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# CSU April 28 Webcast Discussion Doc

Return to main session:

<https://calstate.zoom.us/j/93844428850?pwd=OHpyQzVvUFVYZ3pDams3YnFTVHM0UT09>

<b>Group 1: EO1110 Calc, Precalc, College Algebra</b>	
<b>First Name</b>	<b>Comments</b>
Stan	Blah blah.
Cynthia Melendrez	
Andrew Long	<p>How are instructors partnering with SI or tutoring to support student success?</p> <p>At SDSU we moved our tutor center to online in zoom. We post the zoom rooms and tutor hours on our website and the instructors advertise to students. Students drop in via zoom during those times.</p> <p>Has the adoption of these sessions been strong? At CSULA we have a similar setup but the first few weeks have not seen many students take advantage of the option.</p> <p>Attendance has gone down, but there are students who are attending. Janet Bowers (she's in here too) probably has the specific data.</p> <p>Thank you that sounds very similar to us. If we are in this environment in the Fall, I hope we can take what we have learned to increase students using these resources.</p> <p>We have had tutors work on making short videos. We are hoping that might be a useful resource for some students - especially if schedules prevent them from making tutoring sessions.</p> <p>That's a great idea, and we are starting to do the same. Also, I spoke with Engineering faculty yesterday who have begun experimenting with breakout rooms. Tutors may be able to help facilitate the organization of those rooms so the faculty can concentrate on the course materials.</p> <p>Cool!</p>
Sharona Krinsky	<p>What are some ideas for showing the students' mathematical work? I'm doing pictures/scans of handwritten work uploaded to Canvas but would love to see what others are doing.</p>

	<p>I am currently using the app scribble to demonstrate my work during class and I can upload the handwritten notes I have been taking. This version is the one you need to buy and it costed me about \$10.</p> <p>Does this work for the students? I have lots of options for myself (I have an iPad pro) but what about having the students show work? They may not have a tablet or pencil.</p>
Tracy McDonald	<p>My midterm scores were pretty bad and I told them it was open book/notes; I gave them a review with solutions that they could also refer to. I had them download my exam from Blackboard and gave them 1.5 hours for a 1-hour exam to upload their write-ups. I printed out their exams, graded, and then scanned and emailed them back to my students. Scan quality is an issue for some students as well as printing..</p> <p>SY Scan quality is an issue: I think we all need a pdf scan tutorial to share out.</p> <p>CPL: <a href="#">Adobe has a relatively inexpensive scanning software for the phone that works pretty well.</a></p> <p>™: <a href="#">I like the Notes app. Students were using Camscanner too.</a></p> <p>SY Do you have a sense for the low scores? Are your students struggling with the new environment?</p> <p>™: the ones who did worse aren't coming to lecture, doing the pre-videos (MML), etc. I was shocked they didn't mimic my solutions from the review.</p> <p><a href="#">My scanning has been fine, but I did recommend students use the adobe scanner ap, that seems to work well</a></p> <p>I am using gradescope to grade exams in pdf.</p> <p>™ TY!! Our campus is looking into Gradescope. I will use it in the fall. :-)</p>
David	<p>Personally - Being chair + other work, I have assigned time to not teach this term - but my colleagues are very worried. After midterm - one said "I must be really good at this online stuff - all my students got 100's on the test." Everyone is convinced that there is no way grades will be fair and the honest students will be hurt by the cheating ones. No one thinks the AI proctoring is worth the effort. Personally proctoring via camera is not only demoralizing for students but also easy to cheat any way. Oral exams are impossible for large classes.</p>

	<p>It's a tough situation. This is why some schools are going with Pass/No Pass. This is an argument for moving towards mastery grading.</p> <p>I think this is our real opportunity to have a good discussion about what is assessment and what do grades mean? I agree that mastery grading MAY let us come to some agreement as to what grades really mean. I want my students to know 100% of 80% of the material to get a B, as opposed to 80% of 100% of the material (i.e. not really mastering anything).</p> <p>It seems beneficial to start encouraging teamwork with people who are teaching the same course. Even if you just have pairs collaborate to improve the course, it seems like it could only help the fellow teachers</p>
Mary Pilgrim	<p>Have you used mastery grading for large-enrollment courses? Was the "mastery" part only via webassign or did you use other things?</p> <p>SY: The quizzes are also mastery based. The questions tend to be more conceptual and explanation required. WebAssign is more for basic skills.</p> <p>Thanks!</p>
Julie Simons	<p>This is what I did for Calc 1:</p> <ul style="list-style-type: none"><li>• Two-part midterm (oral part via zoom and timed online part via LMS with "explain why" problems).</li><li>• Final project (open note, with collaboration encouraged but students have to write answers in their own words and have student-specific components of their project) instead of final exam.</li><li>• Homeworks scanned and turned in (graded same as before: partly completion, partly correctness).</li><li>• Quizzes with more explain why questions.</li><li>• A lot more flexibility on deadlines.</li></ul> <p>Our semester is over so now I'm thinking about next semester and beyond. Really like the SBG idea.</p> <p>SY: Really like this system!</p> <p>How long were the oral parts for each student? Were they conducted by TAs? Oral part was 15 minutes (supposed to be 10, scheduled in 15 minute timeslots). We don't have TAs, but our class sizes are capped at 25. So it took a lot of time, so I did not hold class sessions for two days. I had 32 students total.</p> <p>Can you give examples of projects? Did they take a long time to grade? Was there a strict rubric? Do you do projects during non-COVID semesters?</p> <p>The project is due today :) So I'm not sure how long it will take to</p>

	<p>grade. I typically don't do projects in Calc 1, but I have done a lot of projects in Statistics so some experience in what works/doesn't work. I can share the project (somewhere?), but I made it COVID-19 related (with an option for non-COVID-19 project to avoid triggering students who may be sensitive to this topic for a variety of reasons).</p>
Bori Mazzag	<p>Question: many of the faculty members in the department are skeptical of being able to assess student work w/o exams, especially in LD service courses. Do you have resources that address these questions? How do you create questions that are "doable" - at the appropriate level for intro courses? I'm not teaching now - most LD courses give open book exams, with a longer timeframe, the format has not necessarily changed much.</p> <p>Bori - I think two levels. One is moving towards mastery grading. The other is changing the nature of the questions. See examples below.</p> <p>Specifications grading: Linda Nilson (Book) PRIMUS has an issue for Mastery Grading</p>
Alison Lynch	<p>We replaced our second midterm exam in Calculus I with a take-home project where students could work in groups. We had LOTS of cheating via Chegg. Trying to figure out what to do for the final. (Coordinated course, 10 sections, ~300 students)</p>
Bem	<p>Many of our LD service courses are taught by lecturers and TA's. Many of the lecturers are teaching at several institutions and have to deal with different practices from different institutions. Some of them are using testing methods that make me uncomfortable. I am hoping to find some inspiration today to help them develop better testing methods.</p>
Janet Bowers	<p>Would like further description/discussion of examples of open-book questions especially when students (in large lectures) are watching videos that are more procedural in nature.</p> <p>SY: I think we have some example below... They often start with "Explain..."</p>
Joe Fiedler	<p>Is it possible to separate classes into terminal and continuing cohorts? A student who is looking at a sequence of six courses is much less motivated by "pass" than the student for whom the course is terminal.</p> <p>JS: I always worry about doing something like this because I feel like I should be harnessing the motivation and energy of students who are continuing on to future math courses. I feel like this can</p>

	elevate the discourse and learning for all students. In my experience, terminal students grouped together can end up bringing down the learning potential.
Claudia	<p>Is there coordination between sections so that the mastery expectations are the same across the board? What about discussions for what this might imply for next term?</p> <p>This is Sharona - I've used MBG across a coordinated course with many sections. We have instructor meetings where we agree on what mastery looks like and we "norm" the grading for each mastery assignment, evaluating actual student work together and deciding what is and what is not mastery.</p>
<b>Topics Examples of Good Questions for Open Book</b>	
Sharona Krinsky	<p>One way I like to do procedural problems is to ask the student to make some choices and then do the procedure. For example:</p> <ol style="list-style-type: none"> <li>1. Pick an <math>f(x)</math> that meets some criteria (must include....)</li> <li>2. Take the derivative of <math>f(x)</math></li> <li>3. Pick a point <math>c</math> between <math>a</math> and <math>b</math> and evaluate <math>f(c)</math> and <math>f'(c)</math>.</li> </ol> <p>This gives them a lot of choice and you see what they can and can't do. And also you start to see who is looking things up because they come up with the same questions.</p>
Tracy McDonald	<p>On my trig midterm, I had put one question asking them to explain why a triangle wasn't possible with the given dimensions. I knew I would get answers of "undefined" if I asked them to just solve. I want to create a final exam with questions like that and then a computation-based part. I haven't used the testing feature in Blackboard yet. I am hoping it will work well for the qualitative portion.</p>
Julie Simons	<p>I ask questions like: explain where the error(s) are in this work (i.e. second derivative test, with mistakes in derivative-taking and conclusions).</p>
Stan Yoshinobu	<p>Provide graph abstract function.</p>

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Albert Craig Curry	<p>I am currently working with my intro to probability and statistics class that is covered over the course of a year. Specifically I have made a midterm that is take-home paper portions that covers more of the skills and using Persons's MyLab to give more of a general definition and basic level understanding of the concepts. Much more multiple choice and true false with a couple of questions.</p> <p>Good example Craig!</p>

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<b>Group 2: Non-Calc track: Advanced Math courses (Linear Algebra, Differential Equations, upper-level math)</b>	
<b>First Name</b>	<b>CommentsOo</b>
Michelle Norris	I also tried online proctoring for my linear algebra class. Some of the students surely used Wolfram Alpha (maybe 5 out of 30). The class is applied linear algebra and consists mostly of engineers and computer scientists. I feel I have no good way of knowing who cheated for sure and this is unfair to those who did the exam without technology as they were suppose to. I didn't want to change the exam format from pretty computational to very conceptual (non-googleable) midstream as the students were used to computational problems from the homework and first exam. Oops wrong room. I will try to switch.
Kate	True False problems where when it is true give an example, false give a counterexample.
John	(I'm in engineering, actually) Using conceptual questions: "Give an example of natural convection heat transfer," or "How does the convection coefficient vary with distance along a flat plate?"
Kate	Grade the "proof" or Correct the "proof" annotate the "proof".... particularly for induction problems and set theory problems.
Kate	Functions from Matrices to polynomial rings to test concept of injectivity, subjectivity, and pre-image. These tend not to exist on google.
Matt Jones	Using lots of "explain this step in the proof" or, how did we use this hypothesis or previous theorem in this proof" questions I have also broken
George	Good ways to annotate handwritten homework papers that students submit electronically after scanning them to pdf.

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Shawn	My transformation geometry final included problems that had geogebra links with "starter" problems that students would complete. I felt the final was successful. [Kate: Nice idea Shawn]



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<b>Group 3: Non-Calc track: Math for elementary, QR, Stats, Stats related EO 1110, QR</b>	
<b>First Name</b>	<b>Comments</b>
Jill Macari	How can we write exam questions that require explaining for these math students, who don't have a lot of confidence? I am teaching the class that Topaz is coordinating, plus an introductory class for prospective elementary school teachers. In that class, I have been training them all along to explain their thinking
Albert Craig Curry	I am currently working with my intro to probability and statistics class that is covered over the course of a year. Specifically I have made a midterm that is take home paper portion that covers more of the skills and using persons's MyLab to give more of a general definition and basic level understanding of the concepts. Much more multiple choice and true false with a couple of questions.  Good example Craig!
George	Good ways to annotate handwritten homework papers that students submit electronically after scanning them to pdf.
Steve Klass	Geometry for prospective elementary teachers. Enhanced multiple choice and T/F questions can be graded half by tech and half by me. Explanations/justifications for different geometric methods. And looking for a fair format. I'm surprised by the number of my students who don't have printers, or depend on their iPhones for visuals. I also have a Math Trails final project that we had to modify to allow for individual participation, so that's taken a larger chunk of their grade. I backed down on the weight for midterms and finals from 50% to 40% of final grade while increasing the weight on in-class/online work.
Angela Reed	Right now I am working on a project with my students that they are investigating a small scale E. Coli outbreak and making

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	<p>connections to what we are going through with Covid-19. This focuses more on developing the 8 math practices than specific content skills. My plan is to assess them with a final project, where they have choices about what social justice issue they want to talk about related to Covid-19. This is a little “fuzzy” for me, but plan on developing a rubric for their final submission, which will likely be a screencastify video, or paper if they prefer. That is so interesting! What class are you teaching? I am teaching 7th grade math.</p>

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