

Peer Observations of Blended Learning Situations: Principles for Teaching in Higher Education 2020

Contents

Context 2020	1
Updated Understandings of Effective Teaching	2
Peer Observation	3
Builds Rapport	5
Principle 1 Revised: Build rapport between students and faculty through meaningful contact	5
Principle 2 Revised: Develops reciprocity and cooperation among students	6
Principle 3 Revised: Encourages and embeds active learning	7
Principle 4 Revised Respects, accommodate, supports diverse talents and paths to learning	9
Organizes Learning	10
Principle 5 Revised: Communicates high expectations and pathways to achievement for all students	10
Principle 6 Revised: Provides an organized course, organized class sessions, and clarity throughout the course	12
Principle 7 Revised: Gives prompt feedback and checks for understanding.....	13
Principle 8: Guides students to deeper learning through metacognitive activities	15

Context 2020

During this time of teaching in classrooms with using masks and maintaining social distancing in rooms, using synchronous video technology such as Zoom, and other technologies, the goals of delivering instruction have changed to emphasize less crowding in rooms and attention to restricting the passing of a virus in the air. This prevents offering face-to-face (f2f) activities such as typical “group work” around tables or “pair-sharing” sitting side-by-side with peers. Our courses that do involve some f2f components are a blend that reacts to all these health factors and will not look the same as the traditional hybrid course. Hence, this guide reflects our current 2020-21 circumstances.

It also includes comments on what we might and might not expect during an observation—whether in a physical classroom, in synchronous teaching session, and observing other variations on teaching.

For Fall 2020 and possibly future semesters, the nature of peer review—and specifically peer observation of teaching—will need to adapt to new circumstances and uses of technologies and physical spaces. At Clemson, many colleges and departments have peer reviews through TPR and other committees. These reviews should follow the Faculty Manual. For more resources on peer observation and peer review, please see OTEI Resources on [Review of Teaching](#) and a project between OTEI and CAFLS in which we describe how to pull in a variety of ways to review teaching at Clemson. <https://www.clemson.edu/cafls/teaching/index.html>

Principles of Good Practice in Higher Educational Instruction 2020

The instructor:

Builds Rapport:

1. *Builds rapport between students and faculty through meaningful contact*
2. *Develops reciprocity and cooperation among students*
3. *Encourages and embeds active learning*
4. *Respects, accommodates, supports diverse talents and paths to learning*

Organizes Learning:

1. *Communicates high expectations and pathways to achievement for all students*
2. *Provides an organized course, organized class sessions, and clarity throughout the course*
3. *Gives prompt feedback and checks for student understanding*
4. *Guides students towards deeper learning through metacognition*

This list is a revision of Chickering and Gamson. The 1987 “Seven Principles for Good Practice in Undergraduate Education” by Arthur Chickering and Zelda Gamson is a list of principles that emerged from decades of educational research and has been a staple of discussions of higher education for undergraduates and used by associates such as the AACU (American Association of Colleges and Universities).

The Seven Principles conclude that good practice:

1. Encourages contact between students and faculty
2. Develops reciprocity and cooperation among students
3. Encourages active learning
4. Gives prompt feedback
5. Emphasizes time on task
6. Communicates high expectations
7. Respects diverse talents and ways of learning.

Chickering, A. & Gamson, Z. (1987). Seven principles for good practice in undergraduate education. AAHE Bulletin (39) 7.

Updated Understandings of Effective Teaching

Since publication of Chickering and Gamson’s principles were published, significant meta-analyses of teaching and learning effectiveness has been conducted and supports these practices. The work of J. Hattie (2003; 2008) offers analysis that led to a focus on top evidence-based teaching practices, many of which are more like principles or concepts than specifically defined practices (see descriptions of 10 of these at <https://www.clemson.edu/otei/evidence-based.html>). These are considered “evidence-based” because of the evidence that application of these approaches or principles increases student learning. Much of this work is also included in the recent “Model Teaching” work of the APA (American Psychology Association) Teaching Society, in

a project led by Dr. Regan Gurung (Richmond, A. S., Boysen, G. A., & Gurung, R. A. R., 2016; <https://regangurung.com/model-teaching/>). The APA Teaching Society also reviewed research on student reviews of teaching. There are at least two principles that should be added to Chickering and Gamson as well: rapport and organization (Marsh, 2007, 1993; Marsh & Roche, 1993). Research from Marsh and Roche examine the complexity of teaching as multi-dimensional, including aspects of clarity, organization, interactions, and enthusiasm (this last is a term that may introduce bias if not adjusted for cultural and gender expectations and differences). Consider the list above developed from Hattie's work and other research, and you will see some overlap.

Clearly, several items are also represented in the Chickering and Gamson list, and other items have some alignment.

- For instance, stating learning goals / outcomes could be a central practice to communicating high expectations. The literature is clear as well that this is one of the most effective practices when outcomes are stated and clarified not just on the syllabus but regularly in class.
- Contact between instructors and students builds rapport but other activities do as well, such as using names, showing respectful consideration of students, being approachable and reachable for support.
- Hattie noted that prompt feedback was highly important but realized that research showed checking for understanding (getting feedback *from* students) was even more important to learning.
- Presentation of content is represented in recommendations in the research yet not included in Chickering/Gamson and include: sharing concepts and modeling concepts and use (by faculty and students) or graphic, visual representations. Both practices are highly effective for learning.
- Share and model is directly connected to active learning, as instructors model what students will then do.
- Time on task is not the same as building in time to succeed and repeat, spaced practice. All practices are recognized in psychological and educational literature as needed for learning.
- It may go without saying, but disorganization will interfere with time on task and ways of learning. Clarity in all aspects supports student learning but is especially important for students from underrepresented groups and minorities. Using "transparent" practices with instructions, grading, and feedback all support student success.
- Teaching strategies to learn and nurturing metacognition—encouraging thinking about one's thinking—have gained more recognition as important to learning in higher education, since Chickering and Gamson.
- Effective teaching practices and principles apply to graduate students as well as undergraduate students although modified for an adult learner. Still, graduate students also need structure to learn to learn as a graduate, as opposed to an undergraduate, student and other aspects of learning apply to all no matter age (such as modeling or graphic representation or need to build rapport).

Peer Observation

This document is a modification by OTEI director Taimi Olsen of the Penn State *Peer Review Guide for Face-to-Face and Hybrid Courses*, developed by Ann H. Taylor, Amy Garbrick, and Wendy Mahan for Penn State Online. Penn State adapts "the Seven Principles to facilitate the peer review of face-to-face and hybrid courses in both undergraduate- and graduate-level online courses at Penn State. Each principle is described in detail, including evidence of how a principle may be met. Examples of evidence to look for and resources for additional information are also included. While, ideally, good practice would suggest that all seven principles would be supported in some way in a face-to-face or hybrid course, variations in course format, size, and faculty teaching experience can make reaching that ideal difficult."

Hybrid courses are traditionally defined as “courses that combine Web and traditional face-to-face classroom instruction. Hybrid courses are organized to reduce or replace the number of required face-to-face class sessions in order to improve effectiveness and flexibility for instructors and students and/or to achieve other efficiencies. Hybrid courses reduce by approximately 40% or more of the number of required classroom sessions, although some classroom sessions are required.” (See <http://weblearning.psu.edu/resources/glossary/>)

Observation of Teaching faces many challenges this year. For context and guidelines established for traditional face-to-face courses (f2f), OTEI has an [observation guide](#) and sample checklists posted online. However, the new situation, where faculty may be blending asynchronous and synchronous teaching—whether online or in a physical classroom—is so unusual that Educause (a national education group focused on technology and teaching), has coined a new term: bichronous.

The following tables guiding an observation are adjusted to recognize that we may not be able to enter a room (due to social distancing), that synchronous lectures may be delivered online or both online and face-to-face, and that the tradition of peer observation has changed. Peer observation has meant that faculty visit faculty and sit in on class, then write a letter summarizing and evaluating that experience. Online courses have until now been evaluated in a completely different way. For online programs, most universities evaluate the new course through course design evaluation templates and checklists; direct peer observation is not a typical practice for online course evaluation. This fall 2020, many departments are proposing to merge the two approaches to review. OTEI cautions that this should not happen without reflection on current practices, on the new reality, and on what we know currently about best practices in peer review and peer observation.

The tables below, most from Penn State’s document, have been modified to account for these new situations in teaching mentioned above.

Some larger considerations that may be obvious but worth stating:

- Peer observations (as with all parts of peer review) should be conducted fairly and ethically in line with the literature on conducting reviews. How can the committees protect those reviewed during this year?
- Peer observers should be trained in methods of conducting observations. What training can be acquired?
- During a pandemic, in which all employees are treated with understanding for difficult circumstances, so too should the reviewer and person being reviewed. This is a stressful process under any situation.
- Has the person who is being reviewed had some previous experience with teaching online—or not? How new is this modality?
- Consider that many of our teaching circumstances this year are new to everyone—experienced or not.
- How can the review be carried out so that there is an evaluation that is not punitive but allows for growth?
- Persons of color, international faculty, and women are all at risk of being perceived in bias ways; there has been a great deal of discussion in higher education about these issues. What training does the reviewer have to mitigate their own biases as well as stay aware of relevant factors that may potentially skew the class situation?

Committees may need to monitor more closely than in past years or may need to put checks in place. Emphasizing self-review this year more heavily is highly recommended. Only those individuals know all the challenges they are facing. In the lists below, an observer of a synchronous online “live” or f2f class session may see only one example (if that) of each principle below. The principle may also be adequately covered through the LMS course structure, so examples are given there as well. These example lists are not exhaustive but present common techniques.

Builds Rapport

Principle 1 Revised: Build rapport between students and faculty through meaningful contact

“Frequent and timely student-faculty contact is the most important factor in student motivation and involvement, particularly in a hybrid environment. Evidence of faculty concern helps students get through challenging situations and inspires them to persevere. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans.” Penn State

Students today ask for instructors to be “available” in a search for this personal contact. Some research has shown that just the knowledge that an instructor is available increases student learning (whether the student responds and uses this instructor time or not). The most often suggested manner of building rapport with others is to use names during conversation. A second frequent suggestion is to send conversational emails checking in and showing concern, to all individual students in the course, which is easier to manage with the LMS. All people have patterns of behavior in engagement and cultural practices. Good teachers foster their own self-awareness of conversational patterns, ways of interacting, and look for gaps or ways to extend engaging practices.

Examples of evidence to look for:

In a class session (synchronous “live” online or f2f), the instructor...

- Encourages and fosters a healthy exchange of ideas and sharing of experiences among course participants.
- Encourages students to share their questions, examples, and experiences
- Accepts students’ responses
- Treats students as individuals, e.g., addresses students by name
- Checks individual and/or groups of students’ understanding of the material/approach
- Listens, pauses, makes connections among ideas (from students)
- Arrives early to a class session and talks with students or stays after a class session and engages students. If not possible, provides ways for students to connect (encouraging chat, music sharing) and provides alternate ways to connect flexibly.

Additional examples to look for in the LMS (Canvas) online environment:

The instructor...

- Provides a "welcome message" at the beginning of the course that encourages student-to-instructor contact

- Provides a way for students to introduce themselves to instructor and each other
- Initiates contact with, or responds to, students on a regular basis in order to establish a consistent online presence in the course
- Gives students prior notice in the event that the instructor will be unavailable for a period of time
- Uses a prominent announcement area to communicate important up-to-date course information to students, such as reminders of impending assignment due dates, curriculum changes, scheduled absences, etc.
- Responds to student inquiries in a timely manner
- Provides students with interaction space for study groups, suggests sign-up methods, and encourages inclusive study groups

Principle 2 Revised: Develops reciprocity and cooperation among students

“Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions sharpens thinking and deepens understanding.” Penn State

Peer learning is often used interchangeably with active learning, yet the principles of learning are different. All peer learning should be a purposeful and meaningful exchange between two or more students and creates an opening for peers to “interpret” the expert learner who is the instructor. Different methods exist for peer learning, such as Mazur’s Peer Teaching method, whereby students are polled on concept questions, asked to discuss with a peer, and then repolled on their understanding. Casual groups can help build community, get students talking and sharing, and give them opportunities to help each other and build study groups. Beyond these benefits, though, some more thought and structure may be needed as well as clearly stated to the students.

Examples of evidence to look for

In a class session (synchronous “live” online or f2f), the instructor...

- Provides or solicits discussion prompts that help to guide and elicit student participation in class discussion activities.
- Facilitates class discussions by encouraging, probing, questioning, summarizing, and other methods of developing deeper understanding.
- Prompts students to do the same, to probe, question or extend the conversation

- Uses methods of peer learning, such as “pair-share” and other types of activities.
- Regularly divides students into groups, using break-out rooms and other methods to organize students whether online or f2f, including both types of student in participation.
- Provides support or lessons for students on “team roles”
- Checks that all students participate in most class sessions
- Prevents specific students from dominating activities/discussions
- Guides the direction of discussions, mediating conflict or differences of opinion
- Involves all students in problem-solving and critical thinking around concepts

Additional examples to look for in the LMS (Canvas) online environment:

The instructor...

- Encourages students to strengthen their online presence
- Explains the criteria for “good” online discussion participation and provides guidelines are provided to ensure respectful online interaction
- Models good online discussion participation practices and actively monitors and engages in the discussions
- Provides students with interaction space(s) for study groups, “hallway conversations,” and other ways to connect.
- Builds in assignments that can be done in small groups
- Provides regular opportunities for students to engage in one or more of the following activities: formal and/or informal discussions of course topics, collaborative course assignments, and study groups

Principle 3 Revised: Encourages and embeds active learning

“Active learning methods engage students in the learning process by encouraging them to discover, process, and apply information. Empirical support for the positive impact of active learning on student achievement is extensive. “ Penn State

Active learning has been advocated for in higher education for decades but we are only now realizing the various ways students can be active—or engaged—in learning during a class session. Building strong college or graduate level skills for individual learning is now seen as something the instructor can guide students in, whether directly or with academic support units. “Active learning” can include many ways students “learn to learn” at this level of education in the U.S., such as how to read and study more effectively; how to take effective notes during a class; how to study effectively. “Writing to learn” and “visual note-taking” activities can help students actively reflect on their learning as well as build graphic, cognitive “maps” of concepts. “Active lecture” is a term that some use to signal how instructors blend small, ongoing active learning activities within a lecture format. “Group work” has been around in U.S. higher education for decades but

can be misused, overused, or used in situations where individual learning is better. Keep groups as small as possible for the type of activity (short-term activities are best done in twos, threes or fours, to prevent “hangers on”). Certainly, team learning needs higher levels of structure and accountability—and often time. Some measure of individual accountability or measures of learning are needed for all group work, including group tests.

Examples of evidence to look for

In a class session (synchronous “live” online or f2f), the instructor...

- Incorporates / embeds regular, small amounts of active learning within lecture, such as “pair-share”, clicker questions, or other polling
- Active learning activities provide ways for students to 1. Think through material prior to moving on 2. Extend into critical thinking 3. Check their understanding through a question prompt or posed problem
- Activities are “formative” (not graded, although could be participatory points)
- New information can be organized through prompts to structure / review lecture notes, answer reflective questions, pose a scenario or sample problem, or pause for students to draw a graphic representation of information.
- Checks student learning during a class session are done through activity that can be immediately reviewed and amended by instructor.
- Draws non-participating students into activities and discussions or reflections on content (instructor tracks which students answer frequently, draws in other students “back of the room” students, in friendly ways.
- Collaborative apps are used during class for students to share learning, provide peer-to-peer learning (e.g. Google collaborative doc or Zoom breakouts).

Additional examples to look for in the LMS (Canvas) online environment:

The instructor...

- Creates assignments that provide ongoing checks on learning (homework, discussion threads, multi-media and visual activities) and multiple practice (“space practice”).
- Uses discussion threads or other Conversation Apps (VoiceThread etc) to post challenging questions
- Group assignments are offered
- Channels for students to post Q and As

Principle 4 Revised Respects, accommodate, supports diverse talents and paths to learning

People bring different talents and styles of learning to the learning environment. Some bring a wealth of relevant experience to a course, while others may be new to the topic at hand. Likewise, students who are strong in a discussion situation may be less adept at lab or studio work. Students need the opportunity to demonstrate their talents and to “personalize” their learning so that it is relevant to them. It is also important to give students opportunities to learn in ways that may be less comfortable in order to improve their learning skills. Penn State

What we mean as “respecting” diversity has expanded (or at least is more closely examined) today and the instructor’s approach needs to be communicated intentionally and clearly to students to have the most positive results. Universal design for learning can provide guidance for practices that are inclusive of many types of students; culturally responsive teaching and relevant course design can build a course that is inclusive of the many backgrounds of our students.

Examples of evidence to look for

In a class session (synchronous online “live” or f2f), the instructor...

- Provides timely, corrective feedback for learning activities.
- Uses “transparency” practices as mentioned in several principles above
- Includes a policy for accommodations on the course syllabus
- Provides accessible materials
- Applies universal design for learning guidelines, such as building in more than one way to learn material and to show learning.
- Proactively offers accommodations for students with disabilities / incorporates accessible materials and uses universal design for learning course design.
- Uses multiple modes of instruction
- Provides opportunities and time for students to practice.
- Provides a variety of examples and contexts to evoke interest in students with a diversity of identity characteristics.
- Attends to how the discipline situates itself historically with diverse populations and brings diverse examples forward or discusses ways to improve in the profession and the research
- Identifies diverse sources, perspectives, and authorities of the field
- Encourages comments and questions from students with a diversity of identity characteristics—without calling out or isolating students of diversity.

- See active learning and rapport building principles and be aware of including all students in the course from the first day.

Additional examples to look for in the LMS (Canvas) online environment:

The instructor...

- Prioritizes organization and checks organization (such as LMS navigation) with all students
- Prioritizes ongoing, clear communication
- Avoids isolating students of diversity (however that appears in your discipline) in small groups, especially on purpose.

Organizes Learning

Principle 5 Revised: Communicates high expectations and pathways to achievement for all students

As the saying goes, “if you don’t know where you are going, how will you know when you get there?” Effective instructors have high, but reasonable, expectations for their students. They clearly communicate those expectations and provide support to their students in their efforts to meet those expectations. Penn State

While instructors often worry that “too much help” detracts from rigor, this has not been shown in the research to be true. Students who are in the first years of college need more explicit support with college learning generally; students in majors need assistance recognizing and attaining high levels of demonstrated learning, that translate to starting professional careers. Additionally, the literature on learning shows that repetition is critical to deep learning.

Additionally, frequency of practice and feedback does not decrease the rigor if the work is at high levels of effort, knowledge and skill but there should be pathways for students to fill in “gaps” in knowledge and skill. This is an inclusive practice if adopted as a broad principle, to be transparent with students about high-level work. Plus, this is not one-way communication with students. Students can or should “co-create” their expectations of themselves for learning, working with instructors, by verbalizing expectations of themselves on many aspects of a course.

Examples of evidence to look for

In a class session (synchronous online “live” or f2f), the instructor...

- States learning goals/objectives (also called learning outcomes) and has students state or restate such goals in their own language as they are able.
- Models the work expected through sharing own work, providing demonstrations etc.
- Provides examples of other students’ high level work and mid-level work, explaining how work met criteria (making these expectations “transparent” to students)
- Corrects misguided responses or redirects obvious or easy questions.
- Relates material to previous class(es), or provides students with an opportunity to do so.
- Elaborates or repeats complex information.
- Notes new terms or concepts.
- Communicates the reasoning process behind operations and/or concepts.
- Conveys the purpose of each class activity or assignment.
- Provides rubrics, checklists, criteria sheets or other guides to successful work (or involves students in creating those rubrics)
- Provides steps to finishing complex assignments or studying for large tests (or involves students in listing out the major steps to work)
- May address any of the items below, during a class session.

Additional examples to look for in the LMS (Canvas) online environment:

The instructor...

- Explicitly communicates the skills and knowledge every student needs to have in order to be successful in the course and in each major assignment.
- Explains course learning goals and how assignments are designed to help students achieve those goals.
- Uses positive phrasing first to encourage success; addresses common problems (plagiarism, cheating) second.
- Provides frequent feedback to students through written explanations and detailed feedback on assignments.
- Motivates and encourages students to inspire them to move past the easy answers to more complex solutions.
- Routinely uses critical and probing questions when communicating with students about course assignments and activities.
- Provides examples and non-examples of high-quality work, along with a discussion of the differences between these.
- Provides examples of student work that demonstrate advancement toward learning goals.

Principle 6 Revised: Provides an organized course, organized class sessions, and clarity throughout the course

Given decades of student feedback and research studies, clarity and organization is a high-level guiding principle that supports student learning. Students may find disorganization or lack of clarity to be a barrier to learning. Organization and clarity helps all students (hence it is an element of universal design for learning, as are many other principles), but this especially helps students with less resources or college skills, such as first generation students, minority students, self-supporting students, students with disabilities, and others.

Clarity is also often the aspect most often recognized by peers observers who are not trained in educational methods but relying on disciplinary training—hence the focus traditionally on clear PowerPoints, clear and easily understood speech, precise use of terminology, and some elements of “presence” such as voice tone, eye contact and posture. Organization as well often is seen through the disciplinary lens, in terms of how concepts are introduced, explained, and sequenced.

The aspects of clarity and organization should also be seen through a student (novice) perspective as well and include understanding how the current population of students navigates a lesson and identifies important elements of a lesson. We even need to consider how media is perceived and used by students and consider how our lessons present visual, video, audio and graphic information—rather than solely relying on text.

Examples of evidence to look for

In a class session (synchronous online “live” or f2f), the instructor...

- Provides an outline or organization for the class session
- Situates learning with learning goals/outcomes (may be new or a reminder of learning objectives being worked on).
- If the course has a companion lab or has lab sections, learning objectives are well integrated and students are told the explicit links.
- Makes announcements to the class addressing upcoming assignments and exams.
- Provides explicit directions for active learning tasks, e.g., rationale, duration, product.
- Instructions are written as well as verbal, to support student attention
- Allows sufficient time to complete tasks, such as group work.
- Starts a class session on time
- Follows a stated structure and completes the scheduled topics
- Wraps up class revisiting learning objectives and looking to HW and next class.
- Checks with students on navigating LMS / demonstrates location of items on the LMS
- Maintains and reviews an up-to-date LMS calendar linked to assignments

- Builds elements above (clear objectives, goals, structure and wrap-up) into the Powerpoint or other presentation medium. Students are given instructions in writing as well as verbally.
- The organizational flow of content is strong. Visual elements are prominent; good design principles are used so the material presented does not distract learners.

Additional examples to look for in the LMS (Canvas) online environment:

The instructor...

- Provides an estimate of the amount of time students should spend on the course, e.g., “On average, most students spend eight hours per week working on course assignments. Your workload may be more or less depending on...”
- Gives time-to-completion information on course assignments, and/or shares course statistics that demonstrate that time-to-completion and weekly time-on-task estimates are on target.
- Accurately posts due dates in the LMS for the semester—required for major assignments and tests. Also either establishes a routine for homework completion (at regular intervals) or posts dates well in advance of the start of a smaller HW activity.
- Provides course-specific study tips and resources that provide students with strategies for utilizing their time well (during class or online) and links to find assistance (e.g. student success center, library, or writing center).
- Provides assignment feedback that gives students with information on where to focus their studies.
- Considers the nature of the student audience when considering assignment due dates and timeframes, e.g., a course targeted to working adult professionals or graduate students might incorporate a weekend into an assignment timeframe or account for workloads.

Principle 7 Revised: Gives prompt feedback and checks for understanding

Instructors help students frequently assess their knowledge and competence and provide them with opportunities to perform, receive meaningful suggestions, and reflect on their learning. Penn State

The “old way” of asking for mid-semester course feedback has now been replaced by a “feedback loop” in which instructors check on how students are learning throughout the course. A pre-check or background check at the start lets an instructor understand the level of knowledge students have on entering the class (on an individual basis, rather than general expectations of students). A check on how things are going may happen in the first third of class, giving an instructor time to adjust. These formative (often anonymous surveys on student learning) are a powerful tool.

Hattie (2008) found that this information back to the instructor increased student learning *more* than instructor feedback to the student on student work.

Examples of evidence to look for

In a class session (synchronous or f2f), the instructor...

- Structures discussions of material based on feedback on students' understanding.
- Surveys students to elicit feedback on previous class or homework.
- During the class, praises/acknowledges responses from the class.
- Helps students to extend their responses.
- Provides students with periodic feedback.
- Uses appropriate, specific positive reinforcement (again, using names frequently).
- Asks students in groups / pairs to provide feedback to peers. Instructor then actively monitors student work
- Concludes a session with an assessment of student understanding, showing areas of confusion or clarity.

Additional examples to look for in the LMS (Canvas) online environment:

The instructor...

- Surveys students to elicit feedback for course improvement.
- Includes information about course feedback methods and standards on the course syllabus.
- Provides an option (or requirement) for students to submit drafts of assignments for instructor feedback.
- Provides meaningful feedback on student assignments that is provided within a publicized, and reasonable, time frame.
- Provides assignment feedback that is clear, positive, specific, and focused on observable behavior that can be changed.
- Clearly communicates course and individual assignment grading criteria.
- Provides textbook or homework systems that provide immediate feedback to students solving problems, taking quizzes.
- Gives students access to an up-to-date course gradebook.
- Provides an open discussion forum where students can ask questions, and receive instructor feedback, about course content and activities.
- Shares examples of student work that demonstrate advancement toward learning goals

Principle 8: Guides students to deeper learning through metacognitive activities

This topic of “thinking about thinking” has gained greater focus in higher educational instruction in recent years (Perry, Lundie & Golder, 2018; Karpicke, Butler & Roediger, 2009; Biggs, 1999). The research and teaching group, Improve with Metacognition (<https://www.improvewithmetacognition.com/>), defines metacognition as referring to an “intentional focusing of attention on a process in which one is personally engaged. It encourages awareness of one’s current state of accomplishment, along with the situational influences and strategy choices that ... influenced accomplishment of that process...More succinctly, metacognition is the use of reflective awareness to make timely adjustments (self-regulation) to behaviors that support a goal-directed process (e.g. learning, teaching, driving, cooking, writing).” Particularly with traditional-aged students who are finishing cognitive development in their early twenties, but also with older students facing new academic challenges, encouraging *thinking about their thinking* is a valuable addition to our teaching repertoire.

Examples of evidence to look for

In a class session (synchronous or f2f), the instructor...

- Ask students to extend their thinking, using prompts and activities that focus in on aspects of critical thinking and self-awareness.
- Posts feedback from former students or previous classes, to help make students more aware of best learning practices.
- Highlights and spends time on difficult concepts, breaking these concepts down into their components
- Has students engage in “writing to learn” and reflective writing exercises.
- Brings peers together to engage in critical thinking exercises
- Asks students about study habits, references resources to improve learning, shows / models how experts in the field learn.

Additional examples to look for in the LMS (Canvas) online environment:

The instructor...

- Posts activities for students to complete
- Prompts all students to complete examinations of test-taking and studying skills, through activities such as “exam wrapper” assignments.
- Has students compare processes for studying, to make best habits more transparent (discussion or group work online)

- Provides mechanisms to connect all students with study partners (apps to connect, “study halls”)
 - Posts resources at the campus to improve student academic skills (tutoring, skill courses)
-

Use the list above as a guide to what to look for. For templates for observational note-taking and, other resources, please see OTEI Resources on [Review of Teaching](#). For further examination of peer review, see the project between OTEI and CAFLS in which we describe how to pull in a variety of ways to review teaching at Clemson. <https://www.clemson.edu/cafls/teaching/index.html>