Effective Grading Through Google Sheet Functions Timothy Ang

oogle Sheets is a web-based spreadsheet application that provides an efficient way of automating and sharing a breakdown of students' grades. This application is part of the Google Docs Editors suite of productivity software, which includes Google Docs, Slides, Drive, and others. Google Sheets is is a free alternative to Microsoft Excel, which shares similar features but can be cost-prohibitive for some educators. Additionally, the spreadsheets can be viewed anytime on the cloud with a Google account and internet access. This allows students to monitor their performance in the course and to potentially improve their scores.

A Few Useful Google Sheet Functions

This grading spreadsheet can be utilized more effectively by using spreadsheet functions that automate or improve the grading process. Functions are commands that can be typed within a spreadsheet cell, prefaced by an equal sign (=). This article provides a guide for the breakdown of the more complex functions (e.g., COUNTIF, SUMIF, RANK, VLOOKUP) and a few visual display commands with some examples. Students can easily access detailed updated breakdowns of their grade online, and it offers them the opportunity to become more proactive in improving their English abilities in class.

Setting up the Google Sheet

This academic grading system is easy to implement. First, send a link of the grade spreadsheet to the students. The link is only for viewing and does not give them editing privileges. Students are then taken through the various columns with grade components and corresponding percentages indicated. Finally, they are asked to save the link on their internet browser for convenient access.

Although not a complete solution, to address possible university administration or students' concerns, students' names are hidden and only their ID numbers are shown. Fortunately, in two years of using this system I have not received any complaints. Other teachers' experiences may vary depending on the university or department.

COUNTIF for Checking Attendance

COUNTIF (see Figure 1) tallies a total number of characters from a range of cells that meet a certain condition. By utilizing COUNTIF, teachers can manage attendance records and identify students who may require intervention due to habitual absences or lateness. Furthermore, COUNTIF can also be applied to track other class measurements, such as submissions counts and providing insights into student engagement.

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Equation: =COUNTIF (CELLRANGE, "CHARACTER")

In this equation:

- CELLRANGE (AC6:AP6) represents the range of cells containing attendance data, spanning weeks 1 to 14 of the semester under the *Absences* column.
- The "CHARACTER" parameter denotes the condition that COUNTIF should count. In this scenario, "x" indicates an absence, while "o" signifies attendance.
- Under the *Absences* column, CELLRANGE (AC6:AP6) includes class attendance from weeks 1 to 14 of the semester.

Figure 1

COUNTIF Example

	fx =COU	INTI	F(AC	6:AF	P6,	"*x'	·")									
В	с 4	▶AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ
Rank	Student ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Absences (max. 5) (2 late = 1 absence)
11	Manual Votes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	MAX NO.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	10022000	0	0	х	0	0	0	0	0	0	0	0	0	0	0	1
8	MAX NO.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	1001210-00	0	0	x	x	0	0	0	0	x	0	x	0	0	0	4

SUMIF for Tracking Classwork

The SUMIF function (see Figure 2) enables users to aggregate values within a specified range based on predefined criteria. Similar to COUNTIF, using SUMIF helps students keep track of multiple submissions as well as understand the consequences of missed assignments but with an emphasis on in-class activities or assigned homework.

Equation: =ARRAYFORMULA(SUM(IF(CELL RANGE="CHARACTER", NUMERICALVALUE for CHARACTER, NUMERICALVALUE for NOCHAR-ACTER))) In this equation:

- CELLRANGE (G5:P5) represents the range of cells containing submission data for the "Warm-up Writing" column. The characters "o" and "x" indicate submissions and non-submissions of writing activities, respectively.
- When the character "CHARACTER" (e.g., "o") is found within CELLRANGE, the corresponding NUMERICALVALUE for CHARACTER is assigned (2). Conversely, when no such character is found, the NUMERICALVALUE for NOCHARACTER is applied (0).
- ARRAYFORMULA function is employed for calculations involving multiple values produced by the IF function, ensuring correct calculations across the entire range. Its inclusion is necessary to prevent errors, such as "#VALUE!".

Figure 2

SUMIF Example

Q5		•	∫rx =Arı	ayF	orm	ulo	(SU	M(I	F(G	5:P	5="	o",	2,	0)))
	A	В	с 4	∍G	н	1	J	к	L	м	N	0	Ρ	Q
3		Rank	Student ID	1	2	3	4	5	6	7	8	9	10	Warmup Writing (20%)
4	Π	9	MARKED MARK	0	0	0	0	0	0	0	0	0	0	20
5		8	MARKED BARK	0	0	x	0	0	0	x	0	0	0	16
6		12	1001210004	0	0	x	0	x	0	0	0	0	0	16
7	1.1	10	MALE NAME	0	0	0	0	0	0	0	0	0	0	20

RANK for Peer Grade Comparison

The RANK function (see Figure 3) sorts the table numerically and assigns a numbered ranking. The incorporation of rankings alongside total grades shows students their academic standing among their peers in class. This adds an element of competition and pushes students to exert more effort in class. This transparency may also encourage support among students who are underachieving.

Equation: =RANK(CELL, CELLRANGE, FALSE)

In this scenario:

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- The *Grade* column displays students' total grades, with each student's grade referenced by the CELL (AA9).
- The CELLRANGE (Al\$4:Al\$29) represents the range of total grades for all students in the class.
- By utilizing the RANK function with the FALSE parameter, grades are ranked in descending

order. This means that higher grades receive lower numerical rankings, indicating superior performance.

Figure 3

RANK Example

B4		▼ ∫x	=RANK(V4, V\$4:)	/\$36, F/	ALSE)		
	Α	в	C 4	► E	F	G 🖣	► V 4
1							
2		A DOK HER	数			31	
3		Rank	Student ID	1	2	Book Report (20%)	Total Grade (100%)
4		30	38002-6000	0	0	0	19
5		3	3002-000	9	8	17	92
6		13	38024000	8	9	17	84
7		22	38024015	7	0	7	76
0				6	7	12	Q1

VLOOKUP for Importing Data

VLOOKUP is a function that retrieves data from different sources by searching for a specified value and returning a value in the same row from a specified column. This function is useful because it eliminates the need to manually transfer data from different locations of the spreadsheet. In this regard, it allows the teacher to focus on more important aspects of teaching, such as curriculum and professional development.

Equation: =IFERROR(VLOOKUP(CELL, CELL-RANGE, VALUE1, FALSE), VALUE2)

In this equation:

- CELL (C11) represents the value to be searched.
- CELLRANGE (raw!B:C) indicates the range where the search will be conducted, with "raw!" indicating a separate tab in the spreadsheet.
- VALUE1 (2) specifies the column index from which the value should be retrieved if a match is found in CELLRANGE (raw!B:C). In this case, it's the second column (column C).
- FALSE indicates that an exact match is required for the search.
- If the VLOOKUP function fails to find a matching student ID, the IFERROR function ensures that it returns VALUE2 (0 in this case), preventing errors in the formula.

Figure 4 VLOOKUP Example

	В	C (• w	x	Y	Z	AA	AB	AC	AD	AE	AF
3	Rank	Student ID								8	9	10
4	9	-	12,700	5,400	8,000	11,400	13,600	8,600	7,200	7,800	9,000	10,80
5	8	-	13,800	5,400	0	11,700	16,100	9,700	8,000	10,500	12,400	12,30
6	12	-	8,100	4,800	4,200	10,900	12,100	7,400	6,600	5,400	10,300	7,200
7	10	-	1,200	3,600	6,100	11,200	13,700	6,200	6,000	9,100	8,400	10,20
8	23	-	12,600	7,200	10,100	16,000	9,600	0	0	10,100	0	0
9	3	-	11,400	5,400	8,400	17,400	14,50	<u>-</u>	8,700	8,700	9,600	11,70
10	26	-	7,800	3,000	9,300	11,000	10,80 =	n ip	0	0	9,800	0
11	7	100000-0	9,100	4,800	11,500	13,900	15,900	10,300	8,900	12,900	9,700	15,30
12	15	10000010	4,200	6,000	5,400	6,000	10,900	9,100	0	0	6,600	9,900
C3			15300)								
	A		в						с			
1												
2		Fir	st Na	me					Sco	re		
3									153	00		
4									139	00		
5				e					128	00		
6									128	00		
									126	00		

Additional Visual Options

The following Google Sheets' features provide different cell display options and are accessed from the drop-down menu bar located in the top part of the application (see Figure 5).

Figure 5

Drop-Down Menus

Ľ	Ξ	File	Edit	Vie	ew	Insert	Form	nat	Data	То	ols	Help	
	۹	5	ç	9	ľ	75%	•	\$	%	.0 _↓	.0 <u>0</u>	123	Ar
F7			fx										

CONDITIONAL FORMATTING for Highlighting Data

Conditional formatting (see Figure 6) is a display tool in Google Sheets that allows changes to the design and appearance of cells. After selecting this feature under the menu as FORMAT-CONDI-TIONAL FORMATTING, it gives you more design options when certain cell parameters are set, such as changing the cell's color background.

Figure 6

Conditional Formatting Example

^	Cond	itional format rules	×	1	2	3	4		Total Grade (100%)	
		Text is exactly "1"		12,700	5,400	8,000	11,400	13	(10070)	
	123	R4:R55		13,800	5,400	0	11,700	16	60	
		54.500		8,100	4,800	4,200	10,900	12	86	
				1,200	3,600	6,100	11,200	13	80	Ш
8	122 Text is exactly "2"		12,600	7,200	10,100	16,000	9,	81	Ш	
	120	B4:B55		11,400	5,400	8,400	17,400	14	01	
7,8				7,800	3,000	9,300	11,000	10	68	
10,:				9,100	4,800	11,500	13,900	15	87	
5,4	123 Text is exactly "3"			4,200	6,000	5,400	6,000	10	23	
9,1		04.000		7,800	4,200	9,900	14,100	13	86	
10,				6,600	3,000	7,200	6,000	11	78	
0,7	+ 4	dd another rule		10,800	6,600	9,300	14,400	16	10	H

Using conditional formatting, you can assign different colors to cells. In this case, the colors of gold, silver, and bronze were given to the top three values, mimicking the medals used in a competition. Other uses of conditional formatting include highlighting the highest scores of a column range or showing if a student has passed or failed the class by using the highest exam score.

INSERT-IMAGE for Adding Images

Utilizing the menu item INSERT-IMAGE, you can add photos within the cells. As shown in Figure 7, an image of a university logo was placed on the upper left-hand side of the spreadsheet, adding a professional appearance to the spreadsheet. PRAXIS • TLT WIRED

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Figure 7

Logo



DROPDOWN for Checklist

By selecting INSERT - DROPDOWN from the menu, you can create display text as a list of choices that serve as a reminder. In one application, this function (See Figure 8 under the column *Workshop*) indicates whether students have received feedback or not, labeled by either "done" or "not yet." Figure 8

Dropdown Example

数 26 х Writing Workshop 2 Student ID Journal 1 (20%) Done 🔻 20 0 ο 0 Done • 20 o 0 x x Done • 20 o 0 0 Done • 20 o 0 0 20 o Not Yet 👻 0 Done • 20 ο 0 0 Het Met -

Conclusion

Based on a year's use of Google Sheets, the result of this shared grading policy and spreadsheet application has been overall positive to both the teacher and the students. Some students asked to resubmit low-scored assignments and take more responsibilities during class activities, potentially leading to higher overall grades. As a teacher, the ease of customizability and automation has influenced me to consider different ways of making grading more transparent, efficient, and interesting for the class. As such, I encourage teachers to try out this application, either as a viable replacement or as a supplement to their assessment needs.

[JALT PRAXIS] YOUNGER LEARNERS





The Younger Learners column provides language teachers of children and teenagers with advice and guidance for making the most of their classes. Teachers with an interest in this field are also encouraged to submit articles and ideas to the editors at the address below. We also welcome questions about teaching, and will endeavour to answer them in this column.

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Enhancing Creativity with Canva

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earning activities that incorporate creative processes can be a valuable tool for language teachers. This process can develop vital skills such as, "the ability to imagine new ways of solving problems, approaching challenges, making connections, or creating products" (Gallup, 2019, p. 6). In addition, an approach where creativity is "not based on a formula, but on thinking that relates to discovery and inquiry" (*ibid*) can greatly support this process. How can we, as language teachers, develop these skills in learners? Furthermore, as overcoming mistakes is an intrinsic part of the creative process (Robinson, 2006), how can we encourage a mindset that embraces taking risks and is open to making mistakes?

I believe the answers, in some part, can lie in using information and communication technology (ICT) in project-based activities. It is such a familiar presence in our lives, and I was especially interested in the implications on learning for a generation of 'screenagers'. That is, young learners who have grown up with smart screens and have been exposed to interactive and complex visual content in everyday life. Another motivation for trialing ICT came through observing that the standard of work and engagement with paper-based projects varied greatly. This was not only influenced by English ability, but also interest and skill in creating graphic content.

I wanted to find out if using ICT would enhance creative freedom and skills, and how this would affect students' engagement, their willingness to experiment with English, and if it could extend students' capacity to use English in new ways. This article compares the use of the graphic design platform, Canva (https://www.canva.com) with a paper-based approach.

What is Canva?

Canva is an online design platform that can be used to create visual content. It has a large range of templates and graphics that users choose from to produce documents, posters, social media posts, and presentation slides to name a few of the services offered. The templates are the ideal starting point for users to add personalised content and create unique designs. Canva is simple to use as the graphical user