
Ungrading and alternative assessments: shifting from grades to learning
L'évaluation alternative : des notes à l'apprentissage
(Org: **Xinli Wang** (University of Manitoba))

SEAN FITZPATRICK, University of Lethbridge

Adventures in Alternative Assessment: A review of my non-expert attempts to liberate my gradebook

A confession: despite knowing for some time that passive lectures and midterm exams can be bad for my students, I've never fully moved away from them. Why? Most likely some combination of logistics and lack of time to learn how to do it properly. But that hasn't stopped me from trying new things: standards-based homework grading. Strictly cumulative points-based grading. Grading for growth. Some worked, some didn't, and in most cases it depends on the size and type of class.

I'll describe some of the things I've tried, and how they worked (or didn't) for me. I'll also discuss how I adapted to pandemic teaching, what I'm doing now, and what I'd still like to improve. I'll also bring some questions that I've never found satisfactory answers to, with the intent of generating discussion.

KEITH JONES, SUNY Oneonta

Grading for a Flexible and Feedback-Oriented Calculus Course

I will discuss my experience using alternative grading schemes in Calculus I and II over the course of five semesters. I began exploring using mastery grading in Calculus in spring 2020, and have continued to use it through the transition online and the transition back to in-person, refining my approach each semester. I will discuss how I have adopted, and in at least one case rejected, principles of mastery grading in my classroom to work toward achieving a flexible, empowering, and transparent process that focuses on opportunities, feedback, and supporting active student participation in and out of the classroom.

BURCU KARABINA AND XINLI WANG, University of Waterloo; University of Manitoba

Ungrading case studies: mastery-based grading and journals/reflections in several math courses

Assessments have always been an important part of course design in higher education and K12 education. Most math courses rely heavily, if not solely, on summative assessments. Students often miss the point of assessments [?] and rank grading as the main purpose of assessments. In this proposal, we will discuss two case studies that offer alternatives to communicate with students about their learning.

The first case study is an undergraduate course which has 22 learning objectives (LO) in total. Throughout the course, each LO is tested at least 3 times, giving students 2nd and 3rd chances to demonstrate their mastery. For each weekly task, as long as a student shows enough effort, they get full credit (1/1). For test questions, they receive Talbert's [?] E/M/R/N score, coupled with comments.

Second case study of ungraded mathematics activities aims building connections and communication. By setting course-level objectives independently of grades and providing a small incentive for completion, students' perception of them is changed. Instead of diagnosing themselves as right or wrong, students focus on making improvements. Such activities also boost learning and reduce anxiety [?]. For this reason, students completed math journals each week or ungraded components of their assignments.

Mastery-based grading promotes growth mindset and offers students space and time to make mistakes, and progress. It is a more equitable form of assessment for students from different socioeconomic, racial, ethnic, or geographic backgrounds.

TYLER PATTENDEN, King's University College @ Western University

The student perspective on mastery grading in an entry-level liberal arts mathematics class

Standards-based (or mastery) grading is an assessment strategy wherein students are given a list of goals to demonstrate mastery throughout the course. Students are given extensive feedback on assessments, and a score to match their current level of mastery. Given they have not demonstrated full mastery of a topic, students are offered the chance to re-assess goals and show they have improved their learning and understanding of the topic. Here, we have redesigned an entry-level mathematics course, where most students are arts majors, to utilize this assessment model. By constructing a list of 50 – 52 goals (adjusted from one term to the next), students were able to clearly identify where their studying should be focused and how to succeed. At the end of term, a survey was administered to elucidate the student perspective on this assessment model. The results have shown that students found this assessment model rewarding and felt as though this was the “first time they were able to succeed in a math(ematics) course”. We share these thoughts to demonstrate the need for a shift of assessment away from the anxiety-inducing examinations of old and posit that to increase student interest and success in mathematics, especially with those already disenfranchised, a new assessment model must be used.

MIKE PAWLIUK, University of Toronto Mississauga

Extreme Ungrading at scale: when 105 students decide their own final grades

In the 2021/2022 school term I taught two third-year combinatorics courses with 105 students each, without assignments, tests, or exams. At the end of the terms students decided their own final grades (with a small number of exceptions), supported by portfolios of their work from the entire course.

I was surprised by how overwhelmingly positive the outcomes were for students.

I will share specific tools that helped the students succeed, and explore the challenges we faced.

AARON WANGBERG, Winona State University

Assessing student mathematical thinking using portfolios, self-assessment, and silent group exams

What do we teach (or assess) in our classes? In my first-year undergraduate mathematics courses, including calculus, multivariable calculus, and math for liberal arts majors, I want students to learn how to do (their own) mathematics – not just mimic me! During class, students explore ideas, ask questions, generate data to find patterns, propose conjectures, and engage in various forms of mathematical debate as they refine their new understandings. Unfortunately, my traditional assessments inadequately captured these student practices and instead felt more like rote mathematical ‘spelling tests’.

In this talk, I’ll share examples of how I’ve used student portfolios, homework self-assessments, and silent group exams to both let my students explain their mathematical thinking to me and to incorporate learning into the assessment process. And, I’ll share how it has surprisingly decreased my grading load and provided meaningful feedback about my teaching.