

Instructor Self-Reflection On Teaching

Who?

This document is for **faculty who want to continuously improve their teaching**. The recommendations in this document align with the Contributions to Teaching described in the University of Georgia [Guidelines for Appointment, Promotion and Tenure](#). One way to demonstrate evidence of teaching effectiveness is providing “indicators of ongoing efforts to make teaching decisions based on evidence and to improve teaching and instruction” (pg. 14).

What?

This document explains **how to use self-reflection** as a process for continuously improving teaching. Self-reflection complements student and peer feedback by enabling instructors to consider and explain teaching decisions. The process of self-reflection involves:

- **collection of evidence** or **systematic observation**,
- **analysis** of the evidence or observations,
- **reflection** on the findings to make sense of them, resulting in new **knowledge**, and
- **decision-making** about future lessons or courses.

When?

Self-reflection matters at three main times: each time you teach a course, annually during review, and during promotion and tenure decisions. Examining evidence each time you teach can help you make improvements and determine whether improvements worked. Annual reporting of reflection helps document for administrators how you are thinking and improving as an instructor. Documentation of reflection over time shows your teaching trajectory for promotion and/or tenure.

Where?

Self-reflection takes place inside and outside the classroom. You collect evidence and make observations inside the classroom. You decide what teaching challenges to tackle and the evidence necessary to do so outside the classroom. You need not work alone to engage in self-reflection. As in research endeavors, collaboration with peers and experts brings perspectives and ideas different than your own and ultimately generates more creative and diverse solutions. These collaborations can take place informally through impromptu conversations or formally in workshops and professional development.

How?

This document includes multiple resources to support your self-reflection process, including:

- [A detailed guide for the self-reflection process](#), including examples of teaching challenges and approaches to collecting and analyzing evidence
- [A template for writing a self-reflection for annual review](#)
- [A rubric to evaluate written-self reflections](#) that department leaders could use for annual review
- [Examples of written self-reflections](#) for annual review for faculty who have different levels of experience with the self-reflection process

The Self-Reflection Process

The self-reflection process is visualized below. Self-reflection follows a cycle where the decisions you make one semester influence the collection of evidence and observations in subsequent semesters. You can undertake this process individually or with colleagues.



Decision making: Identifying challenges and responses. A key step of the self-reflection process is choosing a teaching challenge on which you will focus your efforts. Every time you collect evidence to address a teaching challenge you have the opportunity to improve your teaching by responding to what you learned.

If you are new to self-reflection, you may find that you are not sure what your teaching challenges really are. If you have received specific suggestions from peer observations, mid-semester evaluations, or end-of-course evaluations, take that as your first challenge. If you are still working to identify challenges, it is appropriate to focus your self-reflections on exploring potential challenges, not trying to solve them. As you get started, it is also useful to reflect on the way you teach rather than the impact of your teaching. For example, you could reflect on the way you present concepts, provide practice for students, or assess their learning.


If self-reflection is already part of your teaching routine, you may have already identified challenges in your course(s) and you may have even tried to address them. In this case, it is appropriate to select one such challenge and begin with your latest attempt at a response. A more experienced instructor should attempt to reflect on the impact of their teaching, rather than just the way they teach. For example, you could reflect on your students' interest in science, sense of belonging, or learning gains.

Questions to help you identify a worthy teaching challenge:

- What would I like to do differently in my course and why?
- What inspiring teaching practices do I want to try?
- What topics or skills seem particularly challenging to students?
- What rationale did I use (implicitly or explicitly) when I chose my particular teaching practices and do those rationales still serve me and my students?
- Why are students' struggling to learn a particular concept or master a particular skill?
- How can I help students improve their learning?
- What are students' experiences in my course and how do these experiences impact them beyond my course?

Examples of worthy teaching challenges:

- Students complain that my exams are too difficult.
- Students do not attend class or breakout sessions.
- Students struggle to learn a particular concept.
- I don't know how to help students learn to read primary literature.
- I am uncertain of the impact of Peer Learning Assistants in my course or how best to involve them in my course.
- I am uncertain whether pre-class quizzes actually help students learn during class.
- I am uncertain whether my teaching increases student interest in science.
- I don't know if my course creates any meaningful long-term learning in my students.
- I wonder if students from marginalized groups feel included and able to learn in my course.
- This site has a very comprehensive list of teaching challenges and even suggests potential strategies: <https://www.cmu.edu/teaching/solveproblem/step1-problem/index.html>



Evidence
collection &
observation

Collecting Evidence & Systematic Observations. Once you have identified a challenge, it's time to determine what evidence will help you understand the challenge and respond to improve your teaching. The data collection itself will most likely take place in your courses. However, some data collection processes happen in professional development, (e.g., as you take notes on ideas from your colleagues), or in collaboration with formal units like the [Office of Institutional Research](#) or [Center for Teaching and Learning](#).

Examples of Evidence to Address Teaching Challenges

The collection of evidence and systematic observation can be informal or formal, short-term or longitudinal. Here are examples of evidence that might be used to address a teaching challenge or learn more about a challenge:

- Informal sources of evidence
 - Interactions with students in class and office hours, documented in notes
 - Short, written feedback from students about their learning. For example, ask students to write for one minute about a concept they have learned or the ideas that are most unclear.
 - Notes about a class lesson that went particularly well or not so well
 - Notes after grading an exam, project, or other assignment

- Notes from working with colleagues on common teaching materials or assessments
- Notes from teaching workshops, CTL events, faculty learning communities
- Formal sources of evidence
 - Assessments that students have completed (e.g., quizzes, papers, exams)
 - Student performance on research-based learning assessments (e.g., pre- and post-testing to document learning). Research-based learning assessments have been investigated for their ability to produce valid and consistent results in particular populations of students.
 - Instructor-generated surveys to gather detailed feedback from students
 - Audio- or video recordings of student behavior in class
 - Student evaluations (i.e., midterm or end-of-course)
- Longitudinal types of evidence
 - Student performance data from Office of Institutional Research, including
 - gaps in performance among different groups of students
 - student performance across different sections of the same course
 - student performance in subsequent courses
- Systematic observation
 - Feedback and insights from Peer Learning Assistants
 - Feedback from trained peers
 - Video-recorded teaching practices, analyzed using protocols that direct attention to specific aspects of instructor and student work.

Determining what evidence or observations you need to collect

If you are new to engaging in self-reflection for continuous teaching improvement, you may feel best prepared to carry out informal, short-term data collection or observation. You may also need to ask open-ended questions of students. As you gain experience with self-reflection, you may decide to gather more formal, longitudinal evidence or observations.

Examples of different types of evidence or systematic observation faculty could use to reflect on example teaching challenges.			
Teaching Challenge	Informal Evidence/Observation	Formal Evidence/Observation	Longitudinal Evidence/Observation
Students complain that my exams are too difficult	Note which exam questions are most difficult and compare these to the opportunities students had to practice in class	Collaborate with a colleague to compare the concepts and cognitive level of exam questions with in-class practice questions for one unit in your course.	Analyze exam questions concept and cognitive level and student performance by question over a series of semesters.
Students' understanding of a particular concept	Take notes after each class session about the most common questions and confusions for the concept.	Thoughtfully design a set of exam questions on the concept and document student performance.	Use the same set of exams questions every semester, covering the concept of interest. Look for trends and how they relate to pedagogy.

Classroom equity among students of different cultural identities	At each office-hour session, invite students to share how they're doing in the class and life. Take notes on any issues that students identify and how students of different identities are experiencing the course.	Generate a survey, vetted with the Office of Inclusion and Diversity, about students' experiences in the course and their cultural identities.	Request and examine student performance data from the Office of Institutional Research, looking for any grade penalties experienced by students from different identities.
Facilitating whole-class discussion	Ask Peer Learning Assistants to provide feedback for ways you could improve whole-class discussion.	Invite CTL to conduct a mid-semester formative evaluation focused in particular on your use of whole-class discussion.	Experiment with new forms of facilitation each semester and compare your mid-semester formative evaluations.

Questions to help guide data collection:

- What evidence or observation do I need to better understand your teaching challenge?
- What evidence or observation would convince me that a change you made to my teaching is having the intended impact?
- How will I know if changes I have made helped students?
- Is my teaching challenge more exploratory and therefore do I need more open-ended data?
- Do research-based assessments exist for measuring the impact I aim to have?



Analysis of Evidence to Address Teaching Challenges. This document assumes that you have selected evidence and observations that you can analyze or have a collaborative partner to help you analyze. Briefly, the type of analysis depends on the type of evidence. Notes, informal feedback, and systematic qualitative observations need to be organized into categories and themes. Surveys and assessment data need quantitative analysis. If you need assistance with analyses of evidence and observations seek help from the DeLTA project and the CTL.



Knowledge: Making Sense of the Teaching Challenge in Light of the Evidence. Once you gather and analyze the evidence, you can reflect and reconsider your teaching challenge in light of this new information. Doing so helps you come up with reasons that explain your findings and identify next steps to improve your teaching or collect more evidence. Here are example questions to facilitate your reflection:

Questions for making sense of the findings:

- What does the evidence suggest about the reasons for this teaching challenge?
- Do my findings align with my expectations and what does this tell me about my expectations?
- What additional evidence could I collect to help me learn more about this challenge?

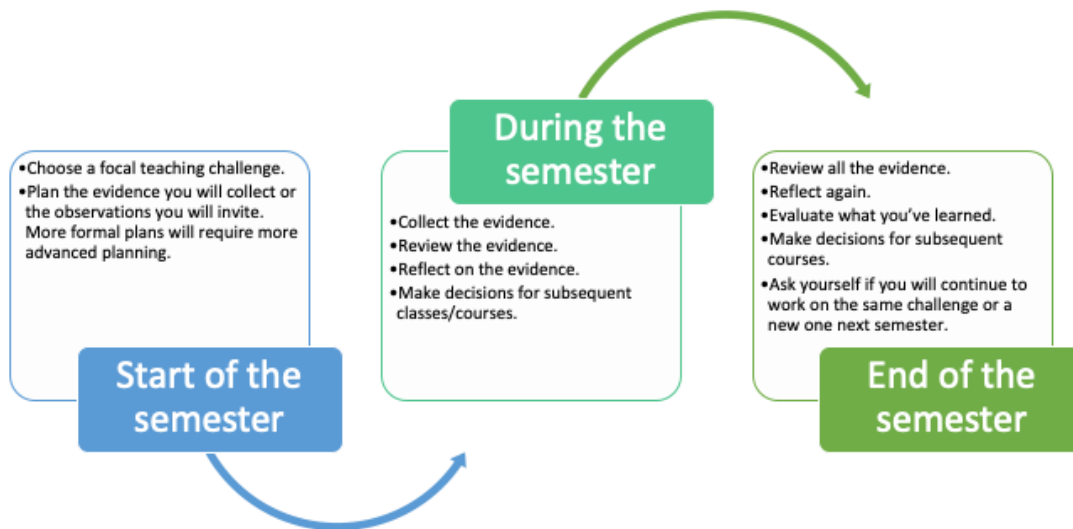
- What are others' experiences with this type of teaching challenge?
- What new questions does the evidence raise?

Questions to determine the implications of the findings:

- Based on the evidence, who should I talk to or what resources should I consult?
- What should I do differently to support student outcomes?
- What teaching plans should I adopt?
- How might Peer Learning Assistants, graduate teaching assistants, co-instructors, and colleagues help me?
- How might the DeLTA project or the CTL help me?
- What strategies exist in the literature to help me improve?

Finally, having collected evidence, analyzed it, reflected, and gained knowledge, you can decide what to do the next time you teach. You should feel confident that this ongoing cycle will lead you to become an increasingly effective teacher.

Timeline and Overview of the Self-Reflection Process.



Template for Self-Reflection Narrative for Annual Review

This template guides you to describe a teaching challenge and the related analysis and knowledge that showcases your commitment to teaching and your ability to continuously improve your teaching in response to evidence.

If used for annual review, we recommend adopting a standardized template, such as the one below, and limiting the document to 1 page.

Teaching challenge considered this year:

What teaching challenge did you put your efforts toward and why was this a worthy challenge? If you are continuing work on a teaching challenge, rather than starting work on a new challenge, you might find it useful to provide a brief overview of your prior work in this section.

Evidence or systematic observation collected:

What evidence or systematic observation did you collect to understand the teaching challenge more deeply?

Analysis of evidence:

How did you analyze the collected evidence or observation and what are the findings of this analysis?

What implications do the findings have for your teaching?

Evidence-based teaching decisions about what and how to change:

What teaching decisions have you made based on this self-reflection process? These may include changes in your teaching approaches, determining the next evidence you need to collect to more deeply understand the teaching challenge, the discovery of a new or different worthy teaching challenge, etc.

Rubric for Evaluating Written Self-Reflections

This rubric can be used by departmental leaders who rely on written self-reflections as evidence in teaching evaluation, such as annual review. This rubric emphasizes the effort that faculty invest into continuous teaching improvement. Specifically, it values taking an evidence-based approach to tackling worthy teaching challenges, rather than valuing specific outcomes. This rubric outlines what failing to meet and meeting expectations would mean for each of four criteria. Rubric users would need to define the gradations appropriate for their context and the appropriate weighting of the four criteria.

Criteria	Not meeting expectations	—————→	Meeting expectations
Selection of a worthy teaching challenge	Instructor selects a superficial problem (i.e., lack of clear importance to learning objectives or other desired student outcomes)	—————→	Instructor selects a meaningful problem with clear implications for course learning objectives and other desired student outcomes
Use of evidence	Instructor relies on little or no evidence, nor systematic observation to inform instruction	—————→	Instructor collects evidence and/or systematic observations of students that are clearly relevant to the specified problem
Analysis of evidence	Instructor does not systematically analyze evidence or analysis cannot reasonably inform decision-making	—————→	Instructor conducts systematic analyses of the evidence collected and analysis results can reasonably inform decision-making
Decision-making based on evidence	Instructor proposes teaching decisions without clear justification from evidence collected and analyzed, nor evidence in the peer-reviewed literature	—————→	Instructors proposes teaching decisions aligned with the analysis of evidence. These decisions represent good next steps.

Examples of Written Self-Reflections

The following examples show the ways some UGA faculty have used self-reflection to continuously improve their teaching:

Example 1: Focus on improving alignment between teaching and assessment. This is an example of a written reflection from a faculty member who is in their first year of teaching. The faculty member identified a teaching challenge and engaged in the self-reflection process to better understand the problem. Using informal evidence and guidance from the CTL, they discovered a potential solution and tried it out.

Written self-reflection narrative for annual review:

Teaching challenge considered this year: During my first year of teaching, students commented on teaching evaluations that my exams were too difficult. They complained that class made the material seem easy, yet when they took my exams they felt completely unprepared.

Evidence collection: Over the summer, I conducted an analysis of the relationship between my exam questions and the practice questions provided in class. Practice questions included clicker questions and questions for small- and large-group discussion.

Analysis of evidence: My analysis revealed that students had sufficient practice on easier topics and multiple-choice items. However, I had not provided sufficient practice for students on challenging topics and short-answer questions. More specifically, only 20% of the in-class questions I posed covered challenging topics and required short answers and written explanation.

Evidence based teaching decisions about what and how to change: I discussed my findings with an Assistant Director in the Center for Teaching and Learning. We came up with the idea to end each class with a short-answer question covering a challenging topic. I gave students ten minutes to answer the question. After class, I reviewed a subset of responses and provided feedback to students the next class period. I implemented this strategy last fall. In my end-of-course evaluations, many students noted how much they appreciated the in-class practice questions, and I had noticeably fewer complaints about the difficulty of my exams.

Example 2: Focus on improving student buy-in to case-based learning. This is an example of a written reflection from a faculty member who is in their tenth year of teaching but their second year of trying a flipped classroom approach. They identified a teaching challenge and engaged in the self-reflection process to better understand the problem. Using informal evidence and guidance from the CTL, they discovered a potential solution and tried it out.

Written self-reflection narrative for annual review:

Teaching challenge considered this year: Two years ago I adopted a flipped classroom approach. My students watch video lectures in advance of class, and during class they complete case studies that situate the content in real-life contexts and require problem solving. I have found new enthusiasm for teaching using this approach, but I was discouraged because many students constantly asked me for keys to the case studies and resisted fully completing the problems on their own.

Evidence collection: Last semester I invited the CTL to conduct a mid-semester formative feedback session with my students, and I asked them to specifically gather feedback about how to improve students' engagement with case study learning.

Analysis of evidence: The CTL reported that most students like the cases. It took them a while to get used to watching videos in advance and completing the cases each week, but they now realize the cases align well with exams. However, the number one concern students voiced was that they needed me to lecture more. The CTL helped me understand students' suggestion that providing a short lecture at the beginning of class could make students feel more oriented to the material and better able to connect the new class material with prior classes.

Evidence based teaching decisions about what and how to change: I learned from this experience that students appreciated the case studies. I realized how important it is to keep creating exam questions based on the case. I reflected on my decision to use minimal lecture and felt this was important to continue because I know students need time to work through the material for themselves. However, I had not previously considered how lost some students feel if I ask them to jump right into the case without orientation to the concepts that are to be learned, which they call lecture. I responded to students' concerns during the next class period. I explained that I would not be lecturing much more frequently because of the importance of giving them time during class to make sense of the material with my guidance. However, I committed to change the way I introduce cases by beginning every class period with a 10-15 minute introduction that shows students what they are supposed to learn and how it connects with prior material.

Example 3: Focus on response to inequities. This is an example of a written reflection from a faculty member who has been working with colleagues in their department in a faculty learning community. The learning community identified a teaching challenge and engaged collaboratively in the self-reflection process to better understand the problem. Using formal evidence from the Office of Institutional Research, the community explored the teaching challenge, designed, implemented, and tested a response.

Written self-reflection narrative for annual review:

Teaching challenge considered this year: My colleagues and I in MATH 2250 meet regularly to discuss student learning outcomes. In summer 2020 amid national concerns about systemic racism, we became concerned that systematic differences in final grades among marginalized groups may be happening in our courses.

Evidence collected: In Fall 2020, we collaborated to collect data from the Office of Institutional Research to see if our concerns were founded. Institutional Research provided us with students' final grades across all sections of MATH 2250 for the past five years.

Analysis of evidence: We analyzed these data using an analytic protocol provided by the DeLTA and HHMI Inclusive Excellence projects. We found that even after controlling for STEM GPA, students who identify as Black or Brown perform one-half of a letter grade below their White and Asian peers.

Evidence based teaching decisions about what and how to change: We worked with the DeLTA research team and the Office of Institutional Diversity to address this problem. We pinpointed several structural issues that may be interfering with the success of Black

and Brown students. We learned that Black and Brown students often experience unconscious bias from their peers in MATH 2250 group work and that they cannot always find study groups among their social networks. We addressed this problem across all MATH 2250 sections with three structural changes. First, we invited UGA researchers to conduct an unconscious bias workshop for MATH 2250 students at the start of the semester. Second, we formalized groups and required each group to adopt a community code of standards focused on respect and equity. Third, we facilitated study groups for outside of class by creating a course-wide sign up sheet. In Fall 2022, we collected follow up data from Institutional Research. Comparing our data from the past two years to the previous five, we find that the grade penalties have nearly disappeared. All student groups are performing as expected based on the predictor of incoming GPA. Moving forward we will continue to gain feedback on the equity promoted in MATH 2250 using mid-semester formative assessments from the CTL that focus on students' interactions in small groups, ongoing data collection from Institutional Research, and recruiting students of color to work with our instructional staff in MATH 2250 through UGA's PLADawgs program.

Example 4: Focus on improving students' conceptual understanding and problem solving. This example is from a faculty member who engaged in a long-term self-reflection process. This reflection is written after three semesters of work on a specific teaching challenge. They had taught this course for three years. This particular reflection was written for annual review, but the faculty member will also highlight this example of self-reflection in their dossier for promotion.

Written self-reflection narrative for annual review:

Teaching challenge considered this year: This year I continued my ongoing efforts to improve student learning about the central dogma in BIOL 1108. After a few semesters of disappointing exam performances and the sense that students were not getting as far as I wanted them to, I undertook the challenge of improving my teaching of central dogma. I read a few papers in *CBE-Life Sciences Education* that convinced me that many students struggle to learn central dogma because of intuitive ideas they bring into the course and confusion about the visuals used to teach the topic. I started by trying to learn more where my students were struggling. I wrote some challenging, short-answer questions. Students answered these questions in class and on exams, and I analyzed their writing for common difficulties. This year I developed and tried three new lessons based on what I learned from my students. In spring, I used a new set of in-class problems that broke down the topic and specifically brought up common difficulties. In the fall, I revised that problem set to make it even more challenging and to address some problems I noticed with how students approached it in the spring. My goal this year was to learn whether students' knowledge was improving from the lessons.

Evidence collected: I collected evidence about student learning in both fall and spring semester. I used a research-based assessment and a few of my own open-ended questions that get at what I think is most important. I used the published Genetics Concept Inventory, which has some questions about central dogma. Students completed it for a bit of extra credit at the start and end of the semester. I also used questions that I have used in class before, so that I could compare student performance to past semesters when I did not use the same approaches. I mixed the questions up so a question that would have been on the exam before was used in class and vice versa.

Analysis of evidence: I was able to match students' pre and post-test data for the Genetics Concept Inventory and calculate each students' percent gain in score. In other words, if they scored a 50% at the start of the semester and a 74% at the end, their percent gain was 24%. Then I calculated the average percent gain across my section. I could compare this to some of the publications that use the same assessment, but mostly I wanted to look more closely at the central dogma questions. I compared data from spring and fall. I also analyzed their answers to the open-ended questions, looking for the same common difficulties I had identified in a prior semester. I also noticed that some students were making clear connections between important ideas, so I re-analyzed their answers to note these high-level connections and compared that to their exam results in prior semesters.

Evidence based teaching decisions about what and how to change: The evidence from this year shows students are learning about central dogma from the new problem set. There were eight questions related to central dogma on the research-based GCA. Students' average scores on these questions at the start of the semester was 48% and 51% in spring and fall, respectively. At the end of the semester, they were scoring 79% and 77%, respectively. This represents an improvement of 25-30%. I do not have data to compare to prior semesters I taught, but this compares favorably to pre and post-testing data from published studies. More importantly to my efforts, I saw a real shift in how commonly students retained problematic ideas on the open-ended exam questions and how commonly they were able to make the higher-level connections I sought. In a semester before the problem set, about 30% of students still had common problems on the exam and only about 15% showed evidence of making higher level connections. In spring, the first semester that I used the problem set, it dropped to 18% with common problems and 45% making connections. My changes for the fall improved that to just 15% with common problems and nearly 60% making high-level connections. I am very impressed with what my students were able to learn. My next challenge will be to re-design subsequent lessons to again target common difficulties and push their thinking further.