**Student Observed Inventory of Methods and Practices Associated with Competent Teaching**

**(Student Observed IMPACT)**

*Adapted from the Teaching Practices Inventory for cross-disciplinary validity. Language was edited to reflect a wider variety of types of assignments and activities as well as to be inclusive of practices and methods in online courses. References to representative literature for each question are shown in blue*. *Point values are shown in* ***bold****: one point is assigned to each practice for which there is evidence it supports student learning; two points are assigned to practices for which there is evidence of large and robust benefits. 48 total points are available in this version.*

The following is an inventory of teaching practices commonly used in both face-to-face and online courses across a wide variety of disciplines. We ask that you identify the practices you observed during the course. Some of these practices are not applicable to every course and/or discipline, and any particular course would likely use only a subset of these practices.

It should take only about 5 minutes to complete this survey.

**I. Course Information and Supporting Materials**

Check all of the course information that was provided to you via hard copy or a course web page. [(Ambrose et al., 2010; Froyd, 2008)](https://paperpile.com/c/4u3X7j/UkdN%2BTsge)

* List of topics to be covered **1**
* List of topic-specific competencies (skills, expertise, …) students should achieve (what students should be able to do) **2**
* List of competencies that are not topic related (critical thinking, problem solving, …) **1**
* Affective goals – changing students’ attitudes and beliefs (interest, motivation, relevant beliefs about their competencies, how to master the material) **1**
* None of these

Check all of the supporting materials provided to you in this course. [(Ambrose et al., 2010; Atkinson et al., 2000; Black & Wiliam, 1998; Froyd, 2008; Hattie & Timperley, 2007; Kiewra, 1985; Pintrich, 2003)](https://paperpile.com/c/4u3X7j/UkdN%2BTsge%2Be7p8%2BM7DC%2BP7i7%2BS2w0%2B8TEJ)

* Student wikis or discussion boards with little or no contribution from the instructor **0**
* Student wikis or discussion boards with significant contribution from the instructor or a teaching assistant (undergraduate or graduate) **1**
* Solutions to homework assignments **1**
* Worked examples (text, pencast, or other format) **1**
* Practice exams, or previous year’s exams **1**
* Videos, animations, or simulations related to course materials **1**
* Lecture notes or course PowerPoint presentations (partial/skeletal or complete) **1**
* Articles from related academic literature **1**
* Examples of exemplary papers, projects, or other assignments **1**
* Grading rubrics for papers, problem solutions, or large projects **1**
* None of these

**II. Assignments and Exams**

Check all that applied to assignments in this course. [(Ambrose et al., 2010; Cooper et al., 2006; Kuh, 2008; Walberg & Others, 1985)](https://paperpile.com/c/4u3X7j/UkdN%2BOdxh%2BixXg%2B3xTV)

* Homework was assigned or suggested, but did not contribute to course grade **0**
* Homework was assigned and contributed to course grade **2**
* A paper of project taking longer than two weeks and involving some degree of student control in choice of topic or design was assigned **1**
* A student presentation was assigned (verbal or poster, either live or through video) **1**
* You were encouraged to work collaboratively with other students on at least some of your assignments **2**
* Explicit group assignments **1**
* None of these

How many tests or major assignments were assigned during the term (e.g. midterm exams, papers, projects)? [(Gibbs & Simpson, 2005)](https://paperpile.com/c/4u3X7j/g9kz)

* 0 **0**
* 1 **1**
* 2 **2**
* 3+ **2**

What was the approximate fraction of final exam questions, paper, or project criteria that required you to explain your reasoning? [(Gibbs & Simpson, 2005)](https://paperpile.com/c/4u3X7j/g9kz)

* 0-5% **0**
* 6-10% **0**
* 11-15% **0**
* 16-25% **1**
* 25+% **1**

What percentage did a final exam, paper, or project contribute to the total course grade? [(Gibbs & Simpson, 2005)](https://paperpile.com/c/4u3X7j/g9kz)

* 70% or greater **0**
* 61-69% **0**
* 51-60% **1**
* 41-50% **1**
* 31-40% **1**
* 30% or less **1**
* No final exam, paper, or project **1**

**III. Feedback**

How often did the instructor explicitly solicit feedback about the course from you during the term? [(Centra, 1973; Cohen, 1980; Diamond, 2004)](https://paperpile.com/c/4u3X7j/ydEa%2BTvSk%2BZFUR)

* Not including end of term course evaluations, your feedback about the course was not requested during the term. **0**
* One midterm course evaluation asking for your feedback about the course **1**
* Repeated feedback from you about the course requested (more than once) **2**

Check all of the following feedback provided by the instructor to you during the term. [(Ambrose et al., 2010; Black & Wiliam, 1998; Froyd, 2008; Hattie & Timperley, 2007)](https://paperpile.com/c/4u3X7j/M7DC%2Be7p8%2BTsge%2BUkdN)

* Assignments with feedback from instructor, teaching assistant, or peer before grading or with opportunity to redo work to improve grade **2**
* Most assignments were graded within 1 week after submission **1**
* You saw your graded assignments **1**
* You saw assignment answer keys and/or grading rubrics **1**
* You saw your graded midterm exams/quizzes **1**
* You saw midterm exams/quizzes answer keys and/or grading rubrics **1**
* You were explicitly encouraged to meet individually with the instructor **1**
* None of these

**IV. Instructional Features and Activities**

Per week, how many times did the instructor ask for your questions (in lectures, embedded prompts in videos/readings, posted discussion boards, or through other means)? [(Ambrose et al., 2010; Froyd, 2008)](https://paperpile.com/c/4u3X7j/UkdN%2BTsge)

* 0 **0**
* 1-2 **0**
* 3-4 **1**
* 5+ **1**

Per week, how many times did you participate in group discussions or problem solving with other students (includes online discussion boards)? [(Ambrose et al., 2010; Froyd, 2008)](https://paperpile.com/c/4u3X7j/UkdN%2BTsge)

* 0 **0**
* 1 **1**
* 2 **2**
* 3+ **2**

Per term, how many times did you participate in discussions on why the material was useful and/or interesting from your perspective? [(Ambrose et al., 2010; Froyd, 2008)](https://paperpile.com/c/4u3X7j/UkdN%2BTsge)

* 0-2 **0**
* 3-5 **1**
* 6-9 **2**
* 9+ **2**

Considering the time spent on the major topics, approximately what fraction was spent on the process by which the theory/model/concept was developed, including the methods and results that support specific theories or ideas?

* 0-10%
* 11-25% **1**
* more than 25% **1**

What fraction of a typical class or online equivalent did you spend listening to lectures directly or through video (presentation of content, derivation of results/solutions, etc.)? [(Ambrose et al., 2010; Froyd, 2008)](https://paperpile.com/c/4u3X7j/UkdN%2BTsge)

* 0-20% **2**
* 20-40% **2**
* 40-60% **2**
* 60-80% **1**
* 80-100% **0**

A student response method is any means used to collect responses from all students in real time either during class (e.g. clickers, online polls, online chat) or embedded in the middle of readings or videos. Check all that occurred in this course. [(Ambrose et al. 2010; Froyd 2008)](https://paperpile.com/c/4u3X7j/UkdN%2BTsge)

* More than one student response question was posed per class or online equivalent, not counted towards the course grade **0**
* More than one student response question was posed per class or online equivalent, counted towards the course grade **0**
* More than one student response question was posed per class or online equivalent, followed by student-student discussion (synchronous or asynchronous, such as via online discussion boards) **2**
* None of these

Check all that typically occurred both before and after class or online equivalent. [(Ambrose et al., 2010; Froyd, 2008; Novak et al., 1999; Pascarella & Terenzini, 2005)](https://paperpile.com/c/4u3X7j/Ys1e%2BDXLn%2BTsge%2BUkdN)

* You were asked to read/view material for upcoming class or online equivalent **0**
* You were asked to read/view material on upcoming class or online equivalent and complete assignments or quizzes on it shortly before the beginning of the class or online equivalent **2**
* You completed a reflective activity at the end of class or online equivalent (students briefly answering questions, reflecting on lecture and/or their learning, etc.) **1**
* None of these

**References**

[Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). *How Learning Works: Seven Research-Based Principles for Smart Teaching*. John Wiley & Sons.](http://paperpile.com/b/4u3X7j/UkdN)

[Atkinson, R. K., Derry, S. J., Renkl, A., & Wortham, D. (2000). Learning from Examples: Instructional Principles from the Worked Examples Research. *Review of Educational Research*, *70*(2), 181–214.](http://paperpile.com/b/4u3X7j/P7i7)

[Black, P., & Wiliam, D. (1998). Assessment and Classroom Learning. In *Assessment in Education: Principles, Policy & Practice* (Vol. 5, Issue 1, pp. 7–74). https://doi.org/](http://paperpile.com/b/4u3X7j/M7DC)[10.1080/0969595980050102](http://dx.doi.org/10.1080/0969595980050102)

[Centra, J. A. (1973). Effectiveness of student feedback in modifying college instruction. *Journal of Educational Psychology*, *65*(3), 395–401.](http://paperpile.com/b/4u3X7j/ydEa)

[Cohen, P. A. (1980). Effectiveness of student-rating feedback for improving college instruction: A meta-analysis of findings. *Research in Higher Education*, *13*(4), 321–341.](http://paperpile.com/b/4u3X7j/TvSk)

[Cooper, H., Robinson, J. C., & Patall, E. A. (2006). Does Homework Improve Academic Achievement? A Synthesis of Research, 1987–2003. *Review of Educational Research*, *76*(1), 1–62.](http://paperpile.com/b/4u3X7j/Odxh)

[Diamond, M. R. (2004). The usefulness of structured mid-term feedback as a catalyst for change in higher education classes. *Active Learning in Higher Education*, *5*(3), 217–231.](http://paperpile.com/b/4u3X7j/ZFUR)

[Froyd, J. E. (2008). White paper on promising practices in undergraduate STEM education. *Commissioned Paper for the Evidence on Promising Practices in Undergraduate Science, Technology, Engineering, and Mathematics (STEM) Education Project, The National Academies Board on Science Education*.](http://paperpile.com/b/4u3X7j/Tsge) <http://www.physics.emory.edu/faculty/weeks/journal/froyd-na08.pdf>

[Gess-Newsome, J. (1999). Pedagogical Content Knowledge: An Introduction and Orientation. In J. Gess-Newsome & N. G. Lederman (Eds.), *Examining Pedagogical Content Knowledge: The Construct and its Implications for Science Education* (pp. 3–17). Springer Netherlands.](http://paperpile.com/b/4u3X7j/lQIe)

[Gibbs, G., & Simpson, C. (2005). Conditions under which assessment supports students’ learning. *Learning and Teaching in Higher Education*, *1*, 3–31.](http://paperpile.com/b/4u3X7j/g9kz)

[Hattie, J., & Timperley, H. (2007). The Power of Feedback. In *Review of Educational Research* (Vol. 77, Issue 1, pp. 81–112). https://doi.org/](http://paperpile.com/b/4u3X7j/e7p8)[10.3102/003465430298487](http://dx.doi.org/10.3102/003465430298487)

[Kiewra, K. A. (1985). Providing the Instructor’s Notes: An Effective Addition to Student Notetaking. In *Educational Psychologist* (Vol. 20, Issue 1, pp. 33–39). https://doi.org/](http://paperpile.com/b/4u3X7j/S2w0)[10.1207/s15326985ep2001\_5](http://dx.doi.org/10.1207/s15326985ep2001_5)

[Kuh, G. D. (2008). *High-impact Educational Practices: What They Are, who Has Access to Them, and why They Matter*. Association of American Colleges and Universities.](http://paperpile.com/b/4u3X7j/3xTV)

[National Research Council, Division of Behavioral and Social Sciences and Education, Board on Behavioral, Cognitive, and Sensory Sciences, & Committee on Developments in the Science of Learning with additional material from the Committee on Learning Research and Educational Practice. (2000). *How People Learn: Brain, Mind, Experience, and School: Expanded Edition*. National Academies Press.](http://paperpile.com/b/4u3X7j/r3v3)

[Novak, G. M., Patterson, E., Gavrin, A., & Christian, W. (1999). *Just-in-time Teaching: Blending Active Learning with Web Technology*. Prentice Hall.](http://paperpile.com/b/4u3X7j/Ys1e)

[Pascarella, E. T., & Terenzini, P. T. (2005). *A third decade of research. Vol. 2 of How college affects students*. San Francisco: Jossey-Bass.](http://paperpile.com/b/4u3X7j/DXLn)

[Pintrich, P. R. (2003). A Motivational Science Perspective on the Role of Student Motivation in Learning and Teaching Contexts. *Journal of Educational Psychology*, *95*(4), 667–686.](http://paperpile.com/b/4u3X7j/8TEJ)

[Sadler, P. M., Sonnert, G., Coyle, H. P., Cook-Smith, N., & Miller, J. L. (2013). The influence of teachers’ knowledge on student learning in middle school physical science classrooms. *American Educational Research Journal*, *50*(5), 1020–1049.](http://paperpile.com/b/4u3X7j/1xra)

[Walberg, H. J., & Others, A. (1985). Homework’s Powerful Effects on Learning. *Educational Leadership: Journal of the Department of Supervision and Curriculum Development, N.E.A*, *42*(7), 76–79.](http://paperpile.com/b/4u3X7j/ixXg)