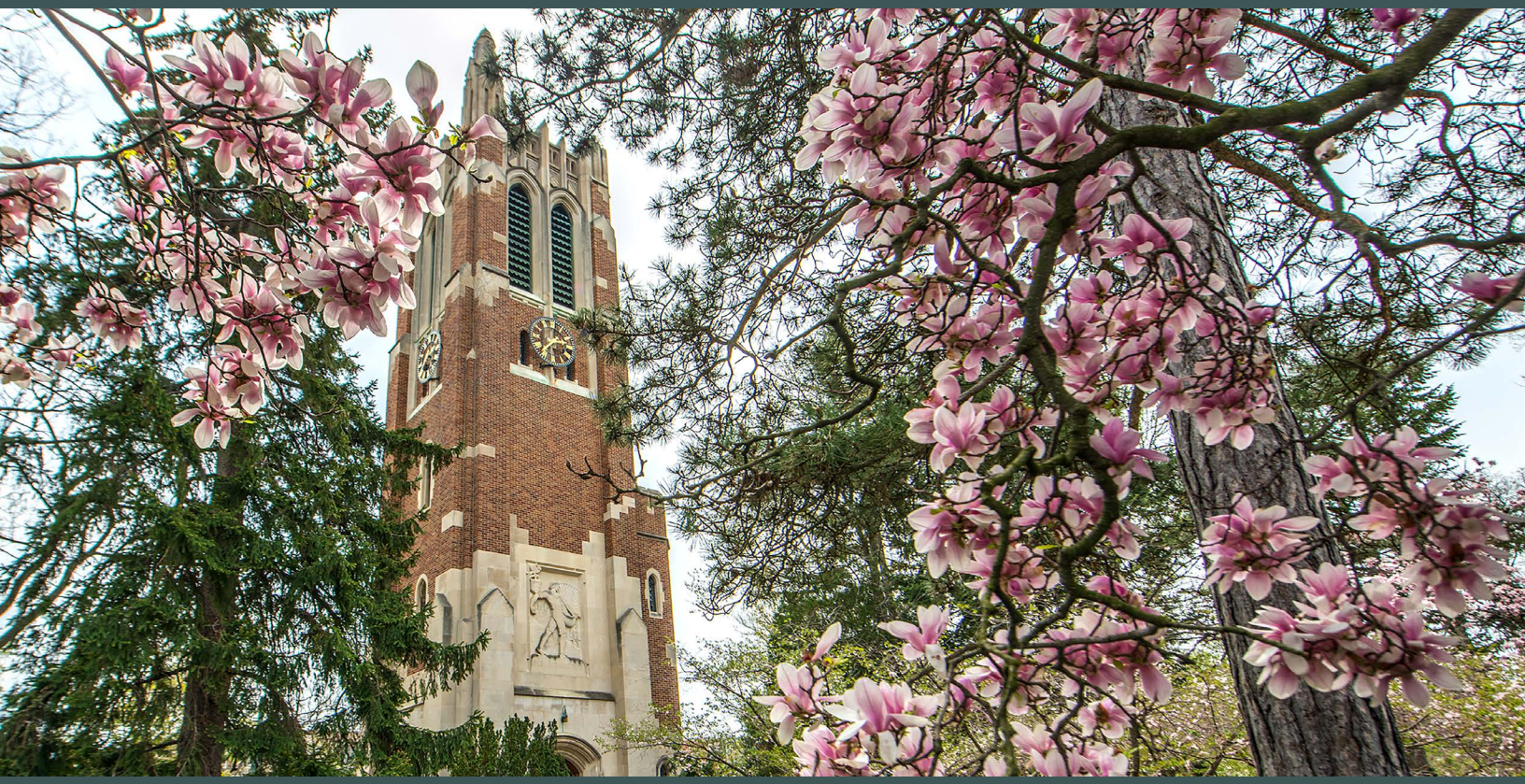
TOOLKIT

Recognize and Understand Effective Teaching to Enhance Student Learning



The purpose of this toolkit is to help unit leaders and educators recognize, understand and support the role of teaching as a catalyst for student learning. The toolkit is a response to requests from unit leaders for resources to help understand effective teaching. Many leaders feel comfortable with their ability to understand and evaluate research, but teaching often presents a challenge. Faculty members have made similar requests for this type of support. Austin (1990), along with Feldman and Paulsen (1999)[1], discuss the importance of a supportive teaching culture, emphasizing its role in both faculty motivation and, ultimately, excellence in teaching.

We recognize that a myriad of impediments and affordances collectively contribute to culture. That is, a culture that strongly emphasizes teaching and learning will require more than a single tool. As such, chairs and directors are encouraged to constructively consider issues and initiatives affecting student success (e.g., interviewing and hiring protocols, assignment distribution). This toolkit provides guidance to better evaluate teaching and learning in support of student success at MSU. These resources are useful for administrators and entire departments, so the kit is offered in that spirit.

1 Austin, A. E. (1990). Faculty cultures, faculty values. New directions for institutional research, 1990(68), 61-74.
Feldman, K. A., & Paulsen, M. B. (1999). Faculty motivation: The role of a supportive teaching culture. New directions for teaching and learning, 1999(78), 69-78.

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Introduction

Knowledge creation (discovery), meaningful dissemination (teaching and learning) of this information and its thoughtful application (engagement) are the principal products of the the academy and the reason for its existence[1]. Each component of this work requires reflective inquiry to ensure efficiency and progress. To do a better job of both characterizing and actuating learning by means of teaching, we must enhance the system supporting it and reinforce a culture that recognizes it as the fundamental component of the mission of the university that it is.

We must change how we conduct teaching evaluations at annual review/merit salary review and moments of promotion. Additionally, we need to advance the notion of an evidence-based culture, one that objectively examines, analyzes and evaluates curricular and pedagogical decisions to better support student learning.[2] We must deliberately and purposefully think about how our lessons, assessments and actions can be crafted to create inclusive experiences for students of all backgrounds and experiences. Unit conversations about how to recognize and understand effective teaching are important outcomes for students, educators and the university.

The Role of Effective Teaching to Support Student Learning

A key cross-institutional priority at MSU is the Student Success Initiative. (More information is available at https://hub.msu.edu/student-success and also http://nssc.msu.edu/). It is imperative to focus on student learning as a way to promote effective teaching because effective teaching is inextricably linked to learning, persistence and success. Condon et al. (2016)[3] propose that, "The premise of higher education is that teaching by highly educated individuals engaged in ongoing learning of their own produces a valuable opportunity for students to learn essential knowledge and skills that will prepare them for life and career."

Evidence suggests that we should:

- Focus on student learning outcomes to improve student success (e.g., sense of belonging, decreased time to graduation, increased student persistence).[4]
- Encourage and guide instructors to be reflective and innovative in their teaching practices.
- Create spaces where conversations about teaching and learning are encouraged.
- Acknowledge that both success and failure are inherent in classroom practice, and encourage dialogue that considers both[5].
- Strive to create classrooms where learners from all backgrounds feel safe, supported and encouraged, where content can be viewed from multiple and different perspectives and experiences.
- Enhance the overall content and delivery of academic programs across departments, colleges and the university.
- Use evidence-based instructional practices aligned with department, college and university metrics to make meaningful decisions about resource allocation that enhance and promote quality teaching.

1 Curry (2006). https://drive.google.com/open?id=11xhBPwpGDYRctDJcMAxflUltp-a5etya
2 Cashin, W. E. (1996). Developing an Effective Faculty Evaluation System. IDEA Paper No. 33. https://www.ideaedu.org/Portals/0/Uploads/Documents/IDEA%20Papers/IDEA%20Papers/Idea_Paper_33.pdf.
3 Condon, W., Iverson, E. R., Manduca, C. A., Rutz, C., & Willett, G. (2016). Faculty development and student learning: Assessing the connections. Indiana University Press.
4 National Academies of Sciences, Engineering, and Medicine. (2017). Supporting Students' College Success: The Role of Assessment of Intrapersonal and Interpersonal Competencies. National Academies Press
5 Palmer, P. J. (1993). Good talk about good teaching: Improving teaching through conversation and community. Change: The Magazine of Higher Learning, 25(6), 8-13.

Assumptions and Definitions

Key definitions

Student success -- students "persist, benefit in desired ways from their college experiences, are satisfied with college, and graduate."[6]

Effective teaching – teaching that promotes student learning and other desired outcomes (i.e., being prepared for class, demonstrating current comprehensive subject knowledge, motivating students, being fair and reasonable, utilizing inclusive practices, being interested in the subject matter and includes one's self-reflection on teaching (Seldin 2006, McKinney 1998)[7].

All teaching faculty members will have clear intended learning outcomes for each of their courses, use appropriate assessment strategies to determine if students are learning, and will record and track assessments to make needed adjustments.

Scholarly teaching – teaching that includes outcomes assessment, discussion of teaching issues with colleagues, employment of new teaching techniques in the classroom, reflection on one's teaching effectiveness, and reading and application of literature on teaching and learning to the discipline (Boyer 1990, McKinney 2010)[8].

Scholarship of teaching and learning – teaching that involves engagement with the existing knowledge on teaching and learning, self-reflection on teaching and learning in one's discipline, and public dissemination of ideas about teaching and learning. The activity requires a high level of teaching and learning expertise, is innovative, and is peer-reviewed (Diamond & Adam 2004, McKinney 2010)[9].

At MSU, we expect that all faculty members with teaching appointments will be, at minimum, *effective teachers.*

Not all faculty members are expected to engage in the scholarship of teaching and learning. However, for those who do, this scholarship should be viewed, valued, and evaluated as equivalent to scholarship in discipline-based research or scholarship in outreach/extension. In essence, **scholarship is scholarship.**

Components for Recognzing and Understanding Effective Teaching

It is important and strongly recommended to use multiple measures when assessing teaching effectiveness. The following components should be considered:

- Peer observation.
- Evidence gathered from students.
- Identifying the appropriate tool(s) that help with recognition and understanding to evaluate both the instructor efficacy and student learning gains.
- Learning outcomes and evidence of learning gains.
- End of term student evaluations -- commonly referred to as "SIRS".
- Student feedback gathered throughout the semester.
- Teaching and learning portfolio.
- Classroom artifacts.
- List of teaching responsibilities.
- Materials that are clearly aligned with teaching philosophy.
- Presence of learning outcomes

6 Kuh, G. D., Kinzie, J., Schuh, J. H., & Whitt, E. J. (2011). Student success in college: Creating conditions that matter. John Wiley & Sons.

7 Seldin, Peter. Evaluating faculty performance: A practical guide to assessing teaching, research, and service. Anker Publishing Company, 2006.
McKinney, K. (2007). The student voice: Sociology majors tell us about learning sociology. Teaching Sociology, 35(2), 112-124.

8 Boyer, E. L. (1990). Scholarship reconsidered: Priorities of the professoriate. Princeton University Press, 3175 Princeton Pike, Lawrenceville, NJ 08648.
McKinney, K. (1988). Faces: Five components of quality teaching. Teaching Sociology, 16(3), 298-301.

9 Diamond, R. M., & Adam, B. E. (2004). Balancing institutional, disciplinary and faculty priorities with public and social needs: Defining scholarship for the 21st century. Arts and Humanities in Higher Education, 3(1), 29-40.
McKinney, K. (2010). Enhancing learning through the scholarship of teaching and learning: The challenges and joys of juggling (Vol. 139). John Wiley & Sons.

Evidence of learning environments that are supportive of multiple perspectives and backgrounds.
- a. Individual reflections on teaching and learning practice.
  - i. Philosophy statement on teaching and learning.
  - ii. Reflections on innovations and evaluation of efficacy.
  - iii. Course of planned action for change when needed.

Implementation of Teaching and Learning Evaluation

This toolkit is framed with three categories of practice that are often used to recognize and understand effective teaching: peer observation, evidence gathered from students and individual (educator) teaching reflections. Within each category, we address how to use these practices and provide tools that can be implemented at annual review and critical decision points relating to promotion for educators.

Peer Observation

Overview

Although students are appropriate judges of an instructor's behaviors and attitudes, they are not the most appropriate judges of content accuracy and use of pedagogical strategy. For these, colleague evaluators have been proposed as optimal.[10] One way that colleagues can work together to mutually benefit teaching and learning is peer observation.

Assumptions and Definitions

Assumptions

Peer observation is formative and can be used by the educator to critically evaluate and reflect on teaching practice to propose and implement changes in approach. As such, it is a crucial part of the reflective documents.

The practice of conducting peer observations may not be familiar in all departmental cultures across the institution. By engaging in conversation about teaching with peers, both evaluators and those being evaluated can benefit from the exchange of ideas that promote student learning.

Key definitions

Peer observation – informed observation of classroom activities by colleagues or peers for formative purposes (professional development) with the intention of improving classroom management, instructional technique, changes to teaching, alignment with appropriate learning outcomes, and, ultimately, student learning.[11]

Goals

Teaching observation supports faculty members in becoming more reflective and more purposeful in decision making regarding teaching and learning. The opportunity to engage in collegial dialogue formatively offers benefit not just to the observed teacher but also to the peer consultant. Specifically, goals derived from the process of self-assessment, peer observations and collegial dialogue are used to take steps that improve teaching and learning.

Process

Like anything, peer observation works best when it is organized with thoughtful purpose. Generally, the process[12] takes the following form:

1. Review of classroom artifacts and teaching and learning philosophy statement by peer consultant.
2. Pre-observation consultation between peer consultant and instructor.
3. Teaching observation.
4. Post-observation consultation with feedback.

10 Sell, G; Chism, N. (1988) Assessing teaching effectiveness for promotion and tenure: A compendium of reference materials. Ohio State University Center for Teaching Excellence.

11 Resources and guidelines, in addition to clarification of formative and summative assessment: http://www.itlal.org/index.php?q=node/90 , also https://faculty.umn.edu/peer-review-teaching and https://provost.ncsu.edu/wp-content/uploads/2016/07/PeerTeachingEvaluationSummaryGuidance_updated2.15.16.pdf

12 Site details the process of preparation for peer observations: http://itlal.org/index.php?q=node/113,

5. Thoughtful integration of refinements driven by an increased awareness of connections between approach and student learning.

Review of Classroom Artifacts and Teaching and Learning Philosophy Statement by Observer

Artifacts of the classroom (e.g., syllabi, course guides, suggested readings, assessments) and the instructor's philosophy on teaching undergird learning and, as such, are important components to learning.

Observing colleagues are encouraged to consider[13]:

1. Whether artifacts are relevant and current, and reflect inclusive community in the classroom.
2. If artifacts (e.g., assignments) are aligned with the syllabus and stated learning outcomes.
3. The level of appropriateness of classroom artifacts.
4. If artifacts (e.g., assignments, syllabi, readings) provide an opportunity for active learning or collaboration.
5. Consistency in philosophy, learning outcomes, artifacts and observations.
6. Whether artifacts reflect an inclusive classroom that encourages multiple perspectives.

Pre-observation Consultation

During pre-observation consultation:

1. The instructor will establish the educational intentions (e.g., what aspects of teaching require feedback).
2. The instructor will establish aspects for which constructive advice is desired and the focus of observation -- i.e., presentation skills, activity facilitation, interactions, ability to generate and guide discussion, use of aids.
3. The instructor will clarify the positioning of the course in the broader context of the curriculum, learning outcomes, clarification of artifacts and objectives for the observation.
4. The peer consultant and the instructor will develop evaluation criteria that can be objectively recorded during the observation.

Teaching Observation

It is recommended that a checklist and evaluative rubric informed by the pre-observation conversations and review of the relevant information (e.g., teaching philosophy, course and learning objectives) be used. A template, which can be modified, is available in Appendix A. At a minimum, the following checklist or rubric should include: general description of the lesson observed, clear goals for the lesson, evidence of progress on objectives, description of the teaching strategies used, instructor soft skills, instructor preparedness, content and inclusive community.

Professional development support for teaching observations can be provided by the MSU Academic Advancement Network. On or before the day of the observation, the instructor may consider briefly addressing the presence of the observer to the students.

Post-observation Consultation and Feedback

The intention is that this session take the form of a dialogue with active participation of both parties. Discussion can be framed around the categories in the checklist, self- reflection or specific goals that were identified during the pre-observation consultation. See Appendix B for tips on how to structure the conversation so that the feedback is productive and useful.

Written Evaluation

A written evaluation synthesizing the essence of the post-observation consultation framed against the objectives that were identified in the pre-consultation session(s) should be provided to the observed instructor by the consulting peer. Written evaluations are formative; these evaluations should be shared only with the faculty member observed. Reflecting on one's intentions and efforts to improve teaching and planning pedagogical adjustments are powerful elements of a teaching portfolio. This reflective piece will be incorporated into review documents as part of the formal annual reviews and at crucial points in the promotion process. Support for processing and reflecting on formative teaching feedback can also be requested from the MSU Academic Advancement Network.

13 Fernandez and Yu (2007). "Educational Research in Action: Peer Review of Teaching." Journal of Chiropractic Education. 21(2). 154-161.

Evidence Gathered from Students

Overview

Student evaluations of teaching are intended to function both as student evaluations of the instructor and the learning environment that he/she creates, and assessment of learning gains (via student perceptions and assessment of learning outcomes). Student evaluations of teaching and learning are critical evidence of how students understand their experience in the classroom and how the created ethos contributes to or hinders a sense of belonging. Research synthesized by the National Academy of Science, Engineering and Medicine indicates that sense of belonging is closely correlated with varied success metrics (retention, persistence, GPA), and that a sense of belonging is pliable with minimal action.[14] In addition to questions related to the quality of instruction, evidence should also focus on student learning gains and should be connected to the departmental, college and university learning outcomes.

The results of standardized course evaluations can be challenging to interpret. And despite a large literature establishing their reliability[15], faculty members still often wonder what the instruments actually measure[16] (see also the resources[17] of the Vanderbilt Center for Teaching and Learning). There is concern about biases associated with gender, race or age that are supported by current research.[18]

Standardized course evaluations can be a useful way to understand effective teaching, but they require some thoughtful work on the part of administrators and faculty members to make it so. For further guidance on student evaluations and implementation in teaching evaluation, consult Linse (2017).[19]

Quantitative Measures

Keep the following in mind:

1. Avoid ranking faculty members from "best" to "worst" on the basis of course ratings. Even with a group of excellent instructors, rankings may present strong instructors as being "below average." An instructor who may be below the unit mean in a unit with a strong teaching culture may still be teaching well.
2. Ratings of global items should be considered within the context of the situation (e.g., is this a new preparation, what is the class size, does the course serve majors or non-majors, is the instructor trying a new pedagogical approach/using a new teaching tool?). It is important to understand that different kinds of courses produce different patterns in student response (e.g., introductory courses versus required advanced courses in the major)[20].
3. Look at the distribution of responses as well as the mean. Consider information such as the distribution of responses by item as well as the variation in responses. The frequency of responses across the range may tell a different story than the mean.
4. Written comments provide the most useful information for teaching improvement. Written comments can provide insight into why some students had difficulty and why others had success. Synthesize patterns in written comments in light of numerical trends in the quantitative feedback. For instance, balance the analysis of written comments against the mean to avoid overvaluing negative comments (more on this below).
5. Keep implicit biases in mind when considering both individual and facultywide results. The literature on implicit bias makes clear that unconscious stereotypical beliefs create expectations, and there is a corresponding literature on course evaluations as well (see, for example, Presumed Incompetent,

14 National Academies of Sciences, Engineering, and Medicine. (2017). Supporting Students' College Success: The Role of Assessment of Intrapersonal and Interpersonal Competencies. National Academies Press.
15 www.ideaedu.org/Portals/0/Uploads/Documents/IDEA%20Papers/IDEA%20Papers/PaperIDEA_50.pdf
16 https://www.insidehighered.com/news/2016/09/21/new-study-could-be-another-nail-coffin-validity-student-evaluations-teaching
17 https://cft.vanderbilt.edu/guides-sub-pages/student-evaluations/
18 Lazos, Sylvia R. (2012). Are student teaching evaluations holding back women and minorities? The perils of "Doing" Gender and Race in the Classroom." In Presumed incompetent: The intersections of race and class for women in academia Eds. Gabriella Gutiérrez y Muhs, Yolanda Flores Niemann, Carmen G. González, Angela P. Harris. Utah State University Press.
19 Linse, A. R. (2017). Interpreting and using student ratings data: Guidance for faculty serving as administrators and on evaluation committees. Studies in Educational Evaluation, 54(Journal Article), 94–106. https://doi.org/10.1016/j.stueduc.2016.12.004
20 Murray, H. G., Rushton, J. P., & Paunonen, S. V. (1990). Teacher personality traits and student instructional ratings in six types of university courses. Journal of educational psychology, 82(2), 250.

Chapter 12).[21] Consider, for example, that when women and minorities enter their classrooms, student expectations may manifest themselves throughout the experience of a class, including in course evaluations.

Making Sense of Written Comments

We suggest a systematic approach to reading written comments (adapted from McGill University):

Look for patterns in the comments.

1. Avoid overemphasizing singularly positive or singularly negative comments. Synthesize comments while considering other evidence within the evaluation submission.
2. Look for comments that demonstrate specific teaching behaviors and practices. This is the data that informs productive formative feedback for faculty and helps with planning and support going forward.
3. It is not uncommon for positive comments to be more general and negative comments to be more specific. This has the potential to highlight or emphasize negative comments.
4. Feedback on scheduling, class length and timing can often be critical. But these issues are more in control of the department or college administrator than of the faculty member.[22]

Midcourse Student Feedback/Evaluations

Instructors are strongly encouraged to touch base with students at least once before the end of the semester through the use of a midcourse evaluation process. Recommended practice indicates that this can be accomplished by surveying students about a third of the way into the course by asking students questions as simple as: what aspects of the course so far are helping you learn, and what recommendations do you have that could improve your learning? The survey can be administered by various means. Many instructors develop an anonymous survey in the learning management system (LMS); others use paper-based versions. The midsemester survey can also include targeted questions about aspects of teaching that the instructor wishes to receive feedback on. Lyman Briggs College has piloted a midsemester feedback form.[23]

The benefit to instructors is twofold: it gives educators a sense of what is working well for the class and what is not while also allowing an opportunity for midcourse correction if the instructor deems it necessary. The process also advantages students by allowing them to have a voice in their educational experience and affords them the possibility of benefiting from midcourse corrections made. The process often strengthens the instructor-student relationship and improves learning outcomes and student satisfaction.

For those interested in receiving more formalized feedback, the MSU Academic Advancement Network offers a midsemester feedback service using a student focus group format.24

Student Assessment of Learning

In addition to feedback from students about instructors' teaching abilities within the classroom, students' reflections on their learning gains in a class can also provide insight into the effectiveness of an instructor in the learning environment. The Student Assessment of their Learning Gains (SALG) is an online instrument that provides information about the specific gains that students perceive they have made in any aspects of a course that instructors have identified as important to their learning (http://archive.wceruw.org/cl1/oldflag/cat/salg /salg7.htm). SALG is one example of student assessment of learning gains.

Faculty members can explore student gains in cognition, skills and learning. A benefit of this form of inquiry is that it has the ability to highlight those elements in the course that best support student learning and those that need improvement. Questions can be added, deleted and modified depending on the

21 www.dickinson.edu/download/downloads/id/6308/are_student_teaching_evaluations_holding_back_women_and_minorities.pdf

22 Marsh, H. W. (1984). Students' evaluations of university teaching: Dimensionality, reliability, validity, potential biases, and utility. Journal of educational psychology, 76(5), 707.
Wachtel, H. K. (1998). Student evaluation of college teaching effectiveness: A brief review. Assessment & Evaluation in Higher Education, 23(2), 191-212.

23 Overview, instructions for use and instrument are available here: http://lymanbriggs.msu.edu/faculty_staff/Midsemester-feedback-overview.pdf

24 https://aan.msu.edu/teaching-learning/mid-semester-student-feedback-session/

course and the interest of the faculty member. Lyman Briggs College initiated the use of SALG several years ago. The 22 core questions developed for use in that college are presented in Appendix C. Faculty members can further incorporate other means of assessing student learning through the use of assignments and work completed for the course. Examples can include written reflections from students about their development and what they have learned in the class, and comparison of pre- and post-tests and final projects. Angelo and Cross25 offer a host of ideas for classroom assessment techniques that educators may consider for developing deeper understanding of student learning.

Objective Assessment of Learning

Submitted teaching materials should provide evidence of learning related to competencies/learning outcomes identified as important for the class, program and university. Assessment should demonstrate progress at the student level and be aggregated across the class. Types of evidence are a matter of professional consensus and should be determined through discussions within the discipline.

Teaching and Learning Portfolio

Overview

It is considered good practice to document reflections about teaching and learning in a teaching portfolio, for both practical (evaluation) and developmental (growth) purposes.[26] Reflections are most useful in demonstrating decision making, evidence-based practice and growth of skill over time. A teaching portfolio can also include relevant items such as artifacts from teaching, a teaching philosophy statement, and reports generated from classroom observations and student feedback. Reflections can be written and recorded in many forms (see Appendix D), but the organization of a teaching portfolio is key to successfully documenting teaching practice and communicating this with others.

Assumptions and Definitions

Key definitions

Teaching portfolio – a documented statement of a faculty member's teaching responsibilities, philosophy, goals and accomplishments as a teacher.[27]

Reflective practice – "merges critical inquiry [evidence of learning], the conscious consideration of the ethical implications and consequences of teaching practice, with self-reflection, deep examination of personal beliefs, and assumptions about human potential and learning."[28]

Goals

The teaching portfolio provides valuable evidence in communicating one's effort in teaching to promote effective learning. It chronicles intention and purposeful decision making, and it can serve as a valuable tool, even when the results of an implementation do not go as expected. There is as much to learn from less successful teaching experiments as from those that are deemed successful. The goal is to describe teaching practice and to document what can be learned from the experience. Reflective practice helps individuals grow as educators, and sharing reflective practice helps groups develop productively as well.

Reviewing the Teaching and Learning Portfolio

A basic teaching portfolio typically contains the following:

25 Angelo, T. A., & Cross, K. P. (1993). Classroom assessment techniques: A handbook for college teachers. San Francisco: Jossey-Bass.

26 Lyde, A. R., Grieshaber, D. C., & Byrns, G. (2016). Faculty teaching performance: Perceptions of a multi-source method for evaluation. Journal of the Scholarship of Teaching and Learning, 16(3), 82-94.
Mitten, C., & Ross, D. (2016). Sustaining a commitment to teaching in a research-intensive university: what we learn from award-winning faculty. Studies in Higher Education, 1-14.

27 Seldin, P. (1991). The Teaching Portfolio, Bolton, MA:Anker Publishing Company.
Seldin, P. (1993). Successful Use of Teaching Portfolios. Anker Publishing Co., Inc., 176 Ballville Rd., PO Box 249, Bolton, MA 01740-0249.

28 Larrivee, B. (2000). Transforming teaching practice: Becoming the critically reflective teacher. Reflective practice, 1(3), 293-307.

1. List of teaching responsibilities -- titles of courses taught, when, number of students (with total credits assessed). Description of what is taught and how the teaching responsibilities are integral to the department's mission. How is a person's disciplinary expertise aligned and critical to his/her teaching responsibilities as well as the content of course she/he may assist with (e.g., guest lectures)? How does one's research or outreach assignments help inform the educator's teaching? May also include dissertation mentoring and independent study courses (tends to be dependent on discipline).
2. Evidence of effective teaching -- sample artifacts or documents from teaching practice (syllabi, quizzes or tests, other materials developed for courses), student survey ratings and their interpretations, peer review of teaching and materials, assessments of student learning, learning outcomes and evidence of teaching efficacy and learning, and teaching awards and honors.

Individual reflections that encompass and synthesize the educator's practices, goals and philosophy as related to efficacy in the classroom. Guidance for documents of this type is available at: www.canr.msu.edu/uploads/files/Faculty_and_Staff/refelctive_essay_perspective.doc.
Plans for future changes based on the synthesis of all components.

An example of a rubric for evaluating a teaching portfolio is available from Indiana University here: Rubric for evaluating teaching portfolios.

Reviewing Classroom Artifacts

When reviewing artifacts (e.g., syllabi, assessments and assignments tied to learning outcomes, other course materials), check for:

- The presence of learning outcomes.
- Alignment of assignments and assessments and classroom content with class, programmatic and university learning outcomes.
- Evidence that classroom practices are consistent with philosophy on teaching and learning.
- Evidence of student progress toward stated learning outcomes.
- Evidence of appropriate reflection and change to teaching practice based on prior reviews and reflection.

Reviewing the Synthesis of Reflections

Philosophy -- Does the essay clearly convey the person's practices and philosophy to teaching and learning grounded in his/her appointment and the needs of the student, class, program and university learning outcomes? Is there evidence of thoughtful approach and innovative methods? Is there evidence of effective mentoring and advising of undergraduate and graduate students? Is there evidence of adaptation and growth with regard to classroom approach?
Teaching and learning impact -- How does the educator describe the impacts of his/her teaching and learning activities/programs (e.g., mentoring, advising, noncredit programs taught composed of several classes) and activities (e.g., courses)?
Assessment of teaching and learning -- How does an instructor assess if students are meeting the course or assignment teaching and learning objectives? How has an instructor helped students discover new knowledge in their respective disciplines? How has one used innovative strategies or methodologies to enhance teaching and learning? Some sample artifacts include: representative exams and course assignments (note: course assignments would be critical to see if a course is designated as a Tier I or Tier II writing course), grants received in support of instructional and assessment development or innovations.

Summary

The educator toolkit presented here intends to encourage a culture in which actuating learning by means of teaching is thoughtfully implemented and valued as a fundamental component of the mission of the university. Here we examine and suggest how to conduct teaching evaluations at annual review/merit salary review and moments of promotion using multiple measures in an attempt to more thoroughly and objectively assess teaching and its relationship to student success, as well as catalyze an ethos that critically reflects on classroom practice and outcomes with thoughtful planning and implementation as a goal.

Appendix A: Peer Observation Templates

Generic Classroom Observation Form

Instructor:
Class:
Time of class:
Observation date: Start time:
Instructor arrival:
Students at start of class:
Students who arrive late:
Students registered:
Lecture topic:

1) Introduction:

Motivation – capture attention, when learner will use this skill, payoff for knowing and using, connect to objective.

Objective – what is the test like, conditions on test, behavior called for on test, standard to judge behavior, related to test and practice.

Overview – what are the main ideas? Main points/steps.
Review – old ideas used today, embedded prerequisites.
Agenda – order to follow, schedule of instructional events.

Did well:

Consider for improvement:

2) Core Lecture:

Explanation/Demonstration – what are the steps/ideas; are essentials simply stated, content organized, transitions between points made, definitions clear, examples concrete/real; point-example-point; does instructor show how to use ideas/steps?

Did well:

Consider for improvement:

3) Group Activity/Participation:

Practice/Feedback – fits objective and test, instructions clear, each individual practices, feedback complete (right/need).

Did well:

Consider for improvement:

4) Conclusion:

Summary – the main ideas; integration – what's next?; objective – what's on the test?; motivation – why use this?; test – fits objective and practice?

Did well:

Consider for improvement:

Example Checklist: Classroom Observation Form

Checklist forms focus on description and the presence or absence of certain characteristics. The specific items can be answered "yes" or "no" or can be measures of frequency, such as "always, often, sometimes, never." Comments can be used by the observer to explain the rationale for choosing the rating or for providing additional information to the observed. The checklist form can be a starting point for initial observation.

Instructor: Department:

Date: Time:

Course #: Course title:

Observed by:

Instructor preparation and organization

- ☐ The instructor arrives to class on time.
- ☐ The instructor states the relation of the class to the previous one.
- ☐ The instructor uses technology or other classroom materials as needed and appropriately.
- ☐ The instructor makes transitional statements between class segments.
- ☐ The instructor conveys the purpose and goal for each of the class activities.
- ☐ The instructor summarizes periodically and at the end of the class.

Instructional strategies: variety and pacing of instruction

- ☐ More than one form of instruction is used -- i.e. simulations, discussions, case studies.
- ☐ The instructor uses appropriate questions.
- ☐ The instructor pauses after asking questions.
- ☐ The instructor accepts student responses.
- ☐ The instructor helps students extend their responses.
- ☐ The instructor appropriately facilitates the direction of the discussion.
- ☐ The instructor provides time for students to complete learning tasks such as group work.
- ☐ The difficulty level of the activities is appropriate.
- ☐ The instructor is able to complete the topics scheduled for the class.

Content knowledge

- ☐ The instructor identifies accurate and important sources, perspectives and authorities in the discipline.
- ☐ The instructor identifies accurate and important sources, perspectives and authorities in the industry.
- ☐ The instructor elaborates on terms and concepts.
- ☐ The instructor emphasizes major points in the delivery of the subject matter.
- ☐ For graduate-level courses and as appropriate, the instructor incorporates current research in the discipline.

Presentation skills

- ☐ The instructor's voice is audible**.**
- ☐ The instructor's voice is comprehensible.
- ☐ The instructor varies the tone and pitch of voice for emphasis and interest.
- ☐ The instructor avoids distracting mannerisms.

- ☐ The instructor establishes eye contact throughout the class.
- ☐ The instructor avoids prolonged reading from notes or texts.
- ☐ The instructor speaks at a pace that allows students to participate and take notes.

Teacher-student rapport and engagement

- ☐ The instructor welcomes students into the class.
- ☐ The instructor is attentive to student nonverbal communication -- i.e., signs of comprehension and puzzlement.
- ☐ The instructor provides feedback at given intervals.
- ☐ Evaluation of student procedures/techniques/activities/responses is constructive.
- ☐ The instructor uses positive reinforcement.
- ☐ The instructor incorporates student ideas into the class.
- ☐ The instructor exhibits an appreciation of student diversity.

Classroom Management

- ☐ The students generally seem engaged and on-task.
- ☐ The instructor draws nonparticipating students into the classroom environment.
- ☐ The instructor prevents specific students from dominating the classroom environment.
- ☐ The instructor maintains a classroom environment that is inclusive and conducive to learning.
- ☐ The instructor is available to the students throughout the class session.
- ☐ The instructor mediates conflict or differences of opinion.
- ☐ The instructor provides clear explanations and answers to student questions.
- ☐ The instructor provides clear directions for student activities.

Other observational comments:

Generic Classroom Observation Form

Teaching Observation Notes

Student:	**Date:**
Setting/Class:	**Time of Lesson:**

Things That Worked	Comments, Questions. Suggestions

Generic Classroom Observation Form

AFNR Principles of Teaching and Learning & Traits of Effective Teaching

PRINCIPLES OF TEACHING AND LEARNING (Newcomb, McCracken, Warmbrod, & Whittington, 2004)

- Organization and Structure of Subject Matter

- ☐ Principle 1 – When subject matter to be learned possesses meaning, organization, and structure that is clear to students, learning proceeds more rapidly and is retained longer.
- ☐ Principle 2 – Readiness is a prerequisite for learning. Subject matter and learning experiences must begin where the learner is.

- Motivation

- ☐ Principle 3 – Students must be motivated to learn. Learning activities should be provided that reflect the wants, needs, interests, and aspirations of students.
- ☐ Principle 4 – Students are motivated through their involvement in setting goals and planning learning activities.
- ☐ Principle 5 – Success is a strong motivating force.
- ☐ Principle 6 – Students are motivated when they attempt tasks that fall in a range of challenge such that success is perceived to be possible but not certain.

- Reward and Reinforcement

- ☐ Principle 7 – When students have knowledge of their learning progress, performance will be superior to what it would have been without such knowledge.
- ☐ Principle 8 – Behaviors that are reinforced (rewarded) are more likely to be learned.
- ☐ Principle 9 – To be most effective, reward (reinforcement) must follow as immediately as possible the desired behavior and be clearly connected with that behavior by the student.

- Techniques of Teaching

- ☐ Principle 10 – Directed learning is more effective than undirected learning
- ☐ Principle 11 – To maximize learning, students should *inquire* into rather than be *instructed* into subject matter. Problem-oriented approaches to teaching improve learning.
- ☐ Principle 12 – Students learn what they practice.
- ☐ Principle 13 – Supervised practice that is most effective occurs in a functional educational experience.

- Transfer of Learning

- ☐ Principle 14 – Learning is most likely to be used (transferred) if it is learned in a situation as much like that in which it is to be used as possible and immediately preceding the time when it is needed.
- ☐ Principle 15 – Transfer of learning is more likely to take place when what is to be transferred is a generalization, a general rule, or a formula.
- ☐ Principle 16 – Students can learn to transfer what they have learned; teachers must teach students how to transfer learning to laboratory and real-life situation.

Newcomb, L. H., McCracken, J. D., Warmbrod, J. R., & Whittington, M. S. (2004). Methods of Teaching Agriculture, 3rd Edition. Pearson Education, Inc., Upper Saddle River, NJ.

There are many options when selecting a classroom observation template. Below you will find several others used across the campus to consider.

RTOP: Reformed Teaching Observation Protocol -- used in Engineering & Lyman Briggs: https://meganbarkerase.files.wordpress.com/2016/10/rtop.pdf

3D-LOP -- developed and used in the College of Natural Science: protocol

UTOP: UTeach Observation Protocol -- used at MSU by Psychology Dept: thetrc.org/web/assets/files/evaluation/UTOP_Final_Version.pdf

COPUS: Classroom Observation Protocol for Undergraduate STEM: www.cwsei.ubc.ca/resources/files/COPUS_protocol.pdf

TBI: Murray's Teaching Behaviors Inventory -- shared in AAN workshops/programs, it is designed as a tool for students to conduct an observation: https://calvin.edu/offices-services/provost/files/behaviors.pdf

Appendix B: Tips for Giving Colleagues Useful Feedback

When giving feedback to colleagues, be sure to consider the following:

Remember that people act from various perspectives. To varying degrees they may be seeking to acquire knowledge, to bond over the experience, to comprehend situations or experiences, or to defend their current practice.[29] If you find yourself wondering about motivations or reasoning, it is best to ask. Context and timing make a difference.

Always try to balance positive and negative feedback.

Approach each situation with the idea that everyone deserves to be treated with dignity and respect.

Characteristics of Constructive Feedback[30]

1. It is ***descriptive*** rather than evaluative. By describing one's own reactions, it leaves the individual free to use it or not to use it as he sees fit. Avoiding evaluative language reduces the need for the individual to respond defensively.
2. It is ***specific*** rather than general. To be told one is "dominating" will probably not be as useful as to be told that "in the conversation that just took place, you did not appear to be listening to what others were saying, and I felt forced to accept your arguments."
3. It is focused on ***behavior*** rather than on the person. It is important that we refer to what a person does rather than what we think or imagine he is. Thus we might say that a person "talked more than anyone else at the meeting" rather than to say that he is a "loudmouth". The former allows for the possibility of a personality change. The latter implies a fixed personality trait.
4. It takes into account the ***needs of both the receiver and the giver of feedback***. Feedback can be destructive when it serves only our needs and fails to consider the needs of the person on the receiving end. It should be given to help, not to hurt. We too often give feedback because it makes us feel better or gives us a psychological advantage.
5. It is directed toward ***behavior that the receiver can do something about***. Frustration is only increased when a person is reminded of some shortcoming over which he has no control.
6. It is ***solicited*** rather than imposed. Feedback is most useful when the receiver has formulated the kind of question that those observing can answer.
7. It is ***well-timed***. In general, feedback is most useful at the earliest opportunity after the given behavior. The reception and use of feedback involve many possible emotional reactions. Excellent feedback presented at the appropriate time may do more harm than good.
8. It involves ***sharing information*** rather than giving advice. By sharing information, we leave a person free to decide for himself in accordance with his own goals and needs. When we give advice, we tell him what to do and to some degree take away his freedom to decide for himself.
9. It involves the ***amount of information the receiver can use*** rather than the amount we would like to give. To overload a person with feedback is to reduce the possibility that he may be able to use what he receives effectively. When we give more than can be used, we are more often than not satisfying some need of our own rather than helping the other person.
10. It concerns ***what*** is said and done or how, not why. The "why" takes us from the observable to the inferred and involves assumptions regarding motive or intent. If we are uncertain of motives or intent, this uncertainty is itself feedback and should be revealed.
11. It is ***checked to ensure clear communication***. One way of doing this is to have the receiver try to rephrase the feedback to see if it corresponds to what the sender had in mind. No matter what the intent, feedback is often threatening and subject to considerable distortion or misinterpretation.
12. It is ***checked to determine degree of agreement from others***. Is this one person's impression or an impression shared by others?
13. It is followed by ***attention to the consequences of the feedback***. The person who is giving the

29 McShane, S., & Von Glinow, M. (2013). M Organizational Behavior. New York, New York: McGraw-Hill/Irwin.

30 This "classic" is excerpted from William H. Berquist and Steven R. Phillips A Handbook for Faculty Development Vol. 1. The Council for the advancement of Small Colleges, 1975. Pp. 224-225. Used with permission.

feedback can greatly improve by becoming aware of the effects of the feedback.

14. It is an important step toward ***authenticity***. Constructive feedback opens the way to a relationship that is built on trust, honesty and genuine concern.

Examples of Constructive Feedback:

- Your use of humor, as when you told the "see me after class" joke to illustrate the importance of context, created a relaxed atmosphere.
- Students participated eagerly. In fact, 15 hands shot up when you asked for a definition of "marginal costing."
- Your contrast between a schizophrenic and a manic-depressive, using the two case histories, helped students appreciate the complexity of mental health disorders.
- Your quotation by Roscoe Pound emphasized the importance of law professors involving themselves in public life.
- Your discussion of field work methods versus survey research seemed unfocused until you provided the three concrete illustrations.
- Students took copious notes during your lecture on the different types of computer systems for database management. They also frequently consulted your handout on using a database management package.
- Your summary of the inventions of Ransom E. Olds and Henry Ford provided a strong conclusion to the lecture on the automobile industry.
- When the student asked you to explain the controversy over categorization of emergency departments by level of service, you responded promptly and concretely.
- You became particularly animated when you shifted the discussion to an overview of single cell reproduction.
- Students shook their heads, indicating confusion, when you mentioned the Oklahoma Supreme Court's decision to uphold utility rate increase enacted by the city in 1971, but your clarification of the case during questioning seemed to resolve any difficulties.
- Your use of Roosevelt to illustrate the strong-presidency concept helped students grasp the abstraction. Several of them nodded appreciably after this example.
- Students seemed to benefit from the peer review session you held with their comparison-contrast rough drafts. They frequently consulted your guidelines as they reviewed one another's papers. I overheard comments such as, "Hey, thanks, I never thought of that," and "Thanks for those two concrete examples."
- I noticed from several nearby notebooks that your outline on the board of Grover Cleveland's goals (to cleanse politics, to reduce tariffs, to aid consumers and attack privilege, and to introduce the civil service) enabled students to organize their notes.

Examples of Concrete Suggestions for Improvement:

- Your illustration of a Hasse diagram could not be seen clearly from the back of the room. Perhaps you could consider a larger drawing, an overhead projector, or a handout.
- Students seemed unusually tense during the drill over the past tense (imperfect). Have you thought about having the entire class repeat a mispronounced word rather than the individual student?
- You might focus more on the process of arriving at a solution rather than on the final outcome itself. A response such as "The orbit must be one de Broglie wavelength in circumference" does not encourage higher order thinking.

You seemed a bit uncertain about the material when you shifted into aggression modeling and reverse modeling. Some examples from current TV programs might have added interest and clarity.

Examples of Confusing or Imprecise Feedback:

"Excellent insistence on terminology and exactness of definitional terms"

Problems: Even though this comment is intended as a compliment, it doesn't describe what is actually occurring in the classroom. Is the lecturer pinning students down, insisting that they recite definitions from the textbook; does the instructor pause during his/her lectures to define key terms?

"The presentation lacked cohesiveness and did not relate significance and utilization in the management of a business. In addition...the assignments should have included application as a corollary to reading."

Problems: Too many vague words make this virtually incomprehensible. Was the "presentation" a lecture, discussion or something else? Do words such as "utilization" and "application" refer to specific examples, case histories or something else?

Appendix C: SALG -- Student Assessment of Learning Gains[31]

The following assessment is part of an ongoing study of student learning. The information that you provide will be very helpful to your course instructor. Please take the time to carefully and thoughtfully answer the following questions using the Scantron sheet that you were given.

In the first 10 questions, please use the following scale:
(a) Great help (b) Much help (c) Moderate help (d) A little help(e) No help

The class overall
HOW MUCH did the following aspects of the class HELP YOUR LEARNING?
1. The way the class topics, activities, reading and assignments fit together
2. The pace of the class

Class Activities
HOW MUCH did each of the following aspects of the class HELP YOUR LEARNING?
3. Attending class/lectures
4. Participating in discussions and group work during class

Assignments, Graded Activities, Tests, and Class Resources
HOW MUCH did each of the following aspects of the class HELP YOUR LEARNING?
5. Graded assignments in this class
6. The reading materials (textbook, course packet, etc.)

The Information You Were Given
HOW MUCH did each of the following aspects of the class HELP YOUR LEARNING?
7. Explanation of how the class topics, activities, reading, and assignments related to each other
8. Explanations given by the instructor of how to learn or study the materials
9. Explanation of why the class focused on the topics presented
10. Explanation of how the course content is relevant to other sciences & social issues

For questions 11-22, the Scantron bubbles represent the following:
(a) Great gain (b) Much gain (c) Moderate gain (d) A little gain (e) No gains

Your Understanding of Class Content
As a result of your work in this class, what GAINS DID YOU MAKE in your UNDERSTANDING of each of the following?

11. The main concepts explored in this class
12. The relationships between the main concepts
13. How ideas from this class relate to ideas encountered in other classes within this subject area
14. How ideas from this class relate to ideas encountered in other courses you have taken outside of this subject area

Increases in your Skills
As a result of your work in this class, what GAINS DID YOU MAKE in the following SKILLS?
15. Communicating your understanding of the course material in **written** form (e.g., essays, equations, problem solving)
16. Communicating your understanding of the course material in **verbal** form (e.g., class discussion, presentations, small group work)
17. Thinking critically about scientific findings and social issues

Class Impact on Your Attitudes
As a result of your work in this class, what GAINS DID YOU MAKE in the following?
18. Enthusiasm for the subject

31 From Lyman Briggs College core questions

19. Confidence that you understand the material

Integration of Your Learning
As a result of your work in this class, what GAINS DID YOU MAKE in INTEGRATING the following?
20. Applying what I learned in this class to other situations
21. Using systematic reasoning in my approach to problems
22. Using a critical approach to the information & arguments I encounter in my daily life

Appendix D: Drafting Reflections on Teaching and Learning

Framework for Reflective Practice
Brookfield[32] recommends enacting reflective practice through four lenses:

1. Students' perspectives -- By examining practice through the perspective of students, educators are able to challenge their own assumptions about teaching and learning.
2. Colleagues' perspectives -- Colleagues can assist with challenging assumptions and offer alternative solutions to familiar problems.
3. Personal experience -- Examples of personal experience can be powerful in transforming understanding of teaching situations and opportunities.
4. Scholarly literature -- Teaching theory helps to develop an advanced vocabulary for teaching practice and broaden perspectives on how to view and understand teaching and learning.

Guidance for evaluating teaching portfolios can be found here:
Teaching portfolio rubric: medsci.indiana.edu/m620/sotl_08/teaching_portfolio_rubric.pdf

Sample Components of a Teaching Portfolio can be found here: https://tilt.colostate.edu/proDev/gradStudents/certificates/portfolios/pdfs/evalRubric.pdf

32 Brookfield, S. (2017). Becoming a critically reflective teacher. John Wiley & Sons.

Appendix E: Assessing Evidence of Learning

Resources to assist with analyzing alignment of assessment/outcomes and ultimately teaching efficacy (student learning):

Hutchings, P. (2016). Aligning Educational Outcomes and Practices. National Institute for Learning Outcomes Assessment. Occasional Paper Number 26. Available at: learningoutcomesassessment.org/documents/Occasional%20Paper%2026.pdf

The Carnegie Mellon University Eberly Center offers Teaching Excellence and Innovation, Assessing Teaching and Learning , Why should assessments, learning objectives and learning strategies be aligned.
https://www.cmu.edu/teaching/assessment/basics/alignment.html

Undergraduate Learning Goals at Michigan State University. learninggoals.undergrad.msu.edu/

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