

TOWARD A PEDAGOGY COMPATIBLE WITH EQUITABLE GRADING

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We desire accurate communication and understanding.
If you have wonderings, questions, arguments, etc. *please* speak up.

TYPICAL GRADING PRACTICES (FROM OUR EXPERIENCE)

- Use a 100-point (percentage) scale
- Have grade ranges similar to A:90-100, B:80-89, C:70-79, D:60-69, F:0-59
- Have several parts, e.g., homework, projects, quizzes, exams, attendance & participation, extra credit, group work, etc.
- Use homework grading as a major source of student feedback
- Assign zeroes to missing work/assessments

WHAT IS EQUITABLE GRADING?

- A book by Joe Feldman
- Grading practices that:
 - Are mathematically accurate, validly reflecting students' academic performance
 - Are bias-resistant, preventing subjectivity from infecting grades
 - Motivate students to strive for academic success, persevere, accept struggles and setbacks, and to gain critical lifelong skills

TYPICAL GRADING PRACTICES

- Are **not** mathematically accurate
- Are **not** bias-resistant
- Do **not** motivate students

ACCURACY: THE 100-POINT SCALE

ACCURACY: ZERO FOR MISSING WORK

- 90/80/70/60 grade ranges → 10 values for A,B,C,D and 60 for F
- A zero in one component lowers 2 B's to an F
- Does missing work indicate a **total** lack of capability? How do you know?

ACCURACY: GRADING CATEGORIES AND WEIGHTINGS

Should grades here be the same or different?

Category	Category Weight	Student 1		Student 2	
		Score	Weight	Score	Weight
Homework	30%	80%	.24	60%	.18
Tests & Projects	40%	60%	.24	95%	.38
In-class Activity	20%	90%	.18	70%	.14
Participation	10%	100%	.10	60%	.06
Weighted Score		76%		76%	

Category	Student Score	Class X		Class Y	
		Weighting	Result	Weighting	Result
Homework	80%	30%	.24	5%	.04
Tests & Projects	60%	40%	.24	85%	.51
In-class Activity	90%	20%	.18	5%	.045
Participation	100%	10%	.10	5%	.05
Weighted Score		74%		65%	

ACCURACY: EARLY FAILURES, EVENTUAL LEARNING

- I had a student who failed for six weeks. I told him he was supposed to learn from his mistakes. His work improved, his grades got higher, and he was doing A-work at the end of the semester.
- What should his grade be?
- Why?

ACCURACY: NON-ACADEMIC PERFORMANCE

- Attendance & participation likely contribute to learning but don't measure it
- Penalizing late work does not reflect academic capability
- Penalizing cheating does not reflect academic capability
- A group score does not reflect individual academic capability
- Extra credit (typically enrichment or advanced content) does not measure performance on course content—if it does it should be required, not extra

ADDITIONAL DISCUSSION RE ACCURACY?

BIAS-RESISTANT: BUT I'M NOT BIASED

- We refer to unintentional bias—Bias-resistant practices value knowledge, not environment or behavior
 - Students come to our classes with different background knowledge
 - Students have outside-of-class circumstances that may restrict class-related activity
 - Students vary in how quickly they learn the content of our courses

BIAS-RESISTANCE: SOME ISSUES

- Extra credit (typically enrichment or advanced content, not in course goals) gets used by those in a better position to profit (have resources, supports, stronger backgrounds, etc.)
- Late penalties are unrelated to actual capability and unduly burden students with few resources, weak prior knowledge, overwhelming life issues, stress, etc.
- Participation credit rewards compliant students and can be antithetical to some who may view it as “acting white” or putting oneself above the teacher
- Including homework/learning activity when grading favors those who already know the material or learn quicker or are “better” students

ADDITIONAL DISCUSSION RE BIAS RESISTANCE?

MOTIVATIONAL: RESEARCH & EXPERIENCE SUGGESTIONS

- Contingent extrinsic rewards—do this to get that—undermine intrinsic motivation (p.154)
- Extrinsic motivation **lowers** performance on creative or complex-thinking tasks and increases unethical behavior (p.155)
- Using (low) grades as punishment causes student withdrawal or low self-esteem (p.157)
- Point-based grades (and extra credit) focus student attention on points, not content

ADDITIONAL DISCUSSION RE BIAS MOTIVATION?

SUGGESTED ACTION: REVISE INSTRUCTION

- Identify desired outcomes (including any soft skills)
- Create assessments covering all outcomes, perhaps a mix of individual & comprehensive assessments
- Create learning activities designed to develop each capability
 - Content presentation
 - Student Practice
 - Feedback to students

SUGGESTED ACTION: CREATE GRADING SYSTEM

- That uses zeroes **only** for actual performance (not missing stuff)
- Includes performance only on assessments, not homework
- Uses equal grade bands, e.g., a minimum grade of 50 or 4/3/2/1/0 or good/okay/marginal/poor, mastered/not-mastered or rubric-based results or . . .
- Allows counting more recent/later assessments or reassessments

IMPLICATIONS

- Substantial work in initial planning of outcomes, learning activities, and (perhaps multiple versions of) assessments—soft-skills may be outcomes, they need their own assessments
- Assessments for individuals in group work will need to be developed. Soft-skill assessments have need to be developed.
- Reimagining the provision of feedback to students, perhaps redefining “teaching” activity
- Less time spent grading
- No more arguing about points and students focus on learning content
- (ultimately) Happier students

DISCUSSION

- Our thinking about grading has changed dramatically. For us it is unprofessional not to use these practices. Fortunately, we also think our instruction becomes better as a result.
- Wonderings, arguments, questions, . . .
- PPT at
◀ <http://www.cs.uni.edu/~adberns/presentations/lsamp2020.pdf>