GIFTS: Creative Reflection to Close the Semester

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GIFTS: A Creative Reflection to Close the Semester

This GIFT describes a creative reflection assignment to be given at the end of engineering students' first semester and again at the end of the first year.

Motivation:
Reflection is a powerful tool for students to evaluate their own learning and growth. It allows students to synthesize learning across lectures, assignments, and classes, as well as giving them a means to connect their past, present, and future selves with their experiences in a project or course [1]. First Year Engineering (FYE) courses are a prime opportunity for students to engage in reflective assessments. Though they are still early in their academic careers, the first year is a pivotal period for making decisions around major selection, on-campus engagement, personal values, and more [2]. As a result, intentionally incorporating reflection into assessments can help to support students as they make these choices that will influence the next four years and beyond. Many assignments can focus students on reflecting on their project work, teamwork experiences, or other academic efforts. The proposed assignment particularly emphasizes the connections between students' personal hobbies and values and the engineering work they have completed. In doing so, the creative reflection assignment promotes reflection on the whole self and potentially the intersection of multiple identities. Additionally, reflection provides an exceptional opportunity for faculty to connect with students. It offers faculty a chance to communicate with students in a less restrictive, less academic context than simply providing feedback on an assignment, report, or project. Student-faculty connections are essential for student outcomes including both academic and personal satisfaction, as well as academic performance [3], [4], [5].

Objectives:
The primary objective of this Creative Reflection assignment is to elicit meaningful reflection on the course or semester in their entirety. Where students have previously been given the chance to reflect on individual units and projects throughout the course, this assessment gives a broader perspective. While the reflection is required to pertain to the course in one way or another, students are not required to reflect on any particular aspect. Some prompting is given in the assignment to revisit the syllabus and course learning objectives, but this is not required. Leaving the medium of this reflection entirely open-ended targets another outcome: meaningful interaction with the assignment. Oftentimes, reflections can become a very sterile type of writing, wherein students write what they believe the instructor wants to hear rather than providing honest insight. By opening the doors to video reflections, drawings, collages, poems, and more, students are broken out of the mold that reflection assignments often put them in, engaging more transparently with their reflective process and sharing more honest thoughts. Never has this been more clearly shown than a student reflection in the Fall 2024 semester. This student chose to combine their final project reflection and Creative Reflection assignments into one, submitting a photograph of a rodent and a screenshot from their favorite video game, along with a page-long airing of their grievances with the course. They then followed with "BS

answers" – phrasing within the submission itself – to the project reflection questions in an effort to get at least some points from that assignment. Such honest feedback was appreciated, though the final project reflection did not receive full credit. The conversation that followed with this student ultimately resulted in them approaching the second course in the sequence with a more open mind, demonstrating the value of the blunt feedback often left out of traditional collection methods.

Finally, the Creative Reflection is designed and delivered in such a way to promote students' engagement with their passions, hobbies, or pastimes at the end of the semester as final exams approach. This period of the semester is often the highest stress for students and leads to a decline in their ability – perceived or otherwise – to devote time to things that they enjoy [6]. By attaching points to this assignment, it promotes taking time away from rigorous study to do something that the students enjoy without the guilt that they should be doing something else. They are working on homework, after all. Reduced stress, particularly at such a pivotal time of the semester, can improve academic performance and overall student experience as well [7].

Implementation:
Titled "Final Reflection: Creative Expression," this assignment is given two weeks before the end of classes for the semester. The parameters of the assignment are explained in class, as its unorthodox requirements are sometimes confusing for students. It is also underscored that grading is solely based on completion, not the quality of the writing, art, performance, or anything else students may choose to submit. Students are also given the reassurance that should they feel creatively drained at the end of a semester, a reflective paragraph is perfectly acceptable as well. Reminders are given throughout the remainder of the semester to complete the assignment, as with all other remaining project deliverables and homework assignments.

The assignment's most recent implementation used the following prompting on Canvas:
"**Purpose**:
Self-reflection and creative expression can be useful tools, helping us understand ourselves and what we've learned. After completing this assignment, you should be able to find novel and interesting ways to demonstrate what you've learned.
Task:
Your first year of engineering school is a time of growth and exploration. You've been exposed to new ideas and methods, and worked to enhance a variety of skills.
For this assignment, I'd like you to spend some time reflecting on the course objectives and what else you have learned as you took ENGR 1010. Then, use some creative medium to express or demonstrate something you've learned from this course, and how you feel about that thing.
Your creative medium can be whatever you like, depending on your preferences and available resources. Some of you may want to write stories or poems, some may want to draw, paint, or sculpt, some of you may want to create songs or videos. Some of you may have other ideas entirely. Any medium you choose is valid, and you do not have to explain this choice. All we ask

is that you submit some way for us to see, hear, or experience your creation. We expect that will be through images, text, audio, or video for most of you.

What you choose to express may be anything, as long as you learned it as a result of taking this course. It may be skills, knowledge, self-knowledge, or anything else you like. Similarly, your feelings may be positive, neutral, negative, or all of the above. This assignment is meant to include an expression of your feelings, and any and all of them are valid (but please be classroom appropriate).

Deliverables:

A way of accessing or experiencing your creative expression, submitted to this assignment on Canvas

Primary Grading Criteria:

Completion

Hints and Resources:

You can do this assignment however you want. It is very open-ended by design. We want to see what you come up with!

Check the syllabus if you need a reminder of the core learning objectives we covered this semester."

Previous submissions for this assignment have included, but are not limited to: reflective paragraphs, poems, collages, photographs, CAD drawings, vlogs, podcasts, videos of students doing things they enjoy (sports, video games, etc.) with voiceovers, TikTok-style videos, Dungeons and Dragons dungeons, screenplays, physical and digital art, sculptures, memes, short stories, coded programs, original musical compositions, and more.

Assessment:

As noted previously, the grading of this assignment is solely based on completion. The type of reflection or quality of the submission are irrelevant. If the submission is on time and connected in some manner to the content of the semester or year, it receives full credit. As a result, in a tight time window for submitting final grades, these reflections can be managed very quickly by the professor or TAs if the course structure allows. However, the primary component of assessing these reflections in the past has been commenting on the reflections that students submit.

First-year engineering courses are often smaller than the other courses students take, like Calculus or Chemistry. Frequently, they are also more hands-on and promote more student-instructor interaction than traditional lecture courses can. As a result, it is easier to establish rapport with students and build connection with them, which in turn supports their sense of belonging [8], [9]. The reflections that students submit are often open and honest about their frustrations, triumphs, and everything in between in the course. Given that you, as the instructor, will have gone through these things with them, there is ample opportunity to reply. Some will prompt minimal response, as when students submit a CAD drawing of a smiley face and nothing more. However, others are much deeper, as when a student voices their disappointment with

their own performance throughout the semester, which provides an opportunity to provide one last round of encouragement and support. Many students choose to include some element of their identity outside of the engineering classroom in their reflections as well. Anecdotally, this is more common amongst students from historically minoritized and underrepresented populations, examining how being in the minority has characterized their experience. This is by no means a universal part of reflections, but a meaningful part of those that include it. Pointing out what the students have done well, empathizing with their struggles with teamwork or engineering software, and giving appreciation for them stepping out of their comfort zone to write a poem or draw a picture all give a final chance to connect with and support them as they adjust to college life.

I typically wait to grade these reflections until all of my other grading is done for the semester, though there is no need to do so. There is no strict requirement to reply to every submission, but I have in the past. Even if I just send a smiley face back, I want to let the students know that I'm looking at their reflections and taking them to heart. Reading, listening to, and viewing all of my students' feedback is a chance for me to reflect on the semester myself. Oftentimes these reflections include feedback about me as an instructor in addition to feedback on the course, something that is often harder to get outside of the university's teaching evaluations. In many ways, the Creative Reflection assignment serves the same purpose for me and my students: a pleasant way to cap off the course by looking back at everything that we accomplished together.

Citations

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