

PowerTeacher Pro Calculation Details 'Alpha' vs. 'Numeric' & Mid-year changes

About this Document

The purpose of this document is to provide users with a better understanding of the calculation differences between the 10-point 'Alpha' type grade scale and the 10-point 'Numeric' type grade scale. In addition, directions are provided to modify stored grades and existing sections when a switch is made from one grade scale type to another.

Note: This process may require the use of Direct Database Access (DDA) within PowerSchool. Ensure the user has the appropriate access to DDA or log a Remedy ticket if access is not available.

Background

Beginning in school year 2018-2019, all North Carolina public schools began using PowerTeacher Pro to record grades that are stored to the students' historical grades table in PowerSchool. During the upgrade process from PowerTeacher Grade Book to PowerTeacher Pro, the vendor informed NCDPI that all classes using the North Carolina 10-point scale should be set up using the 'Numeric' grade scale type. Based upon this direction from the vendor, NCDPI advised LEAs and Charters to begin using the 'Numeric' grade scale effective July 2018. It was not until after the numeric scale was implemented that NCDPI discovered some differences in how the 'Alpha' and 'Numeric' type scales calculate final grades. The differences only exist when using Category Weighting to calculate term grades. The "Alpha" grade scale type should be used in all public schools.

Calculation Methods

How grades are calculated using the 'Alpha' Type Scale

When using Category Weighting in the 'Alpha' type grade scale, the percent totals in the categories are used in the weighting calculation, using totals rounded to the nearest hundredth. All category totals are used to calculate the final average, which is then rounded to the nearest whole number.

Example:

A student has two category totals of 96.67% and 100%. In an alpha scale, these two percentage scores would average to 98.34% and be rounded down to 98 as the final term grade.

It is important to note that the calculation method used in the 'Alpha' type scale is the same as that used in the Canvas application.

How grades are calculated using the 'Numeric' Type Scale

When using Category Weighting in the 'Numeric' type grade scale, the percent totals in the categories are NOT used in the weighting calculation. Instead, the numeric value for each category is first rounded up or down to the nearest whole number, then those values are used to calculate the final grade, which is then rounded again. So, using the same example from above:

Example 1:

A student has two category totals of 96.67% and 100%. With a numeric scale, the category percent scores are rounded up in the grade scale to be 97 and 100. The average of these values would be 98.34% and rounded up to 99%. The percent field that the column from the Scoresheet pulls from was not used in this calculation, so it populates it with the percent value from the grade scale, in this case a 99%.

In addition, it is important to note that extra credit that causes a grade to exceed 100% will be recognized as the highest grade that exists in the grade scale, which is 100.

Example:

A student has two category totals of 101.67% and 98.35%. With a numeric scale, the category percent scores are looked up in the grade scale to be 100% and 98%.

Next Steps – How to Make the Necessary Changes

Part I - Create a New Grade Scale

There are multiple places that discuss how to create grade scales in PowerSchool.

- PS_PTP_Gradebook_Admin_Training (www.nc-sis.org/PTP.html)
- PTPPro_Checklist_2018_Implementation (www.nc-sis.org/PTP.html)
- PowerSource (support.powerschool.com)

Part II - Attach New Grade Scale to Courses in Mass

Finding the Internal ID for Existing and New Grade Scale

Grade Scales are found at the LEA level. Make a note of the names of the old and new grade scales so you will be able to tell which record to see when going into the table in DDA.

Navigation: LEA LEVEL > UNDER SETUP > LEA > UNDER GRADING > GRADE SCALES

1. Note the names of the grade scales

Grade Scales

New

Basic Filter

+

Grade Scale Type
☐ Alpha
☐ Numeric
☐ Special

+

Clear

Apply

				Example	
124					
723	NC 10-Point Scale	NC 10-Point Scale	Alpha	A Special Codes Example	
973	NC 10-Point Scale Numeric		Numeric	A Special Codes Example	

2. Navigate to DDE

Navigation: LEA LEVEL > UNDER SETUP > SYSTEM > UNDER DATA MANAGEMENT > DIRECT DATABASE EXPORT (DDE)

3. **Current Table** - Select 'GradeScaleItem (90)' table from the dropdown list
4. Select all records in the table

Current Table:

GradeScaleItem (90) ▼

Current Records in Selection: 609

List View

Table View

Export Records

Match Selection

Table View Setup

Select all 609 records in this table

5. Click '**Table format**' to see all the records

List Records: GradeScaleItem

A	GradeScaleID	Name	Description	CountsInGPA	GraduationCredit
1	-1	Default	The default grade scale. Used to calculate simple	0	0
2	-1	NC 10-Point Scale Numeric	NC Numeric Scale as of 2018-2019 School Year	0	0
3	-1	A Numeric Example Scale	This is an example numeric gradescale. For PowerT	0	0
4	-1	NC 10-Point Scale	NC 10-Point Scale	0	0
5	-1		Special Codes used with Traditional Grading	0	0
6	-1			0	0
7	-1	Standard Numeric Scale	Standard Numeric Scale	0	0

- Click the -1 of the 'Numeric' grade scale to open the record
- Take note of the value in the 'ID' field
- Navigate back to DDE (Direct Database Export)
- Click **'Table format'** to see all the records again
- Click the -1 of the 'Alpha' grade scale to open the record
- Take note of the value in the 'ID' field

Display Record: GradeScaleItem

Field	Value	Relat
ID	523	
AddedValue	0	
Alt_Grade_Points	0	Existing grade scale internal ID
CountsInGPA	0	
CutoffPercentage	0	
CutoffPoints	0	
Description	NC 10-Point Scale	
ExcludeFromAFG	0	
GradeScaleID	-1	

Display Record: GradeScaleItem

Field	Value	Relat
ID	924	
AddedValue	0	
Alt_Grade_Points	0	New grade scale internal ID
CountsInGPA	0	
CutoffPercentage	0	
CutoffPoints	0	
Description	NC Numeric Scale as of 2018-2019 School Year	
ExcludeFromAFG	0	
GradeScaleID	-1	

Find All Courses Currently Pointing to the Numeric Grade Scale

Go to the Courses table in DDE and search for all courses that are currently pointing to the old grade scale.

Navigation: LEA LEVEL > UNDER SETUP > SYSTEM > UNDER DATA MANAGEMENT > DIRECT DATABASE EXPORT (DDE)

1. **Current Table** - Select 'Courses (2)' table from the dropdown list
2. In the Search Courses panel
 - a. Select '**GradeScaleID**' field from the dropdown list of the first box
 - b. Select '=' equal sign from the dropdown list of the second box
 - c. Enter the ID number gathered in Step 7 above in the third box
 - d. Click the '**Search all xxxx records in this table**' button

Direct Database Export (DDE)

Current Table: Courses (2)

Current Records in Selection: 0

List View Table View Export Records Match Selection Table View Setup

Select all 2942 records in this table

Search Courses

GradeScaleID = 523

Search all 2942 records in this table Search within the current 0 records only

Modify the 'GradeScaleID' field to the New Grade Scale

Change from DDE to DDA, then modify one field in the courses selected above

Modify Records

Caution: Manual modifications to database records should only be attempted by authorized technical contacts, and can result in the loss of information if not executed properly. Before making any changes via Direct Database Access, you should perform a manual backup of your PowerSchool database.

This function will permanently modify your database. Use only if you know exactly what you are doing, and then only with extreme caution. Changes are permanent. You may use ^ to reference the existing value of the field.

Current Table: Courses

Current number of records in selection: 2757

GradeScaleID := 924

☐ Check here to verify a delete command

[Back to Direct Database Access Main Screen](#)

Delete Selected Records **Modify Selected Records**

1. Change from DDE to DDA
2. Click '**Modify Records**'
3. Select field 'GradeScaleID' field from the first field dropdown list

4. Enter the New Grade Scale ID value gathered in Step 11 above in the box after the '=' equal sign
5. Click '**Modify Selected Records**' button
6. Click '**Confirm Modify Selected Records**' button



Part III - Recalculating Final (Stored) Grades in PowerTeacher Pro

Although final grades in PowerTeacher Pro are calculated automatically, you can force a recalculation, if necessary. Use the recalculate tool after making changes in the gradebook, such as adding multiple assignment scores for students who transferred from another class. Also, recalculate grades when your PowerSchool administrator changes a setting that affects the gradebook, such as the grade calculation formula, or when you assign an alternate grade scale to a student.

To use the recalculate tool:

1. Click **Grading** in PowerTeacher Pro
2. Select **Traditional** OR select Scoresheet, Standards, Comment Verification, Category Totals, or All Reporting Terms under Grading. Under Students, click Assignments, Standards Progress, or Comment Log.
3. Click the Gear icon
4. Select **Recalculate Final Grades**
5. Select the classes in which you are recalculating grades
6. To recalculate traditional grades, check **Traditional Final Grades**
7. To recalculate standards scores, check **Standards Final Grades**
8. Click **Recalculate**

Export Stored Grades

Prior to storing grades using the updated grade scale, users will need to export all 2018-2019 stored grades from the stored grades table in DDE. This will enable districts to compare the new stored grades to the old stored grades to identify differences and then notify any impacted students.

Navigation: LEA LEVEL > UNDER SETUP > SYSTEM > UNDER DATA MANAGEMENT > DIRECT DATABASE EXPORT (DDE)

1. **Current Table** - Select '**StoredGrades (31)**' table from the dropdown list in the Search Courses panel
 - a. Select '**TermID**' field from the dropdown list of the first box
 - b. Select '>=' equal sign from the dropdown list of the second box
 - c. Enter the lowest term ID that was used for any previously stored grades this school year. Ex: **2800**
 - d. Click the '**Search all xxxx records in this table**' button
 - e. Select **Export Records** and choose the fields you'd like to export

Part IV- Run PSCB Gradebook- Out of Sync Grades Report (School level)

After recalculating grades in PowerTeacher Pro, the Out of Sync Grades Report can be used to easily identify students who were impacted by the calculation differences. Students who have a stored grade higher than the grade in PTPro are flagged with a red mark, whereas students with a lower stored grade than that in PTPro are flagged with a green mark.

Gradebook			Points		Stored			Last Grade Update	Date Stored	Change Since Stored
Grade	%	Cit.	Earned	Possible	Grade	%	Cit.			
77	77		385	500	79	79		01/15/2019	01/04/2019	-2
87	87		434	500	83	83		01/15/2019	01/04/2019	4
69	69		347	500	70	70		01/15/2019	01/04/2019	-1

Part V- Store Final Grades

Follow the standard stored grades process to re-store term grades that were stored using the incorrect grade scale. Be sure to determine the parameters that were used for the original stored grades process to avoid duplicate stored grades.