

TEACHING EFFECTIVENESS INITIATIVE POST IMPLEMENTATION REFLECTION FORM



Share the impact of your professional development by reflecting on the experience, how it changed your teaching, how it changed your thinking, and how it impacted your students. Use the [TEI Reflection Rubric](#) on page 3 as a guide to complete this form. Please complete all sections prior to [uploading form to Bridge/MyLearning](#).

FACULTY INFORMATION

- Name: **Exemplar for Instructional Strategies**
- Email:
- Department:

PROFESSIONAL DEVELOPMENT EXPERIENCE

- Name of Experience: **Best Practices in Teaching at CSU: Active Learning**
- Provider (TILT, OIE, conference name, etc.): **TILT – 3 week Canvas course**
- Date(s) of Experience: **Sept 16 to Oct 6, 2025**
- Description and Outcomes of Professional Development Experience (*Provide a brief, but detailed description and outcomes. A bulleted list or a few sentences is fine. Include web links or upload syllabus or other supporting documents to Bridge if available. Include webpage links or upload syllabus to Bridge if available.*):
 - **This was a 3-week asynchronous course provided by TILT via Canvas. The content focused on how we can efficiently use active learning in our classrooms to engage students. I had the opportunity to develop, implement and reflect on a new active learning assignment in my organic chemistry course. I also got to engage with other faculty members through the discussion boards.**

TEACHING EFFECTIVENESS DOMAIN

Inclusive Pedagogy, Curriculum/Curricular Alignment, Classroom Climate, Pedagogical Content Knowledge, Student Motivation, Feedback & Assessment, Instructional Strategies

- Primary Domain (*see [TEI Pre-approved PD list](#) for CSU-related events*): **Instructional Strategies (4 DEU)**
- Secondary Domain (*if applicable*): **Pedagogical Content Knowledge (1 DEU)**

USE OF RESEARCH-BASED PRACTICES

1. Describe the specific research-based practices (from the TEF) implemented in your teaching related to participating in this professional development. These changes might be new additions, or they may be extending or revising an approach you've been using. Please be specific.

Since the very beginning of my teaching career, I have been a big believer in "active learning." However, after taking this Canvas course, it opened my eyes to the fact that my active learning bubble is quite small. While the techniques I use are helpful to some, there is room for me to explore other activities.

To date, I have utilized iClicker questions daily in class to give students practice with new content. I know that my current students are well-versed in these types of problems, as we do them every day in lecture. The purpose of these questions is to address common misconceptions that students may have, and I give them a chance to make mistakes in a supported environment. With iClicker, I can monitor understanding. I can provide hints/tips to guide them in the right direction if the wrong answer is being chosen by many students. With this approach, I often need to guess how long a question will take. Having one iClicker questions can take anywhere from 30 seconds to 10 minutes depending on how the class is handling the material. One past evaluation that sticks

in my mind is that a handful of students have said my lectures are “slow at times.” This makes me wonder if I am providing too much down time for a majority of students during work-time to encompass a small number of students who take longer.

I have always liked the idea of an in-class worksheet that encompasses several iClicker questions as a way to eliminate the excess down-time in class. That way, students can take the time they need to work on those iClicker problems before we come together as a class the next day. Throughout the three-week active learning Canvas course, I used this as my “active learning assignment” and spent a lot of time thinking of how to implement it. I decided to change the way I did Exam 2 review in [Course Name]. Instead of having 11 iClicker questions spread about between 2-3 classes (I did this last year for Exam 2 review), I designed a worksheet. The timing was great, as I was able to do this right at the end of the three-week course. After wrapping up new content the Monday before the Thursday evening exam, I handed out a worksheet. We had 25 minutes of class time remaining, and students were asked to begin working on the questions. I provided the following instructions:

1. **Take a few minutes to look over this worksheet on your own. *What do you feel confident about? What do you need to review?***
2. **Work through this assignment without your notes first (either alone or with your neighbors). *When you are stumped, turn to your notes or have a convo with those around you.***
3. **For attendance, answer the two iClicker questions at the end of class today.**
4. **Finish the worksheet outside of class. Tomorrow, we will take 5–10 minutes to touch base with your neighbors on your completed work. Then, we will work through the answer key as a class.**

I incorporated two iClicker questions at the end of class to ensure that students stayed the full time if they wanted participation for the day. The iClicker questions were:

How far did you get on this worksheet today?

- A. I did not complete any questions in full
- B. I completed 1–3 questions
- C. I completed 4–6 questions
- D. I completed 7–10 questions
- E. I finished the assignment

Which topic do you feel least confident about right now?

- A. Topic 4B – [topic name]
- B. Topic 5 – [topic name]
- C. Topic 6 – [topic name]
- D. Topic 7 – [topic name]
- E. I am feeling ok about every topic right now

After class was over, I asked students to finish the worksheet before coming to class the next day. Since I have class MTWR, there wasn’t an opportunity to give students multiple days to work on this on their own time. The next day, I asked the following iClicker questions (polling information has been included below. **Red = Section 001 / Blue = Section 002**)

How far did you get on this worksheet?

- A. I did not complete any questions in full (**5%** | **7%**)
- B. I completed 1–3 questions (**11%** | **8%**)
- C. I completed 4–6 questions (**20%** | **8%**)
- D. I completed 7–10 questions (**21%** | **13%**)
- E. I finished the assignment (**43%** | **64%**)

I gave them a few minutes to touch base with a neighbor before we began writing the answer key together as a class. Not only did I provide the right answer for each question, but I also included commentary on how we got there. I gave time for student questions throughout.

2. How do these changes align with the **Teaching Effectiveness Framework** (TEF) domain(s) you are addressing in this reflection?

This aligns with the **Instructional Strategies** domain, as it was an effort to make active learning more effective in the classroom. To-date, my go-to active learning assignment has been one iClicker question at a time. I have enjoyed the ability to have the whole class focus on one question collectively, but it is quite time consuming so I must pick my questions carefully. I have also run into issues

where I don't get to a problem that I feel students need support with before going into the exam. This is problematic, as I am usually on a time crunch. It often ends with me adjusting the exam to ensure students are prepared for all questions. The hope of the worksheet was that I could cover an extensive amount of content while also giving students the time they needed to problem-solve. Additionally, the ultimate goal was to give students another opportunity to get practice with problem-solving in a low-stakes environment where they know I will show them how to problem-solve when we write the key.

The secondary domain was **Pedagogical Content Knowledge**. From experience, I have found that doing practice problems is the most effective way for students to learn [discipline]. Staring at an answer key does not usually translate to understanding [discipline]. While I do provide students with non-graded practice problem worksheets, some students struggle to commit to doing that practice outside of class. By providing time in-class for practice problems, I was hoping to instill confidence with the material and begin building strong study habits. Teaching students that is ok to be confused or uncomfortable with new material will set them up for success to do so on their own time (not just in our safe active learning classroom space). Unfortunately, this new approach to active learning did not allow me to catch as many misconceptions as I can with my iClicker approach. I couldn't assess student understanding by looking at iClicker submissions like I have done in the past.

IMPACT ON STUDENTS

1. How did students respond to these changes? (*Participation, quality of work, other aspects? Was there an immediate effect, or did the changes take place over time?*)

When I give iClicker questions in-class, there is a subset of students who refuse to write anything down. They wait until I put the right answer up on the board. This may be because they don't want to mess up their notes or maybe don't like being put in an uncomfortable position where they may not know the answer. By doing a worksheet, it was expected that students would be working on the content, either alone or in a group. And then we would be able to come back together as a group to work through the answers together. My hope is this took some pressure off students, but I have no data to support this. Visually, it seemed like an effective day, as the room was loud with discussion and problem-solving.

2. What evidence do you have that this change impacted the majority of your students? (*Description and/or data on observed impacts on attendance, performance, engagement, etc.*)

I was hoping to see a positive outcome for all students in the course, but on Exam 2, I noticed a bimodal distribution in exam scores. 1 in 4 students failed Exam 2 (this is the highest fail rate I have ever seen on an exam), but I also gave out more As on the exam than I have for any other semester (specifically for Exam 2). Some of this may be attributed to the cohort of students (as I had a larger percentage of students who failed the first exam, before this exercise was even employed). Exam 2 is always the hardest for students because it is our first real dive into [discipline], as Exam 1 is mostly [discipline] review. I was hoping the use of a worksheet as review would encourage the right kind of studying for students. Based on the bimodal distribution curve, I wonder if this exercise helped those students who already have good study habits developed, while it did not help those students who were struggling with the content. This was a good wake-up call for me as well to consider building an assignment between Exam 1 and 2 to help students transition to a very difficult exam. I may consider a Canvas quiz/exam as a buffer to touch-in with students to ensure they are on the right track.

IMPACT ON FUTURE TEACHING

1. Based on how students responded, will you keep or continue with these changes, make additional changes or do you feel the need to go in a different direction? How did it go? What worked? What didn't? What would you do differently? What will you keep? Describe your next steps.

Before Exam 3 this semester, I asked students if they found the worksheet to be useful in their Exam 2 preparation. I originally had no intentions of doing it again (as the exam outcome had me questioning this approach) so I just asked for a "thumbs up / thumbs down / thumbs in the middle" visual survey. I had so many thumbs up and someone even cheered, so I was quickly convinced to try it again! However, it was much more informal, as I didn't have class time to dedicate to worktime. I only had enough time to hand the worksheet out a day early and spend two days writing the key as a class. When I polled students for the first Exam 3 Review Worksheet day, these were the outcomes:

Did you do the ¹H NMR questions (Q1–Q3) on the worksheet before class today? Red = Section 001 / Blue = Section 002)

- A. Yes, I completed all three questions (23% | 50%)
- B. I completed two of the three questions (17% | 23%)

- C. I completed one of the three questions (12% | 10%)
- D. I did none of the three questions (47% | 18%)

Even with reducing expectations to doing three questions total before our next lecture, not providing class-time led to almost half of my first section doing none of the worksheet. If I ever choose to do this exercise again, there needs to be clear instructions, as well as class-time allotted for the worksheet.

There were also a few other bumps in the road that I hope to consider for future active-learning exercises.

- I had LAs begin handing out the assignment right as I was talking through the instructions. I could not keep everyone's attention, and it was very distracting. In the future, I want to be sure I have everyone's full attention and hold off on handing out the assignment until after I have finished.
- If I am taking two days to work through an answer key, I can give students a little more guidance with what to come prepared with for the next lecture day. Instead of saying "go home and do this whole worksheet," I can say "we will write answers for Q1-6, come prepared with any questions you may have." That will reduce the anxiety students place on finishing the assignment in whole before our next meeting.
- I may consider only working through a couple of the worksheet questions in the future as well. This would give us extra worktime for students to dedicate to problem-solving, instead of just watching me write the answers. I think it would be fair for me to post the answer key to the worksheet at a later time.
- Maybe I could even allocate worksheet time in-class and **ONLY** post an answer key. This would mean I don't go through the answers as a class, but it would give me a full lecture or two to encourage students to put pencil to paper.

2. What recommendations would you make to colleagues based on what you've learned?

At this point in time, I don't have any strong feelings about providing in-class worksheets to students. While I think putting pencil to paper is the most important study tip for students in my course, I am realizing that giving the students paper to do this with isn't the answer. They need to be convinced that this approach will help them learn. I need to investigate other active learning methods to encourage more students to engage in the learning process. I would be interested to hear what my colleagues are doing to encourage this sort of learning in their classrooms.

Right now, I am leaning towards going back to one iClicker question at a time. While a worksheet may work for some small sections of content, squishing all the content for one exam is a bit too much. Especially when students are all at different places with their studying. Forcing them to do it in class only works if they've begun their studying before that.

FEEDBACK FOR TILT

- What recommendations do you have for TILT?

No specific recommendations. This is my first reflection submission, so I would appreciate any/all feedback! Thank you for everything you do.

REFLECTION RUBRIC FOR TEI EXPERIENCE

Participants must earn “Accomplished” in each criterion to earn domain experience units (DEU’s). “Developing” reflections will be returned with specific feedback for revision.

NOTE: The depth and/or breadth of your response should be in line with the length and intensity of the professional development experience. For example, an instructor taking a 1 DEU course might implement one new practice whereas an instructor taking a five DEU course might implement multiple practices or an in-depth revision to a course.

<i>Criteria</i>	<i>Accomplished</i>	<i>Developing</i>
<i>Implementation of Research-based Practices</i> Describe the specific research-based practices (from the TEF) implemented in your teaching related to participating in this professional development. These changes might be new additions, or they may be extending or revising an approach you’ve been using. Please be specific.	• Describes the teaching or planning technique in enough detail so that the reader knows exactly which technique(s) was implemented. • Depth and breadth of implementation of new teaching practices is congruent with the length and intensity of professional development experience.	• Briefly describes the teaching or planning technique(s) implemented. • Needs more detail to be clear to the reader.
<i>Impact on Students</i> Describe how these specific research-based techniques impacted your students and/or class. Describe how students responded to these techniques.	• Addresses what worked well and what didn’t work as well openly and objectively. • Gives specific details as to how most students responded to the implemented technique.	• Begins to discuss the impact on class or students but needs more detailed analysis of what went well or not well regarding student response to the implemented technique.
<i>Impact on Future Teaching</i> 1. Describe how these changes have impacted your beliefs related to learning & teaching? 2. Describe how these changes/results will impact your future teaching AND/OR your next annual goal? What are your next steps and when do you plan to make these changes?	• Indicates through word choice and next steps a genuine effort to develop teaching using research-based practices. • Includes specific and time-bound plans for future implementation.	• Includes general next steps that may or may not be connected to recommendations in the experience. • Does not indicate through word choice or next steps a genuine effort to develop teaching. • Does not include specific nor time-bound next steps.