Foothill College Math Department Book Club (FHMDBC)
Meeting 2 Preparation: February 2022

Quick reminders for our book club

1. This year, winter - spring 2022, we read:
   Grading for Equity: What It Is, Why It Matters, and How It Can Transform Schools and Classrooms
   by Joe Feldman (16 chapters for a total of 260 pages)

2. Previous documents for our 2022 FH Math Faculty Book Club:

   - FHMDFBC WS2022 Homepage
   - FHMDFBCWS2022 Doodle Poll to find meeting schedule (Google Doc)
   - 12/30/2021 Winter 2022 Planning Meeting with Nicole Gray (Google Doc)
   - 11/29/2021 Winter 2022 Planning Meeting with Ram and Carolyn (Google Doc)
   - FH Math Dept Book Club Interest form (Google Doc)
   - FH Math Dept Book Club Invitation (.pdf on Google Drive)

Updates and news

1. Nicole plans to meet with Carolyn during her office hour on Wednesday morning to discuss PGA credit and payment for participation. She might have an update for our meeting on Friday .
2.

Individual Preparation

1. Prologue and Part I Foundations (Chapter 1-2)

2. Address Writing prompts:
   a. Question 2 from “Questions to Consider” page 15
   b. Question 2 from “Questions to Consider” page 24

Pairs Preparation

1. Pick a 3rd writing prompt to consider
2. Meet to discuss what you have written

Good quotes

Jennifer: "To trust others, it's about knowing that someone is not going to put you in a box based on limited information."

Three pillars of equitable grading:

1. Accuracy
2. Bias-resistant
3. Motivation

Sarah: do we want to manipulate people?

Nicole: The problem isn't the students. The problem is the system.

How many people are like me. They don't think that they are smart..

Jeff: Strategic learning…that which shields them from system forces that threaten to fail them/make them feel like they don't belong.

Pair 1: Jennifer and Sarah

Jennifer's Responses

Question 1: What is your vision for grading? What do you wish grading could be for students, particularly for the most vulnerable populations? What do you wish grading could be for you? In which ways do current grading practices meet those expectations, and in which ways do they not?

My vision for grading is alignment. I want way more integrity in everything to do with teaching. And for me, integrity means intentional planning and design…within a class, across the department, and across campus. I want everything to be aligned to a clear set of learning goals for students. And even as we bring our own experiences and perspectives to our classrooms (Academic Freedom), I want us to be working towards a shared higher goal. I want us to consider the big picture of what we want for students at our college. I want us to talk about how, we can contribute to that in our math classes. I want us to discuss in smaller groups how that might look in each of our classes. I want us to define meaningful learning outcomes that align with our college effort to help position and prepare students for the life that they want. And I want grades to measure their progress towards those outcomes in the context of our classes. I want grades to be encouraging and critical. I want them to be meaningful feedback to students as they reflect on their development and consider how to allocate time and attention and reflect on their strengths and their weaknesses. I want this for myself, my students, and the most vulnerable populations.

Actually, I am always striving for this in my classes. So this is the working goal of MY practice. But I have a LONG WAY TO GO. I don't know about other faculty, but I'll read what they write and see what I learn. If we don't have some kind of agreement about what grades mean/signify (which we don't currently have), then the alignment isn't there and my vision of grades is not realized/does not have integrity with a higher goal.
Of particular concern for me is the time intensity of the feedback I give. I am burning myself out with the effort and wishing I could just get off the treadmill to create some efficiencies to prolong my life and still provide my students with actionable feedback. I am convinced that peer review, collaboration with colleagues, and technology will all play a part in my improvement. On a larger scale, I get anxiety at times because I tried test corrections before and concluded that I needed a way to reassess students to re-evaluate learning and I didn't have the bandwidth to achieve that. MathMyWay was the only system I've known that had that built into the course design. I would like for us to create that kind of course design for all of our classes, to support every student to learn more and be reassessed. That would require institutional support in the form of time…either through release time, flex days/paid time off (if we could even envision such things for ourselves). And it would require a departmental will and vision. If anyone in this group wants to try that for one class on a smaller level, I am down. 3 of us are teaching

Math 1A right now I think. We could do it for Math 1A as part of our Book Club. Of course, there is a problem with developing those materials for online courses because of how they become unsecure. But we could develop it as part of our "return to campus" planning. I also think that formative assessments worth no or few points are key. And with effort, those can be designed in Canvas. And in case no one noticed… homework sites and apps are ubiquitous now…so we could probably leverage the free ones along with things like Khan Academy to organize Just in Time Support for all of our lessons…informed, of course, by all we know and continue to learn about our students.

Question 2:
How do you see the ideas and beliefs of the early twentieth century manifesting themselves through your school's communication, curriculum, instruction, policies, and grading?

I think all the time about how to align teaching and learning with our times. I mostly stopped focusing on why things are the way they are and started recreating my own teaching to the 21st century. So I'll share all the things I think we should do and simply say that what's holding us back is a combination of inertia and the enduring effects of elitism, racism, and our own experiences in the system. As long as that past is unexamined, we seem stuck, unable to define and create a vision that has integrity, that is aligned.
Our communication sucks. The website is so "Cover Your Ass," poorly designed, packed with everything a person could possibly want, with no way of finding it. It makes me very angry.
Our curriculum is outdated and unexamined. We continue to feel constrained to what came before. We are hesitant to ask for a Quantitative Reasoning class to be UC transferable because "they don't have those classes at the UCs, so what will it articulate to?" We are shackled to these invisible ideas that constrain the curriculum process. I cannot believe that we talk about which is better: online or face-to-face. That is a false question. Both kinds of classes can be good. And both kinds can be bad. I believe we are all simultaneously good and bad at what we do. Only through intentional planning and development can we move beyond that.
Our policies are outdated and suck and I regularly submit observations to campus "black boxes," hoping that one day something improves. We now have a tool students can use to identify what modality class they're signing up for. But each time I show someone, they act surprised, leading me to conclude that it is hidden and therefore ineffective. Do you know that if a student doesn't respond to an academic honesty report, the college cannot move forward? And that information is on the webpage students are referred to? How stupid. And if we're going to have online classes, shouldn't there be a plan for how late add students will access the material since they can no longer "attend class" until their paperwork goes through?
With regards to grading, many people still think of it in terms of "norm based grading." We are fearful that if we give too many As and Bs…WHAT?...the filtering system that has been in place for a century will no longer work? And more students will gain access to higher Ed? And we'll be judged for helping "the wrong people" get there? Who cares? Why would I care about our reputation with such backwards facing institutions? Why would I even WANT them to like me?

And what would it say about us if they did? What DOES it say about Foothill that we have such a great reputation? I'm not sure, but I can imagine many possibilities, good and bad.

I don't object to supporting students prepare for the jobs they want (in both broad terms and also technical training. I don't believe that dilutes their education. I feel profound shame that we look to the past to define good education rather than being present in the world of our students and looking forward. I don't like the idea of preparing students to be exploited by business. But a good salary is better than poverty. So I think we should help them to prepare for the careers they want by developing very transferable skills, so that they have options and opportunities. I can't worry too much about someone getting rich off their labor. The students themselves will have to help solve that problem. What I can do is foster the development of critical analysis and thinking and a practice of viewing all things from multiple perspectives…and a realization that a person's school performance is not an intelligent measure of their intelligences, interests, abilities, or creativity. It is not an intelligent measure of their potential as a human being. I wonder sometimes if it's a measure of their own oppression…of their own willingness(think behaviorist training) to subjugate their own interests, desires, and creative ideas for using their energy and time for an external reward (maybe approval, probably something that ensures an aspect of safety).

Question 3:
What are some deep beliefs you have about teenagers? What motivates and demotivates them? Are they more concerned with learning or their grade?

The teenagers I know have been deeply uninspired by the high school system, which is super strict about grades and completely inflexible and formulaic in their grade calculations. If your average comes in at 89.975%, you get a B because the cut-off for an A is 90%. As a parent and an educator, I have viewed it as senseless and oppressive, very much tied to the 20th century notion of preparing people for factory work. The teenagers have appeared to be very bored by the mundane approach to content and course scheduling. It appears to be a very disempowering system that has extremely little opportunity for choice. So, I believe that teenagers hunger for something relevant and compelling, something that captures their interest and attention. And they want to like their teachers and classmates. Many are motivated by success. I'm not sure that any are demotivated by success…but many young people are strategic (possibly from video games) and naturally strategize about everything, including how hard they should work. One brilliant student I had failed the subsequent class, because after doing well, he pulled back on his effort and by the time he realized he needed to ramp it back up, he no longer had adequate time and grade opportunities to do so. That same student answered two questions in a way that contradicted each other, which led me, inaccurately, to conclude he was very confused. But when I asked him why he put those answers, he quickly told me that he couldn't remember a definition or formula, so he hedged his bets to ensure that he was guaranteed 50% credit, therefore ruling out the possibility of getting zero. Of course I told him he could have had it all if he just wrote me a note on his test explaining his dilemma. But they're not used to being treated that way. They're not used to thinking that the teacher wants to give them credit for their understanding…they are more accustomed to the idea that all

that matters to the teacher is the right answer (solved the right way). They are also motivated by their teacher being unique in how they talk about the material. They want to know what the teacher really thinks…about what's important, what's useful, how this will relate to further studies, how it relates to things they've done before. They are motivated by being set up for success and demotivated by feeling like they're set up for failure/like someone has it out for them. They are demotivated by dull/book content that has no heart. They want to be interested and inspired. Those who aspire to go to a prestigious school are often more concerned about their grades and less likely to take risks because of the belief that they have to maintain a 4.0 to be eligible for their dream school. They are demotivated by a lack of opportunity. It's no fun to realize that no matter how hard you work to learn there is no way you can get an A…or pass…or whatever their threshold of acceptability is. Over and over again I hear from students and recently from guided pathways folks that they want a good life…to help their family, to make them proud, to be able to buy a house, to get more education and a better job than their hard-working parents had access to. They want to learn and grow. Some need more help than others in seeing how a class will lead to tangible growth and learning that is relevant to their future.

Sarah’s Responses

Question 1:

I don't have a clear vision for grading. Some aspects of my vision: I wish for my grading methods to give students the feeling that their desired grade is achievable with diligent, fair work -- I want to avoid "cornering" students into feeling that they are better off cheating or giving up rather than tackling the required work. I believe some slice of students is searching for a way to pass their math requirement without learning the math, and I wish to choose grading methods that don't draw an over-abundance of those students. I wish for grading methods that don't penalize or reward students based on their identity (race, disability, employment, etc.) or personality (e.g., charisma). It would be great if my grading methods could be respected in our department, but it's also possible that goal is incompatible with other priorities.

I wish grading could be optional for the students. I wish they had the opportunity to explore the course material and then choose to study further for mastery if they wish to be graded on that course. On the other hand, I know the reality is that students have competing demands, and receiving regular "credit" for the work in my class is a "neutral third party" strategy that helps them make time to study math. I wish that many students could be satisfied with B grades in math, but it seems to me many of them are under great pressure to either get As or give up. (Sarah, this is Jenne. I have gotten this impression this last year as well in Math 1A…very alarming.)

My previous grading scheme essentially attempted to grade the students based on their in-person auditorium-based midterm and final exams, while giving them some grade-based incentive to stay on track throughout the term. A major downside of this method is that the auditorium exam is an anxiety-provoking experience. I do have the thought that students can choose other sections of the class if they know that kind of test taking is not good for them. However, I'm pretty sure this method is not any kind of equity superstar.

My current grading scheme is a big departure, in reaction to the loss of the auditorium test. Now, I am giving students enough credit to pass the class based on their completion of many formative assessments each week. I imagine this is how something like an art class would be graded, where the baseline credit is given for showing up and producing something on task each week. Actually, I don’t hold my students to a weekly time constraint; they can complete all this work by the end of the term, and they can correct any errors after they get feedback. The students can "opt in" to credit above the C level by taking a short summative assessment each week. I think this does meet my goals to a fair extent, but maybe not in my best "spirit." For example, because the summative assessments are small each week, many students probably won't realize when the point has come that earning an "A" in the class is no longer a mathematical possibility for them (like boiling a pot of water). Those who do realize their genuine

efforts have not been enough to put them at A level may feel inclined (and able) to cheat from there forward.

Question 2:

We certainly have a lot of discussion around ideals of progressive education, equity, opportunity, etc. We also still respond to immigration and I think we try to offer an acclimatizing experience; we also try to operate "at scale" rather than employing a very large workforce of teachers. Our institution also tries to some extent to interact with local employers and educate students toward the goal of becoming local employees. I think the CCC system offers an alternative (how effective?) to the tracking systems in high schools that channel students who aspire to direct UC enrollment. I do think it's very valuable for CCC students to be able to arrange their 9th grade+ studies differently in time, and generally have more control over their experience compared to high school. I think at our institution we have a lot of desire to not "count out" students based on category, but I think there is not a lot of impetus to be creative in ways that would radically change how we serve the students who are counted out. For example, if local students work extra retail shifts before the holidays, would our college change its calendar to finish fall on Dec 1? Do we offer child care? (Sarah, that's what bothers me so much about our throughput data…what about the ~50% of low gpa band students who don't attain throughput within a year, despite starting in 48A or 10? What do we know about them? What are we willing to learn about them? And shouldn't we better understand them as part of figuring out how to better serve them? –Jenne)

Question 3:

What are some deep beliefs you have about teenagers? What motivates and demotivates them? Are they more concerned with learning or their grade?

Jenne and I discussed this question, and I appreciate reading her summary of what I mentioned plus her insights! I will add that I think our Foothill population includes some distinct pockets around motivations. I also have weird feelings about this question because I think (?) it implies that the "right" answer is to be more concerned with learning; and that makes me wonder if we are accidentally getting aligned with Victorian ideals here??

Since graduate school I've had the belief that international students have a qualitatively different motivation than what was familiar to me as a domestic student. I think there's a huge variety in the experiences of international students. At one extreme, an international student may have already overcome an incredibly high "barrier to entry" in order to get to our U.S. institution. The process may have involved talent search exams from a young age, prep school programs, living in different locations, gathering money from different sources, spending a lot of money, hiring consultants, jumping through bureaucratic hoops, passing visa interviews, etc. A lot of this work would be shared between the students and their families. After all that, the motivation to succeed in exactly the expected way could be really intense (e.g. 4.0 GPA, transfer to UCLA), rather than starting from the broader conception of success that I have developed from my experience.

The other two pockets I'm thinking of are students whose families of origin live with stability in the Bay Area; and students whose families of origin struggle to afford to stay in the Bay Area. The first group is the one I belong to, so I feel pretty confident saying students in that group are wondering what career and partnership and life and home they will build for themselves, and whether that will occur in the Bay Area or outside the area. There's probably also room to be interested in learning, self-expression, self-actualization, etc. The second group is not one I know closely enough, but should be a focus (most vulnerable) and is also probably a fairly large portion of our students. I believe students in this position face all the same questions and goals as the previous group, but I wonder if the role of college would be more directly economic (more concerned with grades, for good reason).

Pair 2: Phuong and Teresa

Phuong's Responses

Question 1:
Chapter 1 (What makes grading so difficult to talk about (and even harder to change)?

What is your vision for grading?

I don't quite know yet. I know I want to grade a lot, lot less and I always feel that I'm buried in grading and it takes me away from doing more fun instructional stuff. However, grading and grading in a timely matter is super important because it gives me and the students feedback. They like it when I return their homework with comments on them and often ask when they're getting their work back.

I currently have a soft deadline for written homework assignments that I grade and then a firm deadline that is about 3 weeks later. I do this because I want to accommodate students and their schedules, but I set a limit because I won't be able to get through all the grading by the end of the quarter if I don't set a deadline. It still doesn't feel right. About 1/3 of the students are submitting work at the final due date and are overall very behind schedule. They are taking exams when they've not started or finished doing homework for relevant sections. In other words, they are taking exams when they're not ready.

So ideally, letting them take exams when they are ready, when they've covered the relevant sections and have had the opportunity to work on homework problems for practice, would be ideal.

So if we created a large test bank of questions, where students have to take the exams in person, when they are ready, seems like a possibility. I don't see it being doable in an online testing environment though.

What do you wish grading could be for students, particularly for the most vulnerable population?

I want for them to get regular feedback and then for them to feel motivated to learn from their mistakes and know they have opportunities to improve their scores. I like the idea of exam corrections but I never offer it because I just can't keep up with having to regrade exams. I want flexible deadlines for my students but I also want a way to help keep the procrastinators on schedule.

What do you wish grading could be for you?

I want to do a lot less grading. I don't want to grade homework. I feel like grading one assignment per week is plenty for me and maybe that can be reserved for grading check point quizzes or exams or special writing assignments. I want a student grader who will grade written homework for me! I want for the school to pay for student graders! I feel students like working out problems on paper and checking their answers with a key instead of trying to type in answers in an automated homework system. I feel the automated systems are frustrating for students and students waste a lot of times sometime just trying to get the syntax right. I don't want to make homework optional. I feel students learn a lot from working on homework problems but need the push to do it and collecting and grading homework helps them stay on track.

In which ways do current grading practices meet those current expectations, and in which ways do they not? ??? question is vague and I'm not sure how to answer

Question 2:
Chapter 2: A brief history of grading

How do you see the ideas and beliefs of the twentieth century manifesting themselves through your school's communications, curriculum, instruction, policies and grading?

Well, we're still using the letter grading system and the UCs and CSUs still expect letter grades from incoming students. UC Santa Cruz abandoned their non letter narrative grades some years back and I wonder why they did so—probably for ease since no one else was doing it?

A few of us in the department have adopted mastery based/competency based (what are other terms???) grading and some in the English department have too, but my guess is the majority of the campus has not. The good thing is, as the author has laid out, teachers have the academic freedom to control grading.

The school talks a lot about narrowing the achievement gaps and providing equitable instruction and the issue of grading has not been discussed much as was pointed out by the author.

There is still a need to help students develop vocational skills for those who don't want a 4-year degree and the state is moving in the opposite direction of what the schools were doing in the twentieth century in that they seem to now be primarily focused on getting students to transfer and nothing else. Guided Pathways seems to be a big part of this goal of getting students to transfer and I feel it limits student's exploration of courses and ideas. I still don't understand Guided Pathways enough but that's my interpretation and I feel the state is going backwards. In wanting to provide learning opportunity for all and encouraging all students to believe in themselves and aim higher (meaning get a 4-year degree), the state has gone 180 in the other extreme.

In terms of curriculum, AB705's elimination of Math 105 seems like a blow in certain ways but it is now allowing us to create a new course that we feel will be more suitable for our students, a course that will better meet their goals, and reduce the achievement gap.

Question 3:

Question 3: Which of your grading practices do you believe best support learning? Why? Which of your grading practices are you most open to reconsidering? Why?

The grading of written homework and exams/quizzes---that's where I give a lot of written feedback and students appreciate the feedback. I feel my feedback really helps them learn how to communicate their thoughts clearly on paper and that they do see the importance of writing out their thoughts clearly on paper and how lack of clear notation can totally change the meaning of a statement.

I'm also most open to reconsidering these same two things because it's too time consuming. I'm thinking of not grading homework next quarter or at least restructuring the grading another way. Maybe grade one assigned written problem each week. That should be sufficient for feedback of written work before exams. Students will still be encouraged to do homework but I won't collect next time. I'm starting to feel better about this idea already. Exams—I've got 4 exams at 10% each plus a final. I'm open to changing this too but not sure how yet. I don't think I can deal with retakes or exam corrections. I'll call them quizzes next time to make it sound less daunting. Hmm..still pondering about changes that will make things manageable.

Teresa's Responses

Question 1: **What is your vision for grading? What do you wish grading could be for students, particularly for the most vulnerable populations? What do you wish grading could be for you? In which ways do current grading practices meet those expectations, and in which ways do they not?**

I would like grading to be feedback only. In depth, detailed feedback that communicates where the student has demonstrated good understanding and ability and where they still need to improve. It would also need to be tied to resources or a course of action that the student could use to make the needed improvements and a way for the student to demonstrate that they made those improvements.

While I do currently give written feedback on assignments, I am limited by the amount of feedback I can give based on the number of students that I am teaching in that current quarter. I am limited by time. If I did not have to give a score, be it a number or letter, I would have that much more time to give feedback. When I am teaching smaller classes in the MPS program, because I am teaching a class with a corequisite or just due to low enrollment, I have more time to give feedback. I have found that in these situations, students very much appreciate and respond to the "extra" feedback that I can provide for them. They have a more positive, growth mindset, learn more, enjoy learning and are more likely to complete the class successfully.

My current method for the students demonstrating that they have learned from the feedback provided is that they do corrections. In the future, I would like this to be followed by a more comprehensive redo or retake of the assignment with questions that are different but evaluate the same concepts and abilities. I have not yet found a way to do that with my current job responsibilities and human form.

Question 2: **How do you see the ideas and beliefs of the early twentieth century manifesting themselves through your school's communication, curriculum, instruction, policies, and grading?**

What really struck me as I read this chapter is how schools are set up like factories. There are a large number of students that need to be moved through a system with very little differentiation for the needs of each student.

I also see a strong use of behaviorism, rewards and punishments to make the students do certain things. Whether this is to train them to be good employees later in life or to make the instructor's job manageable, it is not beneficial to increase what they are able to learn as they balance their education with the rest of their lives. Policies that include strict due dates, timed exams that all students must take at the exact same time, and instruction that can only be accessed at a certain place at a certain time might make good little soldiers, but does not make education accessible to many of our students, especially our most vulnerable students.

Whether it is my son coming home from his first day of kindergarten with a sticker for sitting “criss-cross applesauce with snowball hands” or me telling a student that if they miss an exam session they cannot take the exam later, it seems to me that there is too much emphasis on compliance in schools and not enough emphasis on providing a joyful learning experience to our students.

Question 3: **Which of your grading practices do you believe best support learning? Why? Which of your grading practices are you most open to reconsidering? Why?**

I believe I am able to better support learning by having a take-home and in-person part to each exam, by giving credit for correcting exams, and by allowing students to take the in-person part of exams outside of the scheduled time. This gives the students some flexibility in how they demonstrate what they have learned, allows students to benefit from progress they make in mastering the material after the scheduled exam, promotes a growth mindset and decreases the impact of obstacles to learning that come from students' lives outside of school.

What I would like to reconsider is homework. I’m currently using WebAssign for homework and while the automatic grading does allow me to give students more flexibility in homework due dates, the cost of purchasing the textbook with access to WebAssign can be a barrier to students. I believe in a college setting students need to practice what they are learning outside of our limited class time. I believe that without some monitoring of this process students will have trouble making this a priority in their lives and getting it done successfully. I believe that I cannot grade homework in the current structure of my job. This set of beliefs leaves me stuck in a system that is not ideal. I would like to reconsider this set of beliefs, but every time I have in the past, I come to the same conclusions. Maybe that will change, but I am pretty attached to this set of beliefs.

Pair 3: Nicole and Jeff

Nicole's Responses

Question 1:

What is your vision for grading? What do you wish grading could be for students, particularly for the most vulnerable populations? What do you wish grading could be for you? In which ways do current grading practices meet those expectation, and in which ways to they not?

I want the grading in my courses to be easy for students to understand, and I'd like for it to be correlated in some way to the progress they made in learning the concepts and also their overall knowledge base of the course content. I note that some student may come into courses with prior knowledge, while others have much less prior knowledge. For the students who come in with less knowledge there should be ways to recognize the progress they make, even if they don't quite meet all the desired outcomes for the course. I think this is especially true for students who demonstrate they are learning how to learn. But is this a fair way to think? Should grades just reflect achievement of outcomes?

For me, I selfishly want grading to take less time. I'd also like to reduce my anxiety about whether or not my grading is fair. Did I take off more points on Student A's assignment than Student B's even though they made the same or very similar mistake?

I do believe that the students who earn A's in my classes have a good understanding of the concepts. However, I recognize that there could be students who have an equal understanding, but who did not complete some of the assignments who did not receive A's, and possibly even who fail. Additionally, while I'd like my grades to recognize those who have gained lots of skills, but who might have achieved all the course outcomes, I believe instead my grading rewards those who are able to diligently complete all the assignments.

Sarah Williams developed a grade visualizer using Excel that I still use with my students, I think this helps my students who don't fully understand percentages to understand how different components of the grade will affect their overall final grade in the course. I have also developed and use rubrics for grading the non-auto graded parts of Checkpoints (like quizzes) and the midterm. These rubrics together with sample work, have improve student's understanding of what I am expecting and help to make grading easier for students to understand. In many ways this also speeds up grading for me.

Question 2:

It's strange to see some of the intent behind the creation of our school system.

"…. The dean of the Stanford School of Education for nearly two decades wrote that urban schools should 'give up the exceedingly democratic idea that all are equal, and that our society is devoid of classes"

"… a writer for *Education Review*, wrote:

> It is the business of the school to help the child to acquire such an attitude toward the inequities of life, whether in accomplishment or in reward, but he may adjust himself to its conditions with the least possible friction."

Wow! Just shocking language.

My education started in the 70's we were very graded. I think they literally ordered the standardized test scores each year and the top n where in one class, then the next n and so on. We all knew which class in each grade was the top and the lowest and probably those in between as well. It's no wonder I grew up with a fixed mindset. Luckily, I was good at math, so I got good reinforcement along the way and my difficulties with language were excused in a way. But I see now how that impacted me and my development as a student a learner and an adult. All my educational choices were based on limiting the number of words I needed to read and write for a class. It wasn't until my work with Carnegie math pathways that I started to change my view of myself (which coincidentally had great benefits for my students, I think)

How does it play out in elementary schools now. We'll, students aren't tracked anymore. In the huge school that my daughters went to they had very few repeat kids from year to year. Hopefully with that comes a more growth mindset away to teaching as well. My girls seem to have a growth mindset but is that from home life?

At FH, and the community college setting in general, I think this is what AB 705 is trying to fix. In that setting tracking is primarily in two area, Math and English. My training in my field (and indoctrination from school experiences?) tell me that there is a hierarchy to the skills needed in these classes and some sense of prerequisites should be enforced. Certainly, you need Math 1A and 1b before taking 1c, and precalculus before calculus. Don't you? But how far back do we go with those prerequisites? How much do we do because it's needed and how much do we do for our comfort and the comfort of our students? Certainly math 105 enrollment remained high because it was a comfortable path for students. I'd already read this chapter in summer 2021, but reading it again with the new Mandates from CCCCO with regard to AB 705 makes me view all that a bit differently.

Question 3:

How do you define learning? How do you define teaching? What are all the different roles that grades play within your definitions for learning and teaching?
(note to Jeff: I think you disguised 3 questions a one.)

What is learning? Learning is a lot of things to me. It is collecting facts. It is being exposed to ideas. It is understanding those ideas from different points of view. It is experiencing things. It is reflecting on the facts, ideas, experiences, and points of view. My daughter Stephanie and I watch professional road cycling together. In June 2018, Stephanie knew nothing about cycling except that in would involve bike riding. After watching professional road cycling for two seasons, she understood enough about the sport and team strategies that she would make a pretty good armature commentator. How did this learning occur? She watched a lot a cycling events and watched videos that explained strategies, she read articles, and she discussed it a lot with me. She emersed herself in the world of cycling and now know more than I do. It started with learning a lot of terminology. What is a peloton, a crank, a cassette, a break, a tete de la course, an attack, a domestic, a feeding zone, a team, a protected rider, a team car, drafting, pulling, pedaling squares…? She asked a lot of questions about my perspective of being a cyclist. She continued to watch events, made predictions about what would happen just by looking at the profile for the stage. She learned a tremendous amount in a short period of time.

What is teaching? I think I'll instead describe what I think teaching isn't. Teaching isn't the act of putting information into another person's brain. I can't make anyone walk around a block. I can suggest, I can encourage, I can incentivize, or I could threaten, and my actions might lead to the person deciding to go out and walk around the block. But I cannot control the person's legs and make them walk, only the individual has that power. Similarly, I cannot put knowledge in someone's brain. I can present facts, explain ideas, and provide experiences, but I cannot make them learn. I cannot even control whether or not the person pays attention to any of my actions. Furthermore, unlike with walking around the block, there is no good way for me to know if the learning has occurred, because I cannot see the connections forming in the brain. So maybe my conclusion is that teaching is something that the learner does for themselves. The role that we call a teacher just curates the facts, ideas, experiences so that the learner doesn't have to do that for themselves,

What are all the different roles that grades play within your definitions for learning and teaching? It's interesting that when I think about learning and teaching, I don't think about grading. Grading is this separate act that is associate with academic learning. But, so much of the learning that we do in our lives is not a part of the academic world where assessments and grading are used to measure or verify that learning has occurred. Through the course that I took while on my last PDL and through further readings and discussions, I think that grading and learning are not strongly linked. In fact, grading can have a negative impact on learning. It becomes gaming the system to earn points rather than learning. But teaching, as it is defined in

the Academic setting is closely linked to grading. The role of the teacher is curate and present the facts, ideas, and experiences and also the assignment and activity, that is the grading, that will be used to determine to what degree the student has learned the material. It would be an interesting idea to have teachers be a different role from graders/assessor.

Jeff's Responses

Question 1:

What is your vision for grading? What do you wish grading could be for students, particularly for the most vulnerable populations? What do you wish grading could be for you? In which ways do current grading practices meet those expectations, and in which ways do they not?

Response 1:

My short answer to this is: I want to get rid of letter grades completely. I wish my elected officials in the state of California would change state law so that I am no longer legally required to submit letter grades. The way our current system is set up, we use letter grades to avoid facing hard truths about harmful policy choices that are made at the local, state, and national levels.

Question 2:

How do you see the ideas and beliefs of the early twentieth century manifesting themselves through your school's communication, curriculum, instruction, policies, and grading?

Response 2:

Ooo… I am salivating right now thinking about how to answer this question.

I have written a little about what I think in the blog post below:

- Grade for Equity : Self Exploration Practices

I now revise my equation for letter grades that I presented in that blog post. Here is my updated version of this equation:

Letter grades = eugenics + capital's control over democratic processes + behaviorism

For more about the first two parts of this equation, please see my blog post from above. My most recent discoveries focus on behaviorism. In November 2021, I read Alfie Kohn's book Punished by Rewards. That book does a good job demolishing popular culture's renditions of behaviorism. Specifically, Kohn shows that punishments and rewards, of which grades are one pernicious rendition, are extremely harmful for the types of learning I want to inspire in my classes. I would call Kohn's book a must read for every parent, teacher, student, administrator, business owner, manager, and worker in the United States. I'm currently trying to convince my wife, my brother, my parents, and some of my past students who want to become community college teachers to read this book. So far, I have only been successful in convincing my brother and one past student. In early March 2022, my mom rented this book from the library, though I don't think she's started reading yet. In any case, Kohn does a lot to show just how harmful the entire

letter grading system is for the type of teacher-student relationships I want to create with learners in my classes.

Over the years I've been reading, thinking, and writing about grades, I have come to realize that grades sit at the intersection of these three belief systems:

Eugenics: the belief that there is a hierarchy between human beings that are based on biological factors. In other words, eugenicists believe that some humans are smarter, better, and more-deserving than other humans. The eugenics movement posits that these differences can be explained by biological characteristics. The work of eugenists was (and continues to be) to come up with "objective" measurements to justify their belief in a hierarchy for human intelligence and capacity. SAT, IQ, letter grades. These are all systems by which we can pretend to measure the innate intelligence of humans and to impose a hierarchy among and between humans. Our colleague, Patrick Morriss, has done some important scholarship to highlight that the intellectual roots of these measurement systems go back to early eugenists and when we invest in these systems, we embody that work, thus perpetuating the belief system on our students and in our own lives. I can't wait until Patrick publishes his book on this work.

Behaviorism: the belief that we can make intelligent decisions on how to motivate human beings based on observations of what works for hungry rats in a laboratory. Behaviorists use external stimuli (punishments and rewards) to modify the behavior of other living beings.

Capital's control over democratic processes: the belief that the amount of money someone has should indicate the amount of control that person wields over democratic processes. In the most extreme form, we might call this oligarchy or perhaps even facism.

I am actively opposed to all three of these belief systems. I do not value these beliefs for myself, for my students, nor for the society I want to live in.

When I think about grades, I see a system that was synthesized out of these three systems. Moreover, when I am required to use letter grades, I give life to these belief systems in my work with students. Every time I use grades, I am complicit in maintaining this power structure and conserving parts of the worldview that it symbolizes. As I've grappled with these ideas, I've gone through my own cycles of guilt, anger, frustration, and despair. Eventually, though, I have come to realize a few different things.

First, I did not invent the grading system. I was given this system from previous generations of scholars and educators. In this way, grades are like systemic racism: a system of social control that is dependent on socializing youth into the underlying belief systems while avoiding a critical examination of the foundations upon which the system is built. It's important for my own healing to realize that I was socialized into these systems. While that doesn't excuse my own actions, it does help me realize that I have the power to disassociate myself from the system of letter grades. Indeed, it's much harder to abandon a devil child that I chose to father than one that was placed into my care without my conscious consent or permission.

Second, our system gives me significant control over how I assess learning and assign grades. As Joe Feldman says on page 4 of Grading for Equity: "Amid all of these pressures and expectations, with administrators and policymakers defining nearly every aspect of a teacher's practice, we have one remaining 'island of autonomy' : our grades. Grades are entirely within our control- the declaration of our professional judgment of student performance and the most concrete symbol of our authority and expertise." In other words, just because I inherited a particular letter grading system does not imply I must recreate that system forever more. The longer I've been thinking about letter grades and the more research I've done, the more I believe that I have a moral responsibility to do everything I can to undermine letter grades in my own classes and within my communities.

Third, the more informed I am about grades, the historical realities that have led to my current reality, and the confines of the current system, the more strategic I can be in crafting a plan to resist this system. One responsibility I take quite seriously is to read about grades, antiracism, and the science of learning. As I have done this, I've put together my Essential UNgrading reading lists. As of this writing (Sunday 3/13/22), that list is incomplete. There are a number of academic articles I plan to add and also an entire set of books focusing on antiracism.

The more I do this work, the more I believe that real policy transformation on assessment must include an explicit focus on antiracism. Without such an analysis, I can claim ignorance. This permits me to avoid speaking or thinking about housing segregation, income inequality, and many of the other harms that show up in our education system. I can also safely avoid the topic of reparations since I am able to avoid an honest accounting of the historical legacy of harms done by my government.

While addressing grades head on is important, it is not enough to transform the structures that support the grading system in the first place. If I am honest about education and supporting the learning of my students, I have to realize that the wealth, income, and economic security of my students is as much a part of my classrooms as the textbook or the COR. When my students don't have enough time to study because they are working two part-time jobs to make income, that reality is part of my work with that student. When my students have to spend 90 minutes on a one-way trip to campus because they can't afford a car and there are no alternative forms of transportation, this is part of my work with that student. Other examples abound. All of these realities are intertwined with the history of racist policy making in the US. Thus, I continue my work to read a growing collection of books on antiracism. The more I read, the more I believe this work to be a necessary part of mobilizing college educators who want to be part of a movement to re-imagine grading in our institutions.

In addition to this reading, I also feel the need to be well-informed about CA state law. Below are two articles I've written about exactly what California's Title 5 law says about grades:

- What does California state law say about content coverage in community college classes?
- Is the job of a teacher to cover content or to inspire learning?

One of the ways that other teachers or administrators might try to intimidate me is to hold title 5 over my head. I can't tell you how many times I've heard someone say: "you can't do XYZ because Title 5 says that is illegal." One of my favorite responses to this line of attack is to ask: "I'm a little fuzzy on Title 5. Can you please point me to the exact part of the law that substantiates your claim. I'd like to read up on that so I can be informed about your concern." More often than not, the speaker has nothing to say other

than, “I don’t know which section that is. I only know that what I’ve said is true.” On my end, I have spent many hours reading Title 5 and have memorized the names and section numbers of the parts of the law that relates to grading. I make sure that everything I do in my classes falls within the language of those parts of the law. This is protection for me against that criticism and I use this to feel safe in my decisions. I document my decision-making processes meticulously and am sure to use my professional judgment to follow that law in ways that I believe satisfy my obligation to support student learning. I believe this is what I am paid to do by the state of CA and I take this responsibility quite seriously.

Question 3A:

How do you define learning?

Response 3A:

I LOVE this question. Below are some blog posts that I’ve written on this topic:

- What is deep learning?
- A model for deep learning
- The five stages of deep learning
- Progress through the five stages of deep learning
- Why is deep learning so hard
- The no-teacher-training-for-college-professors problem
- Make learning meaningful : What is Foundational Knowledge

Everything I do in my classes starts with my answer to this question. In fact, I have been working since 2009 to map every single decision I make in my teaching practices back to my definition of learning and my models for learning. Patrick Morriss has been a huge influence in this work. Through his guidance and his work on grading systems, I am learning to incorporate antiracism as a central practice in my teaching. My work to combine these two fields excites me and fills me with productive energy.

Question 3B:

How do you define teaching?

Response 3B:

I’m working on an antiracist, research-based definition for teaching. I plan to write many blog posts on this topic in the future. Here is my current, short draft:

> *Teaching* is the act of facilitating, inspiring, encouraging, supporting, and empowering learning. In other words, a teacher is someone who empowers learning (see definition and models for learning in blog posts above). Because teaching happens within a social context, the work of a teacher is about creating an environment that helps students learn.

This is closely related to one of my favorite quotes:

> "Learning results from what the student does and thinks and only from what the student does and thinks. The teacher can advance learning only by influencing what the student does to learn."
> –Herbert A. Simon

In my teaching practice, I work very hard to make design decisions based on deep research on how learning works and the types of environments that are conducive to putting students into the driver's seat of their learning journey. However, just because I have spent thousands of hours planning and creating resources for students doesn't mean that my work is effective in guiding students to create significant learning experiences in our class.

Let's use an analogy to describe what I mean here. Compare the work of a teacher (me) to the work of a brain surgeon. To create classrooms in which great teaching happens is much harder than creating hospital rooms that enable great surgery. A surgeon can, with lots of skill, training, resources, and luck, physically alter the body of another human being to produce desired medical results. However, as a teacher, I do not have the power to open my students' brain and physically alter neurons, neural pathways, or brain chemistry to produce a specific set of desired learning outcomes. The only person who controls student learning is each individual student. In other words, what matters is not what I say or the decisions I make as a teacher. The most important part of this class is what each student does to create learning experiences in our class.

My task is to empower each learner to create their own learning experiences customized to their unique identity, interests, and lived experiences. Central to such a task, I believe, are the visions and dreams that each student has for their world. My hope is that the experience we create together will accelerate their ability to make meaningful progress on problems they care most about. One of the challenges I face every day in this job is that many students are not skilled at tracking, monitoring, and reflecting on their own learning. These tasks are quite difficult and involve a lot of mental energy.

It turns out that grades are a convenient way to shift the focus away from learning and towards performance. The use of letter grades outsources the need for learners to track their own progress. Instead, that burden is placed on the teacher. Thus, grades let learners off the hook for a very important part of learning: self-evaluation and reflection. Letter grades shift control over learning away from the learners efforts and, instead, inappropriately center the judgements of the teacher.

My work with my students is to re-center each student as the most important person in their learning journey. I'm working to create structures to put each learner in the driver's seat to track their own learning and assess their progress throughout the class.

Question 3C:

What are all the different roles that grades play within your definitions for learning and teaching?

Response 3C:

Below I list all the different ways that I see letter grades being used in our system. I categorize these into two buckets: useful intentions and harmful effects. When I identify these roles, I am thinking back to all my experiences using letter grades in my own classes (I have taught college math classes since 2008) and my many years as a student in college math classes.

Useful intention 1: Feedback

When I think about teachers as people who inspire learning, I must come to terms with the fact that to help students learn, I need to provide just-in-time interventions to guide student's work. These interventions should be based on each individual students' needs and targeted to help students overcome stumbling blocks along the path towards mastery. In other words, I need to be able to provide feedback on challenges that students face in their learning processes.

The longer I teach, the more I realize that the most effective feedback we can have is through dialog with each individual student. This way, I can customize my feedback to the needs, experiences, and developmental processes of each individual learner. Feedback is most helpful to a learner if that person can easily make the connection between the feedback and their unique individual experiences.

One key type of feedback includes helping students learn to recognize mistakes, correct their mistakes, and iterate in their learning. This relates to the idea of deliberate practice in the sweet spot. (Side note: As I write these words, I can't help but think about Tip # 12 from Daniel Coyle's *The Little Book of Talent*).

I think about two features of effective feedback: timely feedback and targeted feedback.

Useful intention 1A. Timely feedback

This is the idea that feedback is most helpful when it is timely. To understand how important timely feedback is, let's think about learning to play basketball. One of the really nice features of basketball (and many physical activities) is that each player can see for themselves the effect of their actions by watching where the ball goes. This is really helpful to close the loop of the plan-act-reflect cycle.

Specifically, suppose a player is learning to shoot a free throw shot. Every time they take the shot, they can see for themselves whether or not their current strategy is producing the desired results. If the ball goes in, that is useful data. If the ball doesn't go in, that is also useful data. In either case, the player gets timely feedback about their effort.

Now, this limited type of feedback is not enough. Young learners also need coaching about how to correct errors once they know they've made some. This is where direct instruction comes in. A good coach (or teacher) uses a trend of missed free throws to guide their advice and provide just-in-time instruction. They might target the players foot position, ball handling, or whatever. The point is that the cycle from viewing the missed shots to providing an intervention, to having the player implement the intervention happens quickly during the practice session. That way the coach and the player can act in an intricate dance over a matter of days, weeks, and months to make slow and steady progress.

We attempt to use grades in this way. We have students take tests which we correct to help identify errors. While the underlying goal is really important, the way we implement that work is problematic. First, we punish students for making mistakes. In truth, the most valuable part of any test, in terms of learning, is the mistakes the student makes. But we actively punish those mistakes. Second, because of the logistics of school funding, there is a long delay between the time students do the work and the time they get feedback on their mistakes. By the time they get their papers back, the class has moved on. While it is true that test corrections mitigate this a bit, the delay is not optimal.

For low-level learning like procedural fluency and solving calculation questions, it would be much better for students to self-correct their work live in class so they can identify all errors quickly. In other words, the process would look like this: take a quiz in class. Immediately when the student thinks they have completed the quiz, they view the answer sheets. They use this answer sheet to find correct and incorrect answers. Then, they work to correct all mistakes and write a few sentences about what mistakes they made and why they made it. This continues every day as they work towards mastery. A good teacher might have each student put together a log of their mistakes and notice the changes in those mistakes over time with the most attention going to the students' weakest areas until those become their strong suit. That is what I mean by timely feedback.

Useful intention 1B. Targeted feedback

Targeted feedback means that the information I share with students should be targeted and customized to that individual student's experiences and developmental processes. Let's go back to the basketball analogy. Imagine we were coaching a whole team, rather than just an individual player. In this thought experiment, each member of the team is learning to shoot free throws. The idea of targeted feedback is that we target our feedback to each individual player knowing the context of their play. We don't give the same advice to all players. Instead, we work to push each player to develop new skills and target new learning based on that player's needs. This type of feedback is highly specific to the individual, targeting their current stage in the process of learning.

It is possible to give targeted feedback that is not timely and also to give timely feedback that is not targeted. The most effective feedback is timely AND targeted. One of the problems with the letter grading system is that it helps distract our minds from the fact that it is not possible to give timely, targeted feedback when teachers are tasked to work in classrooms with a 1 : 40 teacher-to-student ratio.

On the surface, letter grades seem to be a tool that teachers can use to give effective feedback. But, when we peel back the layers of timely, targeted feedback, letter grades fail on both counts. First, it's hard to grade students' work quickly. When we push teachers to assign grades, we automatically disconnect the original learning process from the reflection process on that event.

Here is a thought experiment that highlights this idea. Imagine we are trying to help a young basketball player learn how to shoot a free throw. To do this, we do the following steps. First, we spend 1 hour talking to the player about the best way to shoot and the theory of shooting. Then, we put the young player on the line to shoot the ball. Then, right as the ball leaves their hand, we put on a blind fold and ear muffs. We video record the entire event and don't allow the shooter to evaluate their own

performance. Over the following weekend, we (as coaches) watch the video of the performance, take notes on the shot, and transform the notes into "points" for different parts of the performance. Perhaps the shooter gets 9 out of 10 points for the way they bend their knees, 6 out of 10 for their foot position, 7 out of 10 for the way they hold their hands, etc. At the end of the analysis, the coach transforms the points into a single letter grade (either A, B, C, D, or F). When the player returns to the court the next week, the coach hands the video back to the player with the letter on it and then moves onto the next skill.

Notice that this pattern of using letter grade, which mirrors the process in so many college classes, is neither timely nor targeted. There is a long delay between the moments that students do their work and the moment they receive feedback on their work. Moreover, the feedback they do receive is not-at-all helpful in guiding their mind. Points and single letters are not accurate indications of what students are doing well, what they can improve, and what the teacher sees. Instead, they are coded judgements of the performance that require lots of work to decode. Most of the time, students don't have the skills nor the incentive to spend that time to decode this type of feedback. Thus traditional grading processes fail to provide anything close to effective feedback.

Useful intention 2. Coaching

This one makes me smile. I often think about the questions:

1. What is the difference between a coach and a teacher?
2. What is the difference between a mentor and a teacher?
3. What is the difference between a friend and a teacher?
4. What is the difference between a parent and a teacher?
5. What is the difference between a family member and a teacher?
6. What is the difference between a therapist and a teacher?
7. What is the difference between a priest/rabbi/monk and a teacher?
8. What is the difference between an expert and a teacher?

When I think about these questions, I can come up with important distinctions for each comparison. However, there are significant overlapping responsibilities/roles fulfilled by teachers and each of the other types of work listed in these questions.

In thinking through my responses to these questions, I believe it would be helpful to come up with a research-based definition of a coach and then compare that with a research-based definition of a teacher. I plan to do this in future blog posts. At this moment, I have a draft of what I think about coaching:

The dominant narrative about a coach is someone who has expert-level knowledge about a particular skill and understands how to guide young minds through the talent acquisition process to produce improved performance in various aspects of that skill.

I challenge that narrative a bit because we tend to reserve the word coach for skill-based activities. Basketball. Running. Hockey. Etc. We tend not to describe people who help others learn how to learn as a coach. But, if I'm being honest with myself, that is more how I see coaching.

Here is my first draft for my definition of what a coach is: A *coach* is someone that has deep knowledge about the process of helping others learn and can act as a mentor, guide, and advocate for learners as they build expertise in their chosen craft. This often includes expertise in more than just meta-learning with a special focus on expertise within the chosen field of study.

We currently use grades as a part of the coaching process. Many teachers intend to use grades the same way a coach might leverage competition and practice: to identify particular skill sets that need work. The point is to help learners identify strengths, weaknesses, and to make progress in their learning processes.

However, if we think deeply about letter grades, there are so many better ways to help students figure out what they need to work on. Narratives with full paragraphs or even better, dialog with each student is much more effective than a single letter or a number assigned to performance. Our attempt to use grades to coach students is noble. The fact that letter grades are extremely ineffective tools (compared with dialog and narrative feedback) is another subject completely.

Useful intention 3. Relationship building

Perverse as it is, letter grades are actually a feature of the teacher-student relationship. They are an asynchronous conversation between teacher and student. Often the conversation is not authentic. Specifically, if we think of how the grading process works and map that back to a model for communication, grades do not allow us to get past surface-level dialog about content. Authentic teacher-student relationships require us to be vulnerable with students, to take an active interest in students' lives, to welcome each student to bring their whole selves into the classroom. Grades mask all of this hard work and make it seem like what is most important is the judgments we pass on a very small subset of the student's lived experiences.

Useful intention 4. Intrinsic motivation

At some level, the grading system attempts to tap into student motivation. I do agree with the idea that a crucial component of learning is motivation. I also agree that as a teacher, I have a responsibility to my students to help them identify sources of motivation and leverage that motivation to push themselves in their learning.

However, as discussed in my other writing in this google doc, grades are built on behaviorism which is all about extrinsic motivation. And extrinsic motivation is not a long-lasting source of high performance. In fact, intrinsic motivation is much more powerful for students. The system of assigning letter grades avoids this investigation of types of motivation completely.

I do plan to write an entire series of blog posts on intrinsic motivation. This series will be targeted at students with a focus on offering both principles and practices that students can use to identify, strengthen, and leverage different types of intrinsic motivation as they strive to learn in my classes. Below are six different types of intrinsic motivation that I believe are important for student learning:

1. Autonomy
2. Pursuit of mastery
3. Value-based purpose
4. Familial responsibility
5. Community connections
6. Grit, resilience, and determination in the face of adversity

One of the crazy realizations I've had in thinking through all of these different features of grades is that it is possible to create a classroom that does not use grades while maintaining all the positive effects that grades can have. In other words, just because our current system uses grades to do all these things doesn't mean grades are necessary to accomplish all of this. In fact, grades are not great tools to produce any of these effects, especially when we are forced to work under current circumstances (high teacher-to-student ratio, high content, very structured rules about time, little auxiliary support, etc).

In addition to identifying the useful intentions behind my use of grades, I believe it is important to identify the harmful effects of the grading system. Here is one that comes to mind immediately.

Harmful effect 1: Workload

Given our current levels of funding in education, the process of continually assigning grades requires unrealistic levels of work from teachers. One of the best practices I can use to help my students learn is to frequently give low-stakes feedback on their work. To do this well, I should be able to speak to students about many facets of the work they do to learn in my classes. I want to tell a story about my early attempts to do exactly this at Foothill College.

Sometime in my first three years at Foothill College, I decided to take on the task of giving low-stakes feedback to students on every component of their work to learn in my classes. I did this in two sections of Math 1A. Here were the assignments I created:

I flipped the classroom and required students to read class content before we met in-person. They had to fill out a pre-class reading assignment in which they copied down definitions, theorems, and worked out examples from the textbook. I had to create these assignments, which were usually 3 - 6 pages of work once completed by students.

Then, at the start of every class, I collected these assignments and would look over every page before the next in-class meeting. After they submitted their reading assignments, students then had a multiple choice quiz on the material they read about. These targeted skills from the pre-class assignment. I would grade these every afternoon and return the feedback the next time I saw the students. Students could then do corrections on any quiz problem they missed. I also had weekly homework assignments with problems beyond the daily quizzes. Three times a quarter, I offered a more comprehensive exam, again with corrections available.

The amount of work I did in this class was beyond healthy. I worked probably 60 - 80 hour per weeks for the entire quarter. Moreover, my students got demolished. They couldn't keep up with the pace of the

class and felt overwhelmed by all the due dates. When it came time for teacher evaluations, I got pummeled. There is no doubt that the activities I undertook are good for learning (within the context of forcing students to consume content on a pace that was blind to their individual learning needs).

However, the problem is that every one of those assignments was labor intensive. A quiz that takes the class 20 minutes to finish will take me at least 4 hours to work on the back end to grade. That is because 20 minutes of work multiplied by 40 students is a ton of reading for one teacher. Now do this across 3 sections in a quarter and you have a teacher who is in need of sleep! Multiply this by daily pre-class reading assignments, weekly homework assignments, and daily quizzes and I had a really painful situation on my hands.

That quarter, I learned something profound. In our current system of education, what is good for student learning is often bad for the physical, mental, emotional, and psychological health of the teacher. This is not true for an individual teacher-student relationship. The issue is a problem of scale. If I isolate my work to serving a single student, I can do an extraordinary amount to support that person. But, the moment that I am tasked to do this for 60 - 120 people, I get in deep trouble.

Here is a fun thought experiment. Let's pretend I limit my work to the 40 hours per week that I am paid for. Let's also pretend that I serve 60 students. Let's pretend that I could spend 100% of my time only working on student learning (with no curriculum development, no office hours, no lecture, no committee work, etc). In this scenario, I could spend 40 hours / 60 students = 4/6 = ⅔ hours = 40 minutes giving guidance to each individual student. But 40 minutes is hardly enough to write perhaps three paragraphs of feedback on a single assignment. Of course, I could do a lot more in 40 minutes if I could speak to that student face to face. But that would require that I spend 100% of my working life in dialogue with students. If we think about how much transformation can occur in 40 minutes per week, we might realize that this is a fraction of what great learning requires. Indeed, therapists usually have at least 60 minute sessions on a weekly basis.

Other authors have identified many more harmful effects of grading. Keeping a running log of these harmful effects is an important practice for me so that I can learn to identify internalized oppression in my students, my colleagues, and my communities as I speak about grades. It's amazing how, once I am aware of these harmful effects, I can map criticism and critiques of my work back to a subset of these harmful effects. This practice helps me disassociate my own identity from any critique of my work and to identify what is going on in the mind of the person I am speaking with.

So often in my work to transform grades, my students and colleagues try to police my decisions from within the context of our current grading system. I know that when this happens, my work has challenged their belief systems and may be causing them pain. When this happens, it's useful for me to be able to identify the sources of that pain so that I can empathize as I listen. I am careful to advocate for myself and my beliefs while building my resolve. But I know that to do this work, I have to be able to listen deeply and help others heal if I am to engage in this process of co-creating a different vision for assessment in our education systems.