INTRODUCTION

There are different ways to use the Normalized Grade Report to calculate individualized grades for your students working on team projects. Many instructors simply want to apply a fair, sound and efficient approach to individualized grade calculation that is consistent with their learning objectives. This report is built for you. But it is also suitable for those who prefer to apply their own customized algorithms.

The Normalized Grade Report is available now on the Reports page, for use on current and past courses. Just fill out the settings to simply configure it for your class assessment(s) and choose which assessment(s) to include in the Excel output file. This new spreadsheet even calculates your final, individualized grades--it computes a normalized grade factor (+/- 1.00) for each student based on their peer assessments and multiplies that by the group project scores you can enter into the sheet.

FEATURES

1) Prepare normalized grades (+/-1.00) that reflect more or less contribution to the group project grade.
2) Set limits on how far peer assessment ratingsdata can increase or reduce an individual student's grade.
3) Set a point reward or penalty to incentivize students to fill out the assessment.
4) Enter group project scores with which to produce individualized student grades.
5) Export a spreadsheet displaying key data used in the grade calculations. You can use it as is, or customize the calculations to better fit your learning outcomes.

NOTES

- **Peers Only!** There is a legitimate debate over whether Self-assessment data should be averaged with Peer-assessments to calculate individualized grades. We have decided to exclude self-assessment data in the grades calculated by PAcom, based on findings from the literature.

- **If you prefer the old Grade Report, its still available**! Where the new report uses a normalized grading factor (+/-1.00), the old report uses a straight percentage possible score (from 1 to 100%).

- **Give feedback always; but don't grade unless you have to!** Sridharan et al (2018) found that students can assess their student peers accurately and consistently when grades are not an outcome. But students are naturally reluctant to honestly assess their peers when it can penalize them. So we recommend that you intersperse formative peer assessments with summative ones so students can have constructive feedback before their grade depends on it.

EXAMPLE

Here we will take you through an example for a 4-person team. We'll start with the Setttings:

1. **Instructor adjusts "Settings" before viewing report**

   a. **Select which Question Set to use** --You may choose any rating or numeric Peer question set. In this example, *P-02* (labeled "Team
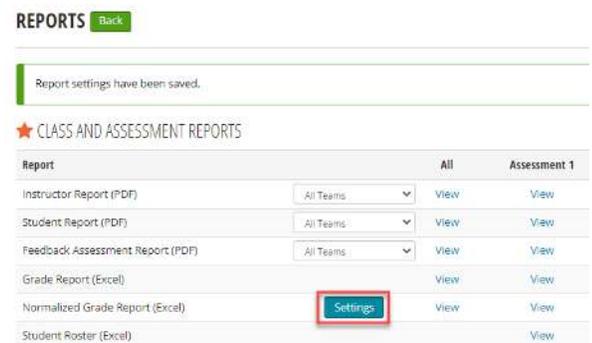
Member Overall Participation") was used. It is a single question, with a comprehensive 1-9 grading scale.

b. **Set Low and High Limits** -- Decide on limits to how far very-high or very-low peer ratings can affect an individual's grade. This example shows the effect of setting a 10% lower limit, (a floor of .9) and a 20% upper limit (a ceiling of 1.2) on the grading factor which is multiplied by the Group Project Grade. (Later we'll discuss considerations for selecting Limits to match your learning objectives.)

c. **Set Completion Incentives** -- Decide if points should be awarded (or subtracted) to students for completing (or not completing) the peer assessment? The example was set to penalize a student -7 points for not completing the assessment. A negative number subtracts points if a student did not fill it out. A positive number awards points if they completed it.

	You may enter the group scores here	Student did assessment: 1=Done, 0=Not	(Incent. Setting) Incentive to fill out assessment	Ave of Peer ratings for an individual (1-9 scale)	Ave of Peer ratings for entire group	Normal Factor: Individual Average / Group Average	(Limit Settings) Normal Factor with Low/High Percent Limits	Group Project Score * Normal Factor with Limits
Name & student information A-G	H	I	J	K	L	M	N	O
Last Name	Group Project Score	Completed	Completion Points (-7 pts if missed)	(P-02) Individual Peer Average	(P-02) Group Average	(P-02) Individual Grading Factor	(P-02) Individual Grading Factor with Limits (0.9 / 1.2)	(P-02) Individualized Project Grade
Turner	80	1	0	6.67	7.08	0.941	0.941	75
Daniels	80	0	-7	4.33	7.08	0.612	0.900	72
Baxter	80	1	0	8.33	7.08	1.176	1.176	94
Parker	80	1	0	9	7.08	1.271	1.200	96

After the four settings are saved, you can View the report. Column labels in the report display your setting choices. You can easily readjust settings and rerun the report as often as you wish.

2. **[Columns A – G] Student, class, assessment and team information**

3. **[Column K & L] Individual and Group Peer Averages** -- This is the core data for the individualized project grade. The first is an average of the ratings a student's peers assigned to him/her. In this case a 1-9 rating scale was used. Turner's average, 6.67, is somewhat lower than the group average, 7.08. Turner was viewed as contributing less than others.

4. **[Column M] Individual Grading Factor** -- Here is displayed the raw normalized factor, or ratio of the individual divided by the group average. Turner's result is less than 1.00--specifically .941--indicating he/she was perceived to have contributed less than others.

5. **[Column N] Individual Grading Factor with Limits** -- When a student's individual factor is within the High and Low limits set by the instructor--in this case .900 / 1.200--then no change is made. This was the case for Turner. However, if they were assessed outside of these limits, their factor is reset at the limit. For example, Daniels was rated at a very low .612 and so was reset to the .900 limit; Parker received a very high rating, 1.271, so was reset to 1.200.

6. **[Column O] Individualized Project Grade** -- The student's grade is calculated by the formula, *=(H2*N2)*, multiplying their group's project score by the limited individual grading factor.

The Completion Points are not automatically included in this formula. You can easily do so by changing the formula in cell O2 to *=(H2*N2)+J2*

DECIDING ON WHAT LIMITS TO USE

The Limits specify how much the peer assessments can impact a student's grade, pushing it above or below 1.00. It is helpful to set Limits to prevent the calculated student grades from varying farther than you are comfortable with.

You may set the Low and High Limits separately, anywhere from 0% to 100%. As you can see in the 'None' condition, 0% allows 0 variance from the Group Project Score—everyone receives the same grade.

In the 'Unlimited' condition, both are set to 100%. Here the team received 80 points on their project, and the group average rating was 3.0 on a 1-5 scale. The first student, Amy, had a perfect average of 5.0, so received an 'Unlimited' grade of 133 points. Meanwhile, Fran--who was

Comparing Grades Under Different Limit Settings (Assume Group Project Score=80; Group Average=3.0 on 1-5 scale)				
Condition:	**None**	**Small**	**Large**	**Unlimited**
Low Limit ...	0%	15%	30%	100%
High Limit ...	0%	5%	15%	100%
Amy (A)	80	84	92	133
Bill (B)	80	84	92	107
Chris (C)	80	80	80	80
Don (D)	80	68	56	53
Fran (F)	80	68	56	27

rated all 1's--received only 27 points. While these are extremes, it underscores the point about whether two students working on the same project (if both did actually contribute) should receive scores that differ by 106 points.

The Large and Small conditions attempt to balance fairness and accountability.

- **Large** -- Individualized grades may vary up to 45%, from 70% to 115%, of the Group Project Score. A group project score of 80 could rise 15% up to 92 for a student who received the highest peer ratings, or drop 30% down to 56 with the lowest ratings.

  With wider limits, more weight is placed on the role of teammates in monitoring and mediating the behavior and contributions of individual students. Thus, you might emphasize the importance of students being accountable to their teammates. Their grade is directly affected by their efforts to help the team--as a productive and reliable contributor, helping the team to set direction, organize work, provide meaningful assistance to teammates, and overall set a positive and respectful tone in the group.

- **Small** -- Individualized grades may vary up to 20%, from 85% to 105%, of the Group Project Score. A group project score of 80 could rise 5% to 84 for a student who received the highest peer ratings or drop 15% to 68 with the lowest ratings.

  Narrower limits provide a smaller but still visible role for students to be accountable to their teammates. Thus, with less individual variance from the group project score, you may place more emphasis on the central role of the team--getting the team product and processes right, building a resilient smoothly functioning team.

  On a separate note, less weight on the peer assessment for individualized grades allows more opportunity for you to adjust individual grades using other factors, such as instructor or client observations, student journals, individually assigned deliverables, etc.