



# Physics and Astronomy Faculty Teaching Institute

## Feedback Without the Grade: Scary But Worthwhile

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*Dr. Mariah MacDonald, a participant in the 2023/2024 FTI FOLC, shares her reflection on an effective teaching practice, **ungrading**, with the physics community. She hopes readers will think about the impact of grades and how they might experiment with other modes of grading in their classrooms.*

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You don't have to grade your students.

I'm not saying that you don't need to assess your students, provide ways for them to practice material, give them feedback, or give them a letter at the end of the semester that will impact everything from their scholarships to their mental health to their competitiveness on the job market. I purely mean you don't have to grade your students.

As educators, we put grades on everything. We believe that the grade tells the student, and everyone else, how "good" that student was, and we believe that that information is a key take-away from our courses. An A student clearly is a better student than a D student, and everyone should know that. But there are problems with that belief. We, as instructors, value different things, and so we set different expectations for our students. Grades can be based on correctness, on completion, on effort, and points can be taken away for tardiness or improper formatting. The grades we assign therefore aren't a description of how "good" a student is, but more how "good" that student checked off whatever boxes we wanted from them.

We are also biased and sometimes petty, partial to our favorite parts of the course or firmly holding whatever hill we choose to die on that semester (this semester my students must understand that hot things emit rainbows). We then tend to not only grade differently semester-by-semester or even day-by-day, but we assess differently semester-by-semester.

Where I'm going with this: the grades we assign our students cannot portray the information to our students or to society that we so desperately want them to. It simply isn't possible.

Whether we know it or not, grades are also actively harming our students. The harm from grades is multifaceted and fairly complex, but there are some common themes:

1. The grade a student receives is read as an evaluation of them, not of their work. They failed the test, not that their answers weren't up to par. Failure is incredibly challenging to overcome, especially when it is seen as a trait instead of an outcome.

2. There is so much room to fail. If you can imagine a distribution of all possible grades, 0 to 100, half of those scores are failing. A student who goes in knowing nothing who learns 50% of our material is now a failure. If I learned 50% of a language, for example, I would be overjoyed, yet we look down on those who learn less than 70% (sometimes less than 80% or 90%) of the material.
3. If we match feedback with a grade, the feedback is worthless. Butler 1988 found that assigning grades versus grades + feedback led to roughly the same drops in student performance and motivation when compared to just feedback. 1988! I still can't believe that we've known about this problem for over three decades, and yet we continue to grade.
4. Grades lead to what I like to call "points optimization." Students will try to get a good grade, not try to learn the material or demonstrate that learning. They will find what they perceive as the quickest and least painful way to an A and follow that path, repeatedly. Such patterns reduce risk-taking and creativity, encourage cheating and other forms of academic dishonesty, and slowly suck any joy or passion students could have in the material by focusing on an external motivator.
5. Grades are biased by socioeconomic status, gender, ethnicity, race, health, and family stability.

Overall, grades do not do what we want them to do and instead hurt our students. Let's just throw them into the garbage and move on.

Just kidding. In addition to a large portion of our society being built upon grades, switching your classroom to a format without grades takes time and effort that you likely should not dedicate right now.

The process of ungrading (it has other names, but I'm sticking with that one) is exactly what I've been describing: you as the instructor intentionally do not assign grades. Now, many of us still need to assign a letter grade at the end (remember that whole our-society-is-built-on-grades thing), so that might still happen, but there are ways to remove or mitigate the problems with grades and still assign a letter grade. While there are so many ways to do that, listed below, the methods that you experiment with will depend on your teaching style as well as what you want to get out of your students.

Ungrading options:

- Pass/fail course
- Minimal Grading
- Resubmit until pass, do-review-redo
- Peer evaluations
- Student generated standards
- Student Portfolios
- Self-evaluation or Self-grading
- Process letters or check-ins
- Standards-based grading
- Contract grading
- Student-instructor meeting

A blog post cannot possibly cover all of the above; if only there were a book that conveniently summarized everything (there is: Kohn et al 2020).

I entirely ungraded my Astro 101 course (gen. ed. course at a public PUI) by implementing a mix of resubmit until pass, self-grading, and contract grading. I found little literature on anyone trying ungrading for a STEM course or for a collegiate course, and I found no literature for non-major courses or large ( $N > 25$ ) classes, so I made my 48 students in Fall 2022 my guinea pigs.

It went so well! My students demonstrated significant increases in their motivation, responsibility for their learning, metacognition, and learning gains. The small amount of literature available suggested this would be the case, but it was still amazing to see it all. I also saw a few things I did not anticipate:

- I built robust relationships with my students quickly
- I had students arguing for a lower grade than what they earned
- My students expressed so much gratitude (in emails, on exams, on course evaluations)

Some advice:

- Experiment. You're all scientists. Worse comes to worse, students complain about the thing (as they do) and you tweak it.
- Experiment now. Don't let this be like those other projects that are sitting somewhere, (physically or mentally) collecting dust.
- Ungrading takes a lot of trust, both ways. Make sure to explain to your students what is going on and why. And prepare yourself to relinquish control over their grade (it is freeing, I promise).
- By removing the crutch that was grades, you will have to (re)design your assessments to actually assess your students' learning. This will take creativity, energy, and time. Keep your eye on the end goal and power through.
- Students don't read contracts. They really don't. I don't plan on switching away from a grading contract because it suits my class well, but just know that you could literally add something in there about selling their organs and they would sign it.

When I first heard about ungrading, I felt...betrayed? No one had told me I had to grade my students, I had just done what was done to me. So now you, dear reader, can't say such a thing: you don't have to grade your students.

Referenced publications:

Butler, Ruth. "[Enhancing and undermining intrinsic motivation: The effects of task-involving and ego-involving evaluation on interest and performance](#)." *British journal of educational psychology* 58.1 (1988): 1-14.

Kohn, Alfie, and Susan D. Blum. [Ungrading: Why rating students undermines learning \(and what to do instead\)](#). West Virginia University Press, 2020.

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