kinds of evaluation processes. In most cases, this reflects a simple calculus: effective and fair evaluation requires significant investments of faculty time and effort. In the face of a reward system that provides significant incentives for productivity in the areas of research, scholarship, and artistry, we anticipate that many faculty members will find it difficult to justify participation in evaluation activities that reduce the time they can invest in research, scholarship, or artistry. If we are to make progress in the development of fair and effective processes for the evaluation of teaching effectiveness, our reward structures – at the department, college, and university levels – must provide incentives for participation in those processes. Those incentives might include allocating time for participation in evaluation activities and viewing participation as an important part of the activities considered during merit, promotion, and tenure evaluations.

RATIONALE FOR SUBSTANTIVE EVALUATION

Developing effective departmental practices for evaluating teaching effectiveness will make important contributions to the University's efforts to improve teaching, learning, student retention, and student success. We offer three reasons for the necessity of substantive evaluation of teaching effectiveness:

1. Substantive evaluation of teaching effectiveness is fundamental to improving student learning, one of CSU's primary missions.
2. Substantive evaluation of teaching effectiveness is a necessary first step to improving teaching effectiveness, a primary responsibility of most faculty members.
3. Substantive evaluation of teaching effectiveness should inform key review processes in a far more meaningful manner than it presently does, including those linked to salary increases, retention of faculty, tenure and promotion decisions, and consideration for recognitions (e.g., teaching awards and prestigious fellowships) within and beyond the University.

3. Observations

Ensuring the rigor and disciplinary appropriateness of processes for evaluating teaching effectiveness is essential to making these processes fair and constructive. Achieving rigor is likely to be both time consuming and challenging. Ensuring disciplinary appropriateness will require a capacious evaluation structure that respects disciplinary differences and priorities. To frame the recommendations that are provided later in this document, and to shed light on some of the complexities associated with developing fair and constructive departmental practices for assessing teaching effectiveness, we offer the following observations.

A SHARED DEFINITION OF "TEACHING EFFECTIVENESS" IS ESSENTIAL TO ITS EVALUATION

The authors of the 2011 Task Force report on assessing teaching effectiveness observed:

Teaching is bound up tightly with learning, yet it is clear that learning outcomes—what students take away from a course in terms of knowledge, skills, attitudes, and abilities—are not

synonymous with teaching effectiveness. Although they are closely linked, it is possible (albeit rare) to teach a course well without necessarily achieving the learning outcomes associated with course goals. Student attitudes and motivations (or the lack thereof), demands on student time that reduce the attention and effort they can devote to a course, and a range of environmental variables (such as problems with a course management system used in an online course or poor acoustics in a lecture hall) can affect learning outcomes in a course that is taught “effectively.” With that in mind, we concluded that any evaluation of teaching effectiveness must take into account not only what is learned by students but also, and importantly, the manner in which a course is designed, content is selected and delivered, and students are engaged in learning activities, among other issues. In addition, we conclude that any assessment of teaching effectiveness must consider the conditions under which a course is taught, for example as its role in the AUCC core or in a particular major or minor, the technology used to support the course, the physical setting in which the course is taught, and the students who typically enroll in the course, etc.

The members of this task force endorse this approach to understanding and evaluating teaching effectiveness.

TEACHING EFFECTIVENESS AND STUDENT LEARNING ARE NOT SYNONYMOUS

The assessment of teaching effectiveness and the assessment of learning are distinct, yet closely connected. In many cases, effective assessments of learning are still being developed. In such cases, assessments of student learning cannot be used to ground assessments of instructors’ teaching effectiveness. As we emphasize throughout this report, rigorous evaluation of teaching effectiveness cannot rely simply on single outcomes or single “data points” (the common practice of relying on student course evaluations alone, for example, is wholly inappropriate, both as a direct method of assessment and as a lone method of evaluating teaching effectiveness); additional measures of teaching effectiveness must be used. As noted below, meaningful evaluations can include methods as wide ranging as peer review of teaching portfolios, peer observation of classroom instruction, peer mentoring, instructor application of research-based techniques, reflection on available evidence of teaching effectiveness (including course survey responses), and the use of those reflections to improve course design and instructional delivery.

Nonetheless, much research reveals a consensus regarding key factors in how people learn. For example, active learning approaches, learning with understanding rather than by rote memorization, and the ability to explain and apply one’s understanding of key concepts or criteria governing their use all contribute to mastering various types of knowledge. In addition, such research shows that learning is complex; it often entails mastering conceptual, procedural, and conditional knowledge, sometimes in complicated relationships with one another. As a result, learning happens in an iterative, rather than a linear, process. When a research-based consensus on how people learn exists, this consensus should inform the development and use of teaching and student assessment practices.

TEACHING EFFECTIVENESS AND TEACHING EXCELLENCE ARE NOT SYNONYMOUS

Teaching effectiveness, as noted above, involves elements that include quality of curriculum design, quality of instructional materials (including assessments and their degree of fit with course objectives), incorporation of new methods in classroom teaching; achievement of student learning outcomes, effectiveness at presenting information, effectiveness at managing class sessions, encouraging student engagement and critical thinking, and responding to students and their work. Teaching excellence, means delivering on the elements that constitute effective teaching *with excellence* (as judged by the multi-method evaluation process this task force promotes). Effective teaching *begins* with the recognition and application of those elements that best stimulate student learning; teaching becomes excellent through effort, through iterative adaptations of and improvements in curricular material, through honest self-reflection, through the solicitation of substantive feedback from colleagues and students, and through a spirit of humility and a willingness to continue to approach teaching creatively. Colorado State University should expect effectiveness from *all* its instructors. Excellent teaching goes beyond effective teaching and requires continual effort to modify course materials, presentation, and activities to achieve as much student learning as possible.

STUDENT MOTIVATION, MATURITY, INTEREST, AND PREPARATION AFFECT EFFORTS TO TEACH EFFECTIVELY

Student preparation, interest, and motivation affect instructors in important ways. It is far easier to teach an upper level or graduate course that is highly relevant to the students' programs of study than to reach a class of first semester students in an entry level AUCC course. For example, students in a capstone course in their major might be more knowledgeable, mature, interested, and motivated than students fulfilling a general education requirement in a discipline not directly in their majors. Such variance affects student learning, as well as the challenges instructors face in motivating students and demonstrating the relevance of course material. Similarly, differences in students' preparation levels can result in substantially greater challenges for instructors in some courses. Such differences can and should be considered seriously in *any evaluation* of teaching effectiveness. In particular, evaluations should consider these questions:

- Does the instructor show evidence of attempting to ascertain students' levels of preparation, motivation, and interest near the beginning of a course?
- Does the instructor show evidence of efforts to adapt content and delivery in ways appropriate to students' preparation, motivation, and interest levels?
- Does the instructor show evidence of seeking resources to assist in such efforts, as needed?

A WIDE RANGE OF METRICS AND ASSESSMENT TOOLS CAN BE USED TO ASSESS TEACHING EFFECTIVENESS

We believe – and research and scholarship as well as our collective experience suggests – that any complex behavior is best understood through the use of multiple methods. Our recommendations are based on assumptions about the value of examining teaching effectiveness through the lens of curriculum development, instructional delivery, response and feedback, student performance, and

efforts to improve courses over time. We recognize that the effort required to implement some methods effectively is greater than the effort required to do so with others. We also recognize that significant problems arise when a single method – such as responses to a student course survey – is used as the basis for evaluation and when methods designed to promote feedback for self-improvement, rather than direct assessment (such as the course survey), are used for summative assessment. Our expectation is that departments will find value in implementing multiple methods to evaluate teaching effectiveness.

CONTEXT MATTERS

We should recognize that faculty members have different degrees of preparation for and experiences in teaching, that the preponderance of new faculty members lack experience in teaching, that faculty roles vary widely and do not necessarily encourage a focus on teaching, and that instructional contexts vary widely even within a given department. Efforts to evaluate teaching effectiveness should take into account differences in:

- a. Discipline
- b. Career trajectory (rank, years in rank, type of appointment)
- c. Faculty role (researcher, artist, instructor, department chair, and so on)
- d. Course type (seminars, labs, large or small lecture, *practica*)
- e. Course role and purpose (foundational, service, gateway, core, major, capstone, undergraduate, graduate)
- f. Students in a course (majors, non-majors, undergraduates, graduates, native and non-native speakers of English, and so on)

UNIVERSITY RESOURCES EXIST TO SUPPORT THE DEVELOPMENT OF PROCESSES FOR EVALUATING TEACHING EVALUATION

We recognize the existence of a rich array of university, college, and department resources supporting efforts to teach effectively. TILT offers instructional guides and tips as well as professional development programs such as the PDI, MTI, and Summer Conference. Other resources are available in spaces as diverse as department websites and CSU Online's teaching blogs. We make recommendations about expanding these resources in the next section.

4. Recommendations

1. GOOD TEACHING SHOULD BE REWARDED. IN PARTICULAR, EVALUATIONS OF TEACHING EFFECTIVENESS SHOULD CONTRIBUTE TO DECISIONS REGARDING COMPENSATION, PROMOTION, RETENTION, AND RECOGNITION.

Teaching is central to the mission of a university and high levels of teaching effectiveness should be encouraged and rewarded. Meaningful assessments of teaching effectiveness should contribute to the calculation of merit-based salary increases, promotion and tenure decisions, retention of faculty, and consideration for teaching awards within and beyond the university.

Review processes for salary, retention of untenured instructors, and tenure/promotion should include the explicitly stated, and administratively supported, expectations that departments will use valid practices for assessing teaching effectiveness and that individual faculty members will demonstrate substantive participation in such practices. To ensure that this occurs:

- Evaluations of teaching effectiveness – using methods and tools as detailed in recommendations 2 through 6 – should contribute to the calculation of salary increases (and decreases).
- Differential performance must be recognized. If evaluations of teaching occupy a narrow range, or if most evaluations fall within the same range because, for example, no meaningful evaluation is applied by department chairs, the differential contribution of those evaluations will be small and other evaluations, such as evaluation of scholarly and research productivity, will exert a larger influence on the overall salary increase. Therefore, department chairs should use meaningful evaluations of teaching effectiveness to identify and reward teaching accomplishments.
- Participation in professional development activities and the application of knowledge gained through those activities should be considered in evaluations of teaching effectiveness.
- Involvement in curricular design activities should be counted toward teaching, not service, in annual performance evaluations.

2. TEACHING EFFECTIVENESS SHOULD BE EVALUATED USING EVIDENCE-BASED APPROACHES.

Colorado State University should make a range of evidence-based approaches to teaching assessment easily available to departments and colleges. These approaches should include, but not be limited to, analysis of data from learning management systems, analysis of student work, observation of teaching, and peer review of curricular materials. Evaluations can draw on direct and indirect measures, qualitative and quantitative data, and the exploration of relationships between measures and student learning behaviors.

3. EVALUATIONS OF TEACHING EFFECTIVENESS SHOULD INVOLVE THE USE OF MULTIPLE SOURCES OF EVIDENCE AND MULTIPLE TOOLS.

No single method should be viewed as sufficient in and of itself. In particular, student course surveys *should not serve* either as a direct or primary means of determining teaching effectiveness. Although these surveys can be valuable in formative assessments, they have not proven to be a valid means of assessing teaching effectiveness. Using them for this purpose can promote ineffective teaching, as demonstrated by recent research (Beleche, Farris, & Marks, 2012; Braga, Paccagnella, & Pellizzari, 2014; Carrell & West, 2010; Langbein, 2008; Stark & Freishtat, 2014; Weinberg, Hashimoto, & Fleisher, 2009).

Potential sources of evidence for evaluating teaching effectiveness might include:

- Curriculum development and course materials, including course proposals, course syllabi, assignments, lesson plans, handouts, Web-based materials, courseware, and assessments (exams, quizzes, writing projects), among others

- Evidence of dissemination of course materials
- Evidence of integration of critical thinking activities into courses
- Evidence of effective technology use in teaching and learning,
- Evidence of innovations in courses (e.g., improvements on past practices or efforts to incorporate new knowledge and processes within the discipline)
- Teaching awards
- Evidence of participation in professional development activities related to teaching and learning

4. EVALUATIONS OF TEACHING EFFECTIVENESS SHOULD INVOLVE A PEER-REVIEW PROCESS (DEFINED LATER IN THIS REPORT) COMPARABLE TO THE PROCESS USED IN ASSESSING RESEARCH, SCHOLARSHIP, AND ARTISTRY.

Peer review is an essential element of evaluation processes that are central to tenure, promotion, compensation, recognition, and retention of faculty members. It is widely used in assessment of scholarly, research, and artistic productivity and in assessments of contributions to service, outreach, and engagement. Although the peer review processes used for these purposes share key similarities across disciplines, elements of the processes can vary significantly. A useful set of guidelines has been developed by the Teaching Academy of the Consortium of West Region Colleges of Veterinary Medicine. They can be found in the appendix to this report.

Although a number of departments currently use peer review processes in their evaluations of teaching effectiveness, many departments do not. We recommend that all departments use peer evaluation for instructors at all levels (temporary, non-tenure track, tenure-track, tenured).

The development of peer review processes (or the improvement of existing processes) should be informed by the following considerations:

- Peer review should draw on multiple forms of information, including but not limited to curricular materials, observations of teaching performance, and examples of student performance. For example, although observation of teaching performance is an important element of peer-review processes, it should not serve as the only source of information for an evaluation.
- Peer review should be rooted in discussions of evidence regarding both the impact of teaching on students and the instructor's use of evidence of those impacts to improve instructional effectiveness and pursue curricular goals.
- Curricular materials offered for review can include, but should not be limited to,
 - course syllabi (including course goals, course outlines, and course policies),
 - student assessments (e.g., exams, writing assignments, projects, and presentations),
 - in-class activities developed and deployed (student presentations, group activities, group discussion), and
 - materials that support student learning outside the classroom (e.g., homework, reflection assignments, group study).

Review of curricular materials is best served by the development and maintenance of an electronic teaching portfolio (critical and part of the 2011 recommendations), which can show development over the course of several years, curricular development, reflective statements on teaching, and more. To be meaningful, materials should be reviewed by more than one faculty colleague and reviews should provide feedback about the materials.

- Classroom observation offers benefits to both the observer and observed instructor. Tools to help the observer focus on important components of the class can facilitate the process. These include pre-observations summaries of the goals and activities for the class, department-designed observation forms, and prompts guiding the development of an observation report. To be most useful, classroom observations must be followed by debriefing and discussion between the observer and instructor. This debriefing and discussion should address observed strategies and techniques, strengths, weaknesses, and recommended modifications. Classroom observation that involves repeated and regular observations by the same colleague best serves the long-term development of effective teaching. Ideally, more than one colleague will serve as an observer and provide feedback.
- Student performance can be assessed through review of student work, observation of engagement during class sessions, and analysis of data provided through various learning analytics tools. The latter can include information from a learning management system, information provided by university reporting systems, and information from the various learning tools made available by the department, college, or more generally at CSU. Examples include data from YouSeeU, ALEKS, MyLabs, and other commercial systems.

Peer review should result in a report suitable for annual review. Peer review should be documented in a way that allows department chairs the opportunity to easily assess teaching effectiveness and excellence. For new instructors, effective peer review can also support the development of a long term mentor/mentee relationship in which a faculty colleague serves as a peer reviewer over the course of several years, and not simply as a one-time visitor to complete a classroom peer observation.

We recommend that CSU provide as many resources as possible to facilitate the peer review process. These resources should be made available through a central portal, perhaps on the TILT website or on the Provost's website. See recommendation 8, below.

5. EVALUATIONS OF TEACHING EFFECTIVENESS SHOULD INCLUDE PEER REVIEW OF REFLECTIVE STATEMENTS FROM THE FACULTY MEMBERS WHO ARE BEING EVALUATED.

A central recommendation in the 2011 task force report was the "production and review of reflective statements on teaching." We recommend that these reflective statements be a required part of any evaluation of teaching effectiveness. This statement would allow the instructor to reflect on their work as an instructor during the review period. It would also allow them to address their strengths and weaknesses as a teacher and explore areas for future improvement. In addition, it would allow them to identify key contributions they've made to teaching efforts within their

departments, college, university, and profession. Ideally, the reflective statement would be linked closely to the contents of a teaching portfolio.

Like the 2011 task force, we also support the design and implementation of professional development initiatives related to this recommendation.

6. EVALUATION OF TEACHING EFFECTIVENESS SHOULD ENTAIL THE USE OF PROCESSES AND STRATEGIES APPROPRIATE TO AND RECOGNIZED BY SCHOLARS WITHIN A GIVEN DISCIPLINE OR PROFESSION.

Research and scholarship on the evaluation of teaching effectiveness – and more generally on teaching and learning – should inform the processes used by departments to evaluate teaching effectiveness. During the development of evaluation processes, department faculty should consult scholarship on teaching and learning, discipline-based educational research, and work in learning science. Because knowledge types, subject matter, and disciplinary values and conventional practices play a key role in determining which teaching approaches are effective in a given course, teaching assessment practices must be adapted to fit discipline-specific needs.

The authors of the 2011 Task Force Report note:

Any attempt to assess teaching effectiveness must take into account institutional and disciplinary culture. Simply put, the agreed upon “best practices” in one discipline might be viewed with suspicion in another, most often because of long-standing agreements within a group about methods but also, and perhaps more importantly, because of genuine differences in content and methods across disciplines. As a result, we believe that teaching effectiveness is best assessed within a disciplinary or departmental context. This implies the central role of peer review within any assessment process and our recommendations are founded on the assumption that assessment must be grounded in agreed-upon standards that are likely to vary widely across the University.

Colorado State University should help faculty find the information pertinent to teaching in their disciplines. TILT should make a rich variety of the following resources easily available at a central repository on its website. CSU faculty with knowledge and expertise in the disciplines should assist by providing materials for the TILT website.

7. DEPARTMENTAL EVALUATION PROCESSES SHOULD REWARD FACULTY MEMBERS FOR ENGAGING IN PROFESSIONAL DEVELOPMENT ACTIVITIES RELATED TO TEACHING AND LEARNING.

Instructors improve most when they take advantage of resources that support improvement in teaching performance. Resources range from informal conversations with colleagues to structured professional development opportunities. Departments are encouraged to provide access to mentoring and encourage participation in mentoring programs and to encourage participation in professional development programs offered by TILT, CSU Online, and the Provost’s Office. Departments are also encouraged to identify potential professional development opportunities offered through professional organizations and at conferences.

8. CSU SHOULD PROMOTE THE DESIGN AND IMPLEMENTATION OF ADDITIONAL PROFESSIONAL DEVELOPMENT RESOURCES AND SCHOLARLY INITIATIVES RELATED TO UNDERSTANDING AND ENHANCING LEARNING AND TEACHING EFFECTIVENESS ACROSS THE INSTITUTION.

A wide range of resources currently exists on websites sponsored by departments, the Office of the Vice President for Research, TILT, and CSU Online, among others. We encourage the University to make additional investments in professional development resources and scholarly initiatives related to teaching effectiveness. These might include:

- Expanding the PDI and TILT Summer Conference to include greater attention to the scholarship of teaching and learning, learning science, and disciplinary based educational research
- Tools that support peer review of teaching, such as observation forms and report templates
- Tools that prompt faculty reflection on teaching effectiveness
- Models of best practices for classroom instruction
- Models of best practices for online instruction
- Examples of teaching portfolios
- Examples of department processes for assessing teaching effectiveness

At the department level, we recommend that departments support and recognize scholarly work related to teaching effectiveness. Departments should include discipline-based research on teaching and learning in its evaluations of faculty and support such work within and across disciplines.

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Appendix: Reviews of Literature and Recommendations Based on Practice

Discussions, bibliographies, and overviews are provided on the following topics:

- Course evaluation
- Teaching excellence
- Student course surveys
- Course development and instructional innovation
- Peer review of teaching
- Mid-semester and/or periodic semester reviews
- Teaching portfolios
- Professional development plans
- Lesson study
- Statements of teaching philosophy
- Guidelines for peer review

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Review: Research on Student Course Surveys

Student course surveys are commonly used, at CSU and nationally, to assess teaching effectiveness. Here and elsewhere, some departments employ course surveys as the primary, or exclusive, means of conducting such assessment. Some departments use only a few questions, such as how students rank what they learned in a course and how they rank an instructor's overall effectiveness. Departments need assessments for high-stakes purposes, such as tenure and promotion decisions, contract renewal decisions for contingent faculty, and salary reviews. Given the importance of such decisions to both the institution and instructors, the attractions of this approach include a seemingly objective quantitative measure, the ready availability of data, and ease of score comparisons.

However, the research literature on course surveys has raised serious questions about whether they are valid measures of teaching effectiveness. Two salient points emerge from this research. First, a number of studies have questioned the validity of using course surveys for this purpose (Beleche, Farris, & Marks, 2012; Braga, Paccagnella, & Pellizzari, 2014; Carrell & West, 2010; Langbein, 2008; Stark & Freishtat, 2014; Weinberg, Hashimoto, & Fleisher, 2009). These studies showed that positive course survey responses correlate positively with students' expected grades in the course but inversely with learning, which was typically measured through students' grades in subsequent courses that depend upon the learning gained in the initial course. For example, Carrell and West, who examined course surveys from 10,534 students at the U.S. Air Force Academy (USAFA), based their study design on USAFA's random assignment of students across sections and its standardized core curriculum, which uses shared syllabi, examinations, and cumulative courses required of all students. They found that students in introductory courses who rated professors more positively received higher grades in those courses but lower grades in subsequent courses. Further, less experienced instructors' students consistently received higher grades in introductory courses and lower grades in subsequent courses, while more experienced instructors' students consistently received lower grades in introductory courses and higher grades in subsequent courses. "Students appear to reward higher grades in the introductory courses but punish professors who increase deep learning [as demonstrated by higher grades in subsequent courses]," the authors indicated, concluding that this fact "draws into question the value and accuracy of this practice [of using course surveys to measure teaching effectiveness]" (p. 412). Similarly, Braga, Paccagnella, & Pellizzari, who found similar patterns in course survey responses, concluded, "good teachers are those who require their students to exert effort; students dislike it, especially the least able ones, and their evaluations reflect the utility [or desired ease] they enjoyed from the course" (p. 85).

Second, some studies demonstrated consistent patterns of bias in course survey responses, patterns that negatively impact instructors of color and female instructors (MacNeil, Driscoll, & Hunt, 2014; Weinberg, Hashimoto, & Fleisher, 2009). For instance, MacNeil, Driscoll, & Hunt used the absence of in-person interaction between instructor and students in online courses to test whether course survey responses differed based on instructors' perceived gender identities. To do so, they assigned two online assistant instructors, one male and one female, two different gender identities, but equivalent qualifications, in their instructor biographies for a course. Thus each instructor taught half of his or her students identified as a male and half identified as a female, with no other differences in teaching

approach. The authors found that both instructors of both genders received consistently higher course survey scores when identified as male, with gender identity the only difference. “Regardless of actual gender or performance, students rated the perceived female instructor significantly more harshly than the perceived male instructor,” they said, concluding, “the continued use of student ratings of teaching as a primary means of assessing the quality of an instructor’s teaching systematically disadvantages women in academia” (p. XX).

Thus using course surveys as a primary measure of teaching effectiveness poses three problems. First, much research suggests that such use is not valid. Second, course surveys produce systematically biased response patterns that negatively impact instructors of color and female instructors. Third, emphasizing course surveys in assessing teaching effectiveness undermines a crucial means of improving this effectiveness, namely fostering ongoing reflection on teaching. Such reflection is a crucial component of teaching development and should be supported by the use of various data types, consistent engagement with peers in discussions of teaching, and other forms of instructor professional development (e.g., workshops, seminars, short courses, and conferences).

However, there are potentially valid uses of course surveys that can contribute importantly to assessing teaching effectiveness and supporting teachers’ development. Reid (2011) argued that course surveys should be more focused on curricular goals. In addition to supporting curricular improvement, course surveys can provide information instructors can use to improve instructional approaches. When course survey responses offer information on issues students can evaluate, such as clarity of presentation, pacing and accessibility of assignments, and perceived relevance of course texts, they often provide instructors with information that can be used to improve curriculum design or instructional delivery. For departments needing to replace the direct use of course surveys with a more valid – but still manageable – measure of teaching effectiveness, this feature of course surveys makes them a potentially valuable tool, when used to prompt instructor reflection and revision of course design or instructional delivery.

Instructors can be asked to summarize their course survey responses, briefly explain changes they’ve made to address issues needing improvement, and summarize any relevant responses from subsequent surveys. This material can be provided in one page per academic year. By asking instructors to produce such surveys each year, departments can track progress (or lack thereof) in instructors’ course survey responses and in their efforts to improve teaching effectiveness. Further, use of this approach will promote sustained, cumulative reflection on teaching. It may scaffold instructors’ and departments’ work toward more robust forms of reflection on teaching, such as teaching portfolios. It is likely to be most effective when supported by professional development endeavors such as teaching effectiveness consultations, workshops, seminars, conferences, and the like.

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Overview: Course Development and Instructional Innovation

Objective: Improve teaching effectiveness through *course development and instructional innovation*

COURSE DEVELOPMENT

- Initial development; then cyclical, dynamic, on-going process of continuous improvement
- Connected to previous and subsequent courses taught in program/major
- Support student learning; engagement and interaction
- Appropriately challenging; discipline specific; invite deep, meaningful learning
- Desired learning and performance outcomes are identified, measured, met;
 - Process: define outcome, identify approaches to measure outcomes, set acceptable standard of expected outcome (e.g. benchmark), determine assessment
 - Suggested best practices: *course mapping*; link core curricular competencies with subsequent course objectives, learning strategies, and final endpoint. *Backwards design. Cluster of courses re-designed.*
- Core curricular competencies identified
- Assess student baseline characteristics

Ried, L. D. (2011). A model for curricular quality assessment and improvement. *American Journal of Pharmaceutical Education*, 75(10), 1-9.

See TILT website: <http://teaching.colostate.edu/tips/index.cfm?category=9&subcategory=0> or <http://teaching.colostate.edu/guides/bestpractices/> for additional tips and articles.

INSTRUCTIONAL INNOVATION

- Definition: Creativity is subjective, making it difficult to measure. Innovation is completely measurable.
- Can be innovative use of existing or new pedagogy/andragogy, product, etc.
- Adds to body of knowledge
- Assessment of innovation important
- Research indicates that innovative teaching performance has four competencies (learning competency, educational competency, social competency and technological competency). Findings indicate that teachers' educational competency, social competency and technological competency were positively related to their innovative teaching performance.
- Supportive relationship with colleagues is important for teachers' innovative teaching performance

Stam, M., Miedema, W., Onstenk, J. Wardekker, W., Ten Dam, G. (2014). Researching how and what teachers learn from innovating their own educational practices: The ins and outs of a high-quality design. *International Journal of Qualitative Studies in Education (QSE)*.

Zhu, C., Wang, D., Cai, Y., Engels, N. (2013). What core competencies are related to teachers' innovative Teaching? *Asia-Pacific Journal of Teacher Education*, v41 n1 p9-27 2013. 19 pp.

Overview: Peer Review of Teaching

Objectives: Improve teaching effectiveness and provide evidence of teaching effectiveness for evaluation processes.

PROCESS FOR SELECTION OF PEER EVALUATORS

(1) Instructor option; (2) Administrator option; (3) Combination of (1) and (2). In most disciplines for which the evaluation is being conducted, the evaluator has expertise in the subject although this requirement may not be consistently required. A few units utilize a specifically designated trained reviewer across all units.

EVALUATION PROCESS DETAILS

- a. Observation of Classroom Teaching: Perceived appropriateness of materials and methods; depth of material covered; correlation of topics with course syllabus and learning outcomes for course; currency of the material presented. Interaction with instructor by reviewing syllabus and course goals prior to evaluation enhances experience.
- b. Evaluation of course materials: Review of materials used in the class can provide a more in-depth assessment of the course and therefore more useful feedback to the instructor.
- c. Peer reviewers should work one-on-one with instructor in contrast to “committee of peers.” Results should be shared only with instructor. Report by peer reviewer should outline suggestions for improving teaching effectiveness.
- d. Training of reviewers and use of a standardize assessment template (many available) will improve quality and consistency of information collected.

FACTORS TO CONSIDER IN IMPLEMENTING PEER REVIEW

- a. Time allotted to peer evaluations can be extensive and therefore could be burdensome to reviewers
- b. Reviewers’ efforts must be seriously recognized
- c. Process has to be non-judgmental
- d. Feedback to Department chairs/deans should not reflect nature of review—merely that exercise was completed.
- e. Instructor resistance to peer evaluations exists for various reasons (Berk, 2005)
- f. Peer evaluations should be regular—a one-time classroom review may be insufficient
- g. Departments/Colleges should consider development of processes/policies for peer evaluation
- h. Literature generally discourages use of student evaluations as part of peer evaluations
- i. “The evidence for peer’s effectiveness in broadened evaluative roles is scant and inconsistent. – article calls for caution regarding roles that peers should assume in evaluating teaching. – questioned whether it is the “right thing to do.” (Burns, 1998)
- j. Creation of peer teaching discussion groups usually viewed as positive aspect of process

RESOURCES REQUIRED

- a. Training of reviewers by TILT as to what should be focus of assessment
- b. Standardized templates recommended by TILT tailored when appropriate to units

Overview: Mid-Semester and/or Periodic Semester Reviews

Objective: Improve teaching effectiveness with the use of feedback during the semester

In order to determine whether students are learning throughout a semester, it is important to utilize various types of assessments. Formative assessments used throughout the semester are common measurements to help increase learning in undergraduate students (Feden, 2012). Assessments range from traditional multiple-choice tests to group work projects to less traditional assessments of essays, poems, etc.

The key to formative assessments is the act of “providing helpful information as *“learning occurs”*” (McMillan & Hearn, 2008, p.42). Mid-semester reviews or periodic semester reviews allow the instructor to receive feedback and take action while the learning is happening to ensure student learning outcomes have a better chance of being achieved. Boyer (1990) understood effective teachers are constantly requesting feedback and by receiving feedback, they were learning along with the students, and thus more effective teachers. An effective teacher’s intrinsic desire to learn makes them more effective to teach students (Carnegie Foundation for the Advancement of Teaching, 1998; Czikszenmihalyi, 1982).

Factors to consider when utilizing mid-semester or periodic semester reviews:

- Small chunks of time can be utilized to gain valuable feedback
- A small number of pointed questions can deliver significant feedback to direct the rest of the semester activities
- Providing comments and corrective actions for the feedback received is a critical step
- Not all feedback will require or even allow a significant change to the syllabi or remaining course

Factors causing resistance for teachers to ask for feedback:

- The feedback loop may imply more work for the faculty member
- Feedback requires faculty to consider their goals and expectations when receiving feedback from students, which can be uncomfortable (Grassian, 2013)
- Feedback not acted on requires an explanation for the remaining activities and pedagogical activities

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Overview: Teaching Portfolios

WHAT IS A TEACHING PORTFOLIO?

A teaching portfolio is a set of elective documents that support claims that an instructor makes about his/her teaching effectiveness. The supporting documents may include:

- Narrative statements of teaching goals and philosophies
- Curricular revisions
- Lessons and Assessments
- Student work samples
- Supervisor or peer evaluation notes/observations
- Excerpts from students
- Communications with others in the institution who are not directly in the classroom
- Photographs
- Video files
- Action Research Projects

PURPOSE

- Opportunities for teachers to be reflective
- Starting point for supervisors and teachers to discuss effective teaching
- More authentic assessment of teaching
- May be used to determine tenure/promotion/recognition for teaching award/etc.

ISSUES/CONCERNS

- Quality of documentation
- Commitment to updating portfolio
- Models for reflection/ quality of teacher reflection

REFERENCES

Seldin, P, Miller, J. E., & Seldin, C. (2010). *The Teaching Portfolio: A Practical Guide to Improved Performance and Promotion/ Tenure Decisions, 4th Edition*. San Francisco: John Wiley Publishers.

<https://books.google.com/books?id=DGjvo1L6dWUC&printsec=frontcover&dq=Teaching+Portfolio&hl=en&sa=X&ei=ssI5Vba3BlaoogT45oEo&ved=0CCwQ6AEwAA#v=onepage&q=Teaching%20Portfolio&f=false>

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Overview: Professional Development Plans

WHAT IS FACULTY PROFESSIONAL DEVELOPMENT PLAN?

Faculty members proposed goals, proposed plan on meeting goals, intended outcomes, resources needed to meet goals, alignment of goals with university mission, and success in meeting goals so far or in the past.

PURPOSE

- Instructor must think and articulate his/her goals for teaching
- New faculty members/instructors can pilot new ideas with their supervisors
- Fosters communication amongst faculty about teaching and approaches
 - Opportunities to clarify expectations
 - Resources can be negotiated so instructors can meet goals
- Written documentation of plan for future reference (including short and long-term goals)

BENEFITS

- Raises awareness amongst colleagues
- Fosters communication amongst colleagues about best practices
- May initiate reform efforts
- Continuous documentation of programs

REFERENCE

BYU Faculty Development Center. <http://facultycenter.byu.edu/faculty-development-plan-guidelines>

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Overview: Lesson Study

WHAT IS LESSON STUDY?

Group of instructors observe instructional strategies as a team in order to collect data; the data are shared during a post-instruction colloquium with the intention of making evidence-based decisions on how to improve instruction

1. Study curriculum and formulate goals
2. Plan (include goals, anticipated student thinking, data collection plan, rationale for instructional plan and model of learning trajectory)
3. Collect data (one person teaches, others collect data)
4. Reflect (Discuss data and original learning plans, consider next steps)
5. Repeat

PURPOSE

Educators to work collaboratively, learn from one another, collect data as a team (increase reliability of their interpretations of the data collected) to improve learning outcomes of students.

ISSUES/CONCERNS

- Is it scientific?
- Lack of clear causal warrants (perhaps instructional practices are restricted locally)

REFERENCE

Lewis, C., Perry, R. & Murata, A. (2006). How should research contribute to instructional improvement? The case of lesson study. *Educational Researcher*, 35(3), 3-14.

Overview: Statements of Teaching Philosophy

Statements of Teaching Philosophy are generally one- to two-page documents that are required as part of job applications for academic positions and are used in dossiers for promotion and tenure. The statements generally articulate teaching approaches, methods, and expertise in ways that convey teaching values, beliefs, and goals. Teaching Philosophy statements address the following questions (Teaching Center – WUSL):

- **Why do you teach?** : Teaching values, beliefs, and goals.
- **What do you teach?** : Content areas of expertise.
- **How do you teach?** : Modes (lecture, active learning, On-line, Self-directed learning, Experiential learning), Discourse style, and Activities.
- **How do you measure your effectiveness?** : Criteria and/or standards to judge the quality of your teaching, evidence of your teaching effectiveness (e.g., student mastery in content, critical thinking, problem solving, and collaborative teamwork skills).

ASSESSMENT AND EVALUATION

- Course Syllabus (assignments, format, content, expectations, texts, assignments, grading and assessment),
- In-classroom environment (diversity of methods, level of interaction, quality of feedback, intercultural sensitivity)
- Assessment of student learning
- Connection to institutional mission and disciplinary trends

METHODS AND CRITERIA USED TO PROVIDE EVIDENCE OF TEACHING EFFECTIVENESS

- Peer review
- Students comments
- Ratings
- Portfolio
- Syllabi
- Teaching activities

REFERENCES

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Writing a teaching philosophy statement. Washington University in St. Louis
<http://teachingcenter.wustl.edu/About/ProgramsforGraduateStudentsandPostdocs/resources/Pages/Writing-a-Teaching-Philosophy-Statement.aspx>

Guidelines for Peer Review

The following guidelines were developed by the Teaching Academy of the Consortium of West Region Colleges of Veterinary Medicine. You can view their website at <http://www.teachingacademy.westregioncvm.org>.

1. PROFESSIONAL REVIEW PACKET SUMMARY - FOR FACULTY WITH SIGNIFICANT TEACHING

If teaching is a relatively minor part of your job, your primary goal may be to just document your specific teaching activities and provide some reasonable measures of teaching effectiveness. **HOWEVER**, if teaching is a substantial portion of your appointment, it may be in your best interest to prepare a much more substantial portfolio that includes reflection and context statements for some of your most critical activities.

An educator's review packet should consist of at least 3 components in the order below in a digital form that is easy to distribute.

- I. Vitae in the format of an "Educator's CV" or "Teaching Vitae"
- II. Teaching Portfolio
- III. Appendices (in support of this teaching portfolio)

A. EDUCATOR'S CV OR TEACHING VITAE:

Vitae formats are sometimes governed by department or college guidelines. However, the vitae you submit for this review should document the depth and breadth of both your teaching activities and their outcomes as completely and effectively as it documents your other professional activities (such as biomedical research, clinical service, service on behalf of department/college/university, etc.). See the #2 attached document for specific suggestions on what to include in your Educator's CV regarding your teaching.

B. TEACHING PORTFOLIO:

The Teaching Portfolio highlights your current effective teaching endeavors, selecting a few specific areas you wish to explain in detail.

"The teaching portfolio is not an exhaustive compilation of all the documents and materials that bear on teaching performance. Instead, it culls from the record (from your CV) selected information on teaching activities and solid evidence of their effectiveness. Just as in a curriculum vitae, all claims in the portfolio should be supported by firm empirical evidence." From Peter Seldin, et al. *The Teaching Portfolio: A practical guide to improved performance and promotion/tenure decisions. 4th ed. Jossey-Bass. 2010.*

See the #3 attached document for a Teaching Portfolio format rooted in 6 basic domains. All teaching faculty are likely to have submissions in some categories. Importantly, please note that only a few are likely to have activities in all 6 domains.

C. APPENDICES:

The appendices "should consist of judiciously chosen evidence that adequately supports the narrative section of the portfolio." *P. Seldin, et al 2010*

See attached #4 document for suggested elements to include in the appendices, supporting your selected highlights in the Teaching Portfolio. Examples may include: student evaluation reports, an analysis or graphical summary of student comments, peer review/classroom observation reports, a representative syllabus, a representative student assessment, record/statistical analyses of student exam scores, example of a student assignment, examples of your contribution to curriculum design or course development, a list of teaching awards with award criteria, or reprint of an educational publication or presentation abstract.

2. RECOMMENDATIONS FOR AN “EDUCATOR’S CV” OR “TEACHING VITAE”

The following pages are intended to serve as prompts as you work on your Educator’s CV. Few if any faculty may be able to list activities in all categories. However, these provide guidelines to help you consider your work more completely and to ensure you present your teaching activities effectively. This document should be a complete capture of all your teaching activities with breadth and depth. Some items may fall into overlapping categories and the creator should place these items in a single category of their choice.

A. TEACHING ACTIVITIES

Teaching is defined as any organized activity that fosters learning and the creation of associated instructional materials.

Examples of teaching activities may include:

- Classroom/Online/Alternative teaching & structured labs (undergraduate, graduate, DVM students, interns & resident didactic teaching), e.g. any didactic teaching
- Teaching students/house officers while conducting medical service (veterinary teaching hospital, diagnostic pathology, etc.), e.g. clinical teaching
- Teaching and mentoring students conducting research (undergraduate, graduate, post-doc, DVM, interns, residents), e.g. **teaching** in a laboratory situation
- Facilitating formal student discussions and clinical reasoning (Foundations, Case Discussions, etc.)
- Continuing education (for other professionals)
- Service Learning that integrates community service into the learning experiences
- Other teaching (e.g. presentations to student clubs, events)
- Coordinate courses (graduate, undergraduate, DVM, intern, resident courses)
- Enhance and update current courses and pedagogical tools

Examples of measures to quantify teaching activities may include:

- Number of contact hours of classroom/online/alternative teaching (total number of hours spent in class)
- Number of contact hours teaching and conducting medical service in the clinics (combined)
Note: Not all hours in the clinics are teaching
- Number of contact hours teaching while conducting research *Not: Not all hours in the lab are teaching*
- Number of hours formally facilitating discussions and clinical reasoning
- Number of hours teaching Continuing Education
- Number of hours involved with service learning
- Number of hours teaching student clubs/groups

- Approximate number of hours involved with coordinating course(s)
 - List number of hours in efforts to enhance and update current course(s)
- List all significant teaching activities you've been involved in. See examples below. Whenever applicable include course name and number.
These may be subdivided into logical sub-categories such as:
- Undergraduate, professional, graduate student teaching, house officer, etc., or
 - Traditional didactic (classroom), online, clinical teaching, classroom + lab, etc.
- Provide a brief description of the activity and your role (instructor, facilitator, course director, etc.)
- Always quantify – i.e. indicate year or years; number or average number of students; number of credits; and number of contact hours (e.g. # lectures).
- If possible, provide outcomes / evidence of effectiveness
- Summary of student evaluations / student survey results - with college or department means for comparison
 - Peer review/observations (e.g. names of reviewers)
 - Outcomes – student successes, etc.

B. EFFORTS TO IMPROVE TEACHING (THROUGH INDIVIDUAL PROFESSIONAL DEVELOPMENT)

Examples of relevant individual professional development may include:

- Seminars & workshops
 - National/international conferences on education
 - Educational sessions at professional association meetings or research conferences
 - Journal clubs focused on teaching & learning
 - Local and/or regional Teaching Academy events
 - Your personal practices
 - Other items related to individual instructional professional development
- List specific activities that reflect a scholarly approach to teaching.
- Provide title, dates, location, and brief description (including your role)
- Provide evidence that these activities informed and/or changed your teaching (i.e. when appropriate, briefly indicate how a listed activity affected your teaching methods and/or altered outcomes. How did it impact what you were doing as an instructor?)

C. DEVELOPMENT OF “ENDURING” INSTRUCTIONAL MATERIALS

Enduring instructional materials are used repeatedly and/or used by others.

Examples of enduring materials might include:

- Producing an educational video
- Developing teaching cases [e.g. Problem Based Learning (PBL)] cases, Diagnostic Challenge cases, etc.)
- Authoring a textbook or textbook chapter
- Authoring test questions for national testing organizations

- Writing computer-based instructional programs
- List activities and/or products
 - Indicate specific dates of this activity to document time & effort, especially if substantial
 - Indicate your specific role (e.g. author, co-author, collaborator, etc.)
 - Indicate if materials were peer-reviewed and briefly explain how they were reviewed
 - What were the goals/objectives?
 - Outcome/use: briefly indicate how the product is being used, by whom, and its impact.

D. MENTORING AND ADVISING

Mentoring is a process in which an experienced professional gives a person with relatively less experience guidance, teaching, and development to achieve broad professional goals. (from AAMC Toolbox)

Examples of activity may include:

- Chair of thesis committees (PhD versus MS)
 - Member of thesis committees (PhD versus MS)
 - Primary advisor for a resident or intern
 - Advisor for a post-doctoral research fellow
 - Mentor for a resident or intern
 - Mentor (or evaluator) for an undergraduate honors thesis
 - Advisor for undergraduate or DVM student research project
 - Professional student advising (e.g. senior paper, capstone project, etc.)
 - Advisor for graduate student rotation project
 - Advisor for visiting summer student
 - Mentoring novice educators in teaching (other faculty, post-docs, grad students, residents)
 - Peer review / formal peer observation of other instructors
 - Formal teaching mentor for a CVM faculty member
 - Letters of recommendation written for students (number and types)
 - Other relevant mentoring or advising activities
- Organize / sub-divide by type of activity (e.g. Major advisor for PhD candidates)
 - List name of each advisee
 - Indicate time frame for mentoring relationship (e.g. Aug, 2013 – present)
 - Document your time & effort, especially if substantial
 - Your specific role(s) (if not obvious, provide a brief description of each activity)
 - Mentoring topic (e.g. title of project or thesis, specialty area, etc.)

NOTE: Many of these mentoring activities can take considerable time. For example, helping someone write and rewrite their thesis is often the most meaningful educational experience of a graduate student's career (especially when it comes to developing a professionally written document). Although these activities can be listed by course numbers, listing such courses often isn't very meaningful whereas a list of specific names and the nature of the interaction shows one to be engaged in a different type of teaching than classroom activities.

- Provide outcomes / evidence of effectiveness (these can be coupled to previous listings)

Examples of outcomes include:

- Presentations and publications (citation; title, date, venue)
- Successfully passed specialty boards (date)
- Successfully passed preliminary exam (date)
- Successful undergraduate honors thesis – passed with distinction
- Resulted in coauthored paper with resident as first author
- PhD awarded (date) and moved to a post-doctoral position with at?
- Intern successfully competed for residency in neurology at
- Resident successfully competed for a faculty or specialty practice position at
- Currently tenured Associate Professor at University of
- Advisor & advisee awards
- Outcomes from letters of recommendations (e.g. scholarships attained)
- Mentored faculty promoted or recognized for teaching effectiveness
- Other relevant outcomes or evidence of effective advising and mentoring

E. LEARNER ASSESSMENT / OUTCOME ASSESSMENT

Learner assessment is defined as all activities associated with measuring knowledge, skills, attitudes, and behaviors of learners so that judgments can be made about their performance. (AAMC Toolbox)

Assessment of student learning is almost certainly an integral part of your teaching and an important element you will spotlight under Domain #2 in your Teaching Portfolio. For the purposes of your Educator's CV, however, this section refers to activities that fall *outside* the learner assessment you do routinely in your assigned courses.

Examples of instructional assessment may include:

- DVM: real time assessment, mini-CEX, OSCE, DOPS, capstone or clinical proficiency exam, etc.
- Graduate students: written and oral preliminary exams, etc.
- Undergraduate: capstone exams or projects, honor theses assessment
- Other relevant instructional assessment or outcome assessment examples

-
- Provide a brief description of each activity & your specific role(s)
 - Example Roles: instrument developer versus contributor/ grader/evaluator)
 - Document your time & effort, especially if substantial
 - Provide outcomes / evidence of effectiveness - Briefly, explain how has this assessment information been used to help learners, to improve the curriculum, to revise programs, to address accreditation standards, and/or to improve your own teaching

F. EDUCATIONAL RESEARCH / SCHOLARSHIP

Educational Research is defined as "a field of inquiry aimed at advancing knowledge of education and learning processes and development of tools and methods necessary to support this endeavor." [American Educational Research Association]

Educational Scholarship produces resources and materials specifically designed “to fulfill an educational purpose” and that have been peer-reviewed and disseminated for use by others in the field. [MedEdPortal, AAMC]

If you have products or activities that qualify as “traditional research”, you may want to list these under separate educational sub-headings or otherwise mark them in some unique way.

Examples of educational research and scholarship may include:

- Peer reviewed publications focused on teaching & learning
 - Presentations on educational topics – local or external (e.g. other institutions, national meetings, etc.)
 - Grant proposals funded
 - Grant proposals – submitted, but not funded
 - Scholarly collaborations in teaching & learning
-
- For grant proposals: indicate title, funding source, funding period, dates, budgetary dollar amount, name of Principal Investigator(s), and your specific role(s), including percent commitment. Clearly indicate extramural versus intramural grants.
 - For presentations: indicate title, authors, venue, date, audience, your role, and invited versus peer-reviewed or non-peer reviewed abstract, poster versus podium presentation, and additional relevant information.
 - For publications: provide citation. Separate peer-reviewed versus non-peer-reviewed. Clearly indicate published/in press/in preparation or submitted.
 - List and briefly summarize any work being carried on collaboratively with other faculty, whether at your home institution or with other institutions. Indicate the research goals and your role(s).

G. TEACHING HONORS AND AWARDS

- List any significant teaching awards.
- Indicate year and criteria for award (e.g. student selected versus a nomination and/or criterion-based selection process).
- Clearly indicate whether awards are either departmental, college, university, regional, or national.

H. CURRICULUM AND PROGRAM DEVELOPMENT

Curriculum is defined as a longitudinal set of systemically designed, sequenced, and evaluated educational activities. (AAMC Toolbox) A program is something that is placed within or ideally outside the confines of an existing course or teaching assignment.

Examples of curriculum and program development may include:

- Building new programs and courses,
- Revising existing programs and courses,
- Curricular revision task force,
- Redesign of a graduate program,
- Other relevant examples.

- List and briefly describe each significant activity
- List the goals / rationale behind the significant activity
- Briefly explain your specific role(s) – e.g. leader/initiator, collaborator, reviewer, etc.
- Document your time and effort for specific examples, especially if substantial
- Provide outcomes / evidence of effectiveness e.g. Changes or improvements as a result of this work

I. EDUCATIONAL LEADERSHIP AND ADMINISTRATION

Educational leaders achieve transformative results by leading others to advance educational programs, initiatives, and/or groups either at the local, regional, national or international level. (AAMC Toolbox)

Not all educators will have duties or roles in this domain. The Educational Leadership and Administration Domain will be used by educators/faculty that have responsibilities in leading or administering the educational process at the local, regional, national, or international level. The following list of roles is not exhaustive but will provide the educator with examples that would fit into this Domain.

Examples of educational leadership and administration may include:

- Service as Educational Leader (Administrative appointment)
- Educational program/course/section director or coordinator
- Chair or leader of educational committee or task force
- Organizing and/or making presentation for professional development of teaching/education
- Serve as a reviewer for educational journals
- Hire and/or manage teaching assistants
- Leadership activities/roles associated with organized educational groups (example: Western Veterinary Teaching Consortium/Academy, local Teaching Academy, etc.)

Examples of leadership roles:

- Steering Committee member
- Workshop/seminar organizer
- Host for speaker
- Book club or interest group organizer
- Designated chair or co-chair for Teaching Academy initiative or working group
- Citizenship activities in support of teaching program & students. Examples include:
 - Committee membership – Admissions, Curriculum, Scholarship, Student Progress, etc.
 - Student – Faculty council
- Other relevant examples of leadership and administration

- First indicate any official administrative appointment(s) – with dates of appointment and brief description of responsibilities (e.g. Associate Dean, Director, Department Chair, etc.)
- Organize/sub-divide leadership activities by level of program/course or committee – e.g. department, college, university, regional or national
- List each activity and provided a brief description
- Clearly indicate your specific role (e.g. chair, committee member, etc.) and duration of role (e.g. dates)

- Document time and effort, especially if substantial
- List and/or briefly explain primary accomplishments for each activity

3. TEACHING PORTFOLIO TEMPLATE:

Based on the educator's portfolio template from the Academic Pediatric Association for the Educational Scholars Program and the AAMC Toolbox for Medical Educators

"The teaching portfolio is not an exhaustive compilation of all the documents and materials that bear on teaching performance. Instead, it culls from the record (from your CV) selected information on teaching activities and solid evidence of their effectiveness. Just as in a curriculum vitae, all claims in the portfolio should be supported by firm empirical evidence." *From Peter Seldin, et al. The Teaching Portfolio: A practical guide to improved performance and promotion/tenure decisions. 4th edition; Jossey-Bass 2010.*

I. TITLE PAGE

NAME:

ACADEMIC TITLE(S):

DEFINE YOUR FACULTY APPOINTMENT AS DETERMINED BY YOUR DEPARTMENT and/or COLLEGE:

Approximate as necessary

- % Research
- % Teaching
- % Clinical Teaching (if defined separately from teaching as a whole)
- % Clinical/Diagnostic Service or Extension/Outreach (if applicable)
- % University, college and department service (CITIZENSHIP)
- % Administration

PRIMARY EDUCATIONAL ROLE(S):

Briefly summarize your roles as an educator:

II. EDUCATIONAL PHILOSOPHY STATEMENT (Teaching Philosophy)

"In 1-2 pages, describe your approach to education and the principles that underlie your teaching. For example, you might discuss your personal theory of learning, characteristics of a good teacher and a good learner, your view of the roles and responsibilities of students and teachers, the aims of instruction and how these might change under different conditions, or environmental factors that promote or impede learning. This statement should spring from careful reflection on your educational strengths and practice. Illustrate your principles with examples from your own teaching, to show how they are related and have evolved over time." *Academic Pediatric Association for the Educational Scholars Program*

III. YOUR FIVE-YEAR GOALS AS AN EDUCATOR

In one page or less, list up to FIVE carefully-considered goals for your development as an educator in the next five years, and be sure that your educational activities, as they evolve over time, address these goals. Your professional development goals should be accompanied by learning strategies to help you achieve them. This list might include both aspirations for achievement and plans for learning and growth, ideally linked together. Keep the list both brief and focused. Consider discussing your goals with your mentor(s).

Recommend one page or less.

- 1.
- 2.
- 3.
- 4.
- 5.

(Revise or add goals with each portfolio update.)

IV. IDENTIFY THE TEACHING DOMAINS OR CATEGORIES WHERE YOU ARE ACTIVE:

Disclaimer: Educators' activities and responsibilities will vary widely, depending on their individual appointments and their department or college. FEW if any individual portfolios will provide evidence for ALL categories or for all indicators listed under each domain.

The SIX domains/categories based on the [AAMC Toolbox for Evaluating Educators](#)

- Teaching
- Mentoring and Advising
- Learner Assessment
- Educational Research
- Curriculum and Program Development
- Educational Leadership and Administration

For most junior faculty, you will likely be reporting only or primarily in the first 2 or 3 domains/categories.

DOMAIN #1: TEACHING

Teaching is defined as any organized activity that fosters learning and the creation of associated instructional materials.

Domain 1a: Teaching Activities

From the complete list of teaching activities in your Educator's CV, choose 1-2 focal areas of teaching for more detailed comment and expansion here. These represent your best efforts, i.e. work you would like to highlight.

Recommend two-three pages

Reiterate detailed information on each highlighted activity and then briefly describe:

- Your desired learning outcomes (objectives),

- The instructional methods you used to address these outcomes/objectives,
- How you chose those instructional methods,
- Content & materials are appropriate, up-to-date, consistent & integrated.
- The outcomes (e.g. evidence of effectiveness)
- Any changes you have made in your instructional methods based on outcomes, course reviews, and other feedback,
- Any teaching experiments / innovations (e.g. a new active-learning strategy, introduction of new rounds format, trained residents to use the One Minute Preceptor strategy, “flipped” one or more classes, etc.)
- Any additional reflections (e.g. how did the information obtained through this teaching activity and its evaluation change your overall educational practices?)

For the reviewer:

1. The instructor provides learners with written learning outcomes (learning objectives)
2. Learning outcomes are clear, measureable, achievable and realistic
3. The instructor develops sustainable educational materials and/or methods
4. The instructor utilizes novel or innovative educational methods
5. Teaching activities have been developed using a scholarly approach
6. The instructor has and uses a thoughtful assessment strategy that provides valid information relative to the learning outcomes and instructional methods
7. The instructor utilizes constructive feedback from students and peers to improve instructional methods
8. The instructor provides evidence that students achieved desired learning outcomes
9. The instructor demonstrates continual improvement in instructional delivery and methods

Domain 1b: Development of Enduring Educational Materials (if applicable)

Enduring materials are those used repeatedly and/or used by others.

Choose 1-2 examples of enduring educational materials that you have developed from the complete list in your CV and describe in more detail. These represent your best efforts, i.e. work you would like to highlight.

Recommend one to two pages (if applicable to instructor), plus appendices for examples and supporting evidence

Reiterate detail information on each activity you’ve chosen to highlight and briefly describe:

- Your desired learning outcomes (objectives),
- The product / materials, including the instructional methods used to address these outcomes/objectives,
- How you chose this instructional approach,

- How the material is being utilized, specifically where and by whom, duration and number of learners involved
- The outcomes / evidence of effectiveness,
- Any products that were peer-reviewed, presented or published, or adopted for use in other programs,
- Any additional reflections (e.g. how did the information obtained through this teaching activity and its evaluation change your overall educational practices?)

For the reviewer: see previous section

Domain 1c: Educational Professional Development: (efforts to improve your teaching)

A scholarly approach to education is reflected by how one undertakes one's own development as an educator and evidence of one's consistent use of evidence-based principles for planning, designing, and assessing educational activities. Modified from Academic Pediatric Association for the Educational Scholars Program

From the complete list of professional development activities in your Educator's CV, choose 1-2 programs or activities for more detailed comment. These are activities that have had "high impact" on you as a teacher, educational scholar, or educational leader.

Recommend 1 or 2 pages.

- Reiterate detailed information on each program/activity you've chosen to highlight, and
- Briefly describe its impact on your practices.
 - How has it changed your teaching or your views on your role as an educator, educational scholar, and/or educational leader?
 - Describe new and/or innovative teaching practices that have arisen from your educational professional development activities.

For the reviewer: see domain 1a

1. The educator actively engages in practices that promote continual improvement.
2. The educator reflects on these activities and thoughtfully considers new information/perspectives regarding teaching and learning.
3. The educator transforms his/her own professional development activities into action – i.e. into experiments and/or change in his/her teaching.
4. If applicable: the educator transforms his/her own professional development activities into action in other domains – e.g. assessment, curriculum/program development, educational leadership, etc.

DOMAIN #2: MENTORING and ADVISING

Mentoring is a process in which an experienced professional gives a person with relatively less experience guidance, teaching, and development to achieve broad professional goals. (AAMC Toolbox).

Recommend one to two pages

Describe your mentoring philosophy and the process by which you typically mentor students, residents and/or junior professionals. Only include this if there are significant differences from your earlier teaching philosophy statement.

- Briefly explain ...
 - How you've chosen your mentoring/advising methods,
 - How you assess your methods and results,
 - Any changes you've made based on outcomes, reviews, and other feedback.
- Provide specific examples - including outcomes / evidence of effectiveness and (if applicable) instances wherein you've modified your approach as a result of feedback and/or your professional development activities.
- How did the information or experience obtained through your mentoring and advising activities and their evaluation change your educational practice or philosophies?
- Describe any products of educational scholarship that were peer reviewed, presented or published, or adopted for use in other programs as a result of your mentoring and advising activities (especially if these are not expanded elsewhere in the portfolio).

For the reviewer:

1. The instructor provides mentees and advisees with clear learning and professional outcomes (learning objectives and goals for both the short- and long-term)
2. Learning and professional outcomes are clear, measureable, achievable and realistic
3. The instructor develops sustainable educational materials and/or methods
4. The instructor utilizes novel or innovative educational methods
5. Mentoring and advising activities have been developed using a scholarly approach
6. The instructor has and uses a thoughtful assessment strategy that provides valid information relative to the learning outcomes and instructional methods
7. The instructor utilizes constructive feedback from students and peers to improve advising and mentoring methods/practice
8. The instructor provides evidence that students achieved desired learning outcomes
9. The instructor demonstrates continual improvement in mentoring and advising methods

DOMAIN #3: LEARNER ASSESSMENT / OUTCOME ASSESSMENT

Learner Assessment is defined as all activities associated with measuring knowledge, skills, attitudes, and behaviors of learners so that judgments can be made about their (the students') performance.

Provide no more than five representative examples of assessments. These may be examples from your assigned teaching responsibilities OR assessment activities that fall outside the learner assessment you do routinely in specific courses (see Educator's CV recommendations document for examples of the latter).

Recommend 1-3 pages, plus supporting materials in appendices.

- Brief description of each selected assessment activity & your specific role(s)
 - Role: e.g. instrument development vs. contributor (e.g. grader/evaluator)

- Document time and effort, especially if substantial

Provide evidence that your instruction utilized:

- Assessments match learning outcomes and the purpose of assessment is clear to learner, etc.
- Assessments measure expected learning outcomes (*example: pre-post studies, student outcome data with biserial correlation scores, etc.*)
- A suitable range and variety of assessments, scoring is clear, etc.
- suitable rigor for these activities (*e.g. exam statistics such as mean, median, SD, number of C,D & F grades, etc.*)
- Assessment that reflect feedback of learners, peers, experts, and that learner benchmarks were achieved, etc.
- Assessment that indicate reflective critique (*critical and self-analyses, evidence of ongoing improvement of assessment*)

Briefly describe:

- any changes you have made in your instructional or assessment methods based on outcomes, course reviews, and other feedback
- any products that were peer reviewed, presented or published, or adopted for use in other programs

For the reviewer:

1. The instructor provides learners with written learning outcomes (learning objectives) coupled to the assessment strategy
2. Learning outcomes are clear, measureable through assessment, achievable and realistic
3. The instructor develops sustainable educational assessment materials and/or methods
4. The instructor utilizes novel or innovative educational assessment methods
5. Teaching assessment activities have been developed using a scholarly approach
6. The instructor has used a thoughtful assessment strategy that provides valid information relative to the learning outcomes and instructional methods
7. The instructor utilizes constructive feedback from students and peers to improve instructional assessment methods
8. The instructor provides evidence that students achieved desired learning outcomes through assessment
9. The instructor demonstrates continual improvement in instructional assessment delivery and methods

DOMAIN #4: EDUCATIONAL RESEARCH / SCHOLARSHIP

Educational Research is defined as “a field of inquiry aimed at advancing knowledge of education and learning processes and development of tools and methods necessary to support this endeavor.” [American Educational Research Association]

Educational Scholarship produces resources and materials specifically designed “to fulfill an educational purpose” and that have been peer-reviewed and disseminated for use by others in the field. [MedEdPortal, AAMC]

If applicable: Choose 1-2 examples of educational research activity or accomplishment to highlight from your Educator’s CV.

Recommend: one to two pages

Your summary of educational research activities should:

- Summarize your most important research and overall themes or goals,
- Put your research in context with the larger fields you work in,
- Utilize the more-detailed information on your Educator's CV (publications, grants, etc.) or Appendix as examples,
- Address the unique nature and impact of your research to date,
- Briefly explain future research directions, including targeted funding sources, plans/ideas for proposals and/or projects, and collaborations,
- Explain how your research activities have affected your own educational approaches, educational philosophy, or other practices.
- Explain how your research activities have been used by others to improve instruction.
- Identify any non-traditional, peer-reviewed resources that have resulted from your educational research
- Other: _____

For the reviewer:

1. Research progress, goals and outcomes are clear, measurable through assessment, achievable and realistic
2. The instructor develops sustainable educational research materials and/or methods
3. The instructor utilizes novel or innovative educational research methods
4. Teaching research activities have been developed using a scholarly approach
5. The instructor has used a thoughtful research strategy that provides valid information relative to the learning outcomes and instructional methods
6. The instructor utilizes constructive feedback from students and peers to improve instructional research methods and/or outcomes
7. The instructor demonstrates continual improvement in instructional research

DOMAIN #5: CURRICULUM and PROGRAM DEVELOPMENT

Curriculum is defined as a longitudinal set of systemically designed, sequenced, and evaluated educational activities. (AAMC Toolbox) A program is something that is placed within or ideally outside the confines of an existing course or teaching assignment. See examples in "Recommendations for CV" document.

From the complete list on your Educator's CV, choose 1-2 development activities or accomplishments that represent examples of some of your best work in this domain.

Recommend: one to three pages, depending on appointment or instructor's involvement.

Use the following to highlight your development work:

Activity:

- Briefly describe the curricular activity or program, including number & type of learners (e.g. undergraduate students, professional students, etc.).
- Indicate your role (e.g. leader or contributor). Document time & effort, especially if substantial.
- Is the curriculum or program implemented? Where and when?

Goals and Objectives:

- What were the goals and/or desired learning outcomes for the activity or program? How were the goals and learning outcomes determined?

Needs Assessment:

- What programmatic and/or learner needs was the curriculum or program intended to address, and how were these needs identified?

Teaching/Learning Methods:

- What instructional methods were applied and how were these methods chosen?

Outcomes Assessment:

- How are curricular/program goals and student learning outcomes assessed?
- How is learner assessment data and other feedback used formatively to modified the curriculum or program? Provide examples of how assessment results have been applied.

Other:

- List and briefly describe any products that were peer reviewed, presented or published, or adopted for use in other programs as a result of these activities.
- Share any reflections on your curricular development activities that are not covered above. For example, how did the information or experience obtained through your curricular or program development activities change your educational practice or your teaching philosophy?

For the reviewer:

1. The instructor provides learners with written program outcomes (objectives)
2. Program learning outcomes are clear, measureable through assessment, achievable and realistic
3. The instructor develops sustainable programmatic assessment materials and/or methods
4. The instructor utilizes novel or innovative program assessment methods
5. Program development activities use a scholarly approach
6. The instructor has used a thoughtful development strategy that provides valid information relative to the learning outcomes and instructional methods
7. The instructor utilizes constructive feedback from students and peers to improve instructional curriculum and programs
8. The instructor provides evidence that students achieved desired programmatic learning outcomes through assessment
9. The instructor demonstrates continual improvement in program and curriculum delivery

DOMAIN #5: EDUCATIONAL LEADERSHIP AND ADMINISTRATION

Educational leaders achieve transformative results by leading others to advance educational programs, initiatives, and/or groups either at the local, regional, national or international level. (AAMC Toolbox)

Not all educators will document duties or roles in this domain. The Educational Leadership and Administration Domain will be used by educators/faculty that have responsibilities in leading or administering the educational process at the local, regional, national, or international level. See examples in "Recommendations for CV" document.

From the complete list on your Educator's CV, highlight 1-3 activities or accomplishments that represent examples of some of your best work in this domain.

Recommend one to four pages

2. List and provided a brief description of each activity you've elected to highlight
 - i. Indicate level of program/course or committee – e.g. department, college, university, regional or national
 - ii. Indicate your role (e.g. chair, committee member, etc.) & duration of role (e.g. dates)
 - iii. Document time & effort, especially if substantial
- List and/or briefly explain primary accomplishments resulting from this activity
 - i. What were the goals of this work and how were those goals determined?
 - ii. Were the goals achieved and if so by what methods?
 - iii. How were your methods determined?
 - iv. If applicable, provide evidence of a scholarly approach to this role/task.
3. Provide outcomes / evidence of effectiveness. For example:
 - What changed or improved as a result of this work?
 - What evidence can you provide that your work resulted in valued change? (e.g. a list of stakeholders for whom letters are appended (institutional / departmental leaders, learners, peers, community partners, etc. OR appended results of evaluation of your ROLE by outside agencies or external reviewers)
4. List and briefly describe any products that were peer reviewed, presented or published, or adopted for use in other programs as a result of these activities.
5. Share any reflections on your educational leadership and administrative activities that are not covered above. For example, how did the information or experience obtained through your curricular or program development activities change your educational practice, your teaching philosophy, or your leadership practices/philosophies?
6. List of stakeholders from whom letters are appended (e.g., institutional/departmental leaders, learners, peers, community partners)

For the reviewer:

1. The leader provides others with clear outcomes (objectives) coupled to an assessment strategy
2. Leadership outcomes are clear, measureable through assessment, achievable and realistic
3. The leader cultivates novel or innovative educational assessment methods
4. Teaching leadership activities have been developed using a scholarly approach

5. The leader has used a thoughtful assessment strategy that provides valid information relative to the objectives
6. The leader utilizes constructive feedback from others to improve leadership methods
7. The leader provides evidence that staff and students achieved desired outcomes through assessment
8. The leader demonstrates continual improvement in administrative methods

4. APPENDICES SUPPORTING THE TEACHING PORTFOLIO:

The appendices "should consist of judiciously chosen evidence that adequately supports the narrative section of the Teaching Portfolio." P. Seldin, et al 2010

Educators' activities and responsibilities will vary widely, depending on their individual appointments and their department or college. FEW if any individual portfolios will provide evidence for ALL categories or for all indicators listed under each category. Please limit these items to those with relevance in your current teaching, supporting this current snapshot of your activities.

Some suggested or potential appendices to support the portfolio domains/categories:

DOMAIN 1: TEACHING

- Student evaluations of teaching – quantitative summary / analyses
See companion document Student Evaluation of Teaching- Recommendations for presenting student evaluation data
- Narrative student comments – presented as summary or graphical analyses
See companion document on recommended practices in presenting student evaluation data
- Results and/or reports from peer review/classroom observation
See companion document on recommended practices in peer review / observation
- A representative course syllabus
- Representative student learning outcomes (learning objectives)
- Example of a student assignment, with scoring criteria/rubric
- Example of an enduring educational materials product, with assessment data or letters
- Example of or outcomes from a highlighted educational experiment/innovation, with assessment data or letters

DOMAIN 2: MENTORING AND ADVISING

- Evidence of effectiveness in mentoring/advising activity
 - Letters from former advises/mentees
 - Advising awards
 - Letters/recognition from supervisors or external reviewers

DOMAIN 3: ASSESSMENT OF LEARNERS

- A representative learner assessment (e.g. exam or portion thereof), ideally presented in conjunction with desired student learning outcomes and accompanied by scoring criteria
- Example of learning feedback (e.g. samples of graded student work)
- A summary or representative example of learner performance data (*e.g. course grades; exam statistics such as mean, median, and standard deviation; number of C,D & F grades, etc.*)

DOMAIN 4: EDUCATIONAL SCHOLARSHIP / RESEARCH

- Example products of educational research activities
 - Reprint of a representative peer reviewed publication,
 - Abstract and title page of a funded educational grant,
 - Peer reviewed presentations abstracts

DOMAINS 5 AND 6: CURRICULUM / PROGRAM DEVELOPMENT AND EDUCATIONAL LEADERSHIP/ADMINISTRATION

- An example of your contribution to curriculum or program development, including outcomes
- An example of an educational leadership activity, including outcomes
- Letters from stakeholders, peers, supervisors, or external reviewers regarding a curriculum/program development or educational leadership activity