

The Grading Rubric: A Short History, Various Formats, and Available Tools

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The modern instructor is accustomed to using rubrics to grade assignments and other course activities, but the format, verbiage, and point structure can make these grading grids frustrating for students and faculty alike instead of providing the guidance intended. Institutional restrictions and Learning Management System limitations can also restrict the development of acceptable assessment rubrics. A short history of stratified grading structures along with advantages and disadvantages are coupled with a practical look at the various kinds of rubrics and tools available for creating meaningful evaluative instruments. Examples and links along with instructions for those using Word and Excel are included.

Keywords: Assessment, Grading scales, Evaluation, Analytical, Holistic, Single-Point.

Introduction

At what point did grading become an integral part of the educational process, how do rubrics assist in grade implementation, and what are the benefits and drawbacks of main rubric styles used today? Grading rubrics promise consistency, fairness, time savings, and a guide for students to successfully complete an assignment. Promises are not always fulfilled, however, and a poorly designed rubric can create confusion and frustration instead. The key is to look for a "humanizing pedagogy" wherein rubrics and grades provide clear *value* for students as they work towards ultimately meeting course objectives (Mahmood & Jacobo, 2019). This balance can be attained by first reviewing the evolution of grading to put modern educational assessment into perspective, and then evaluating the benefits and drawbacks of various rubric styles that may be used for different graded activities. This focus on practical application is reinforced in appendices that provide additional information for curriculum designers and instructors.

Brief Literature Review: The Notion of Grades and Rubrics

Grading in general is not always embraced by educators, and it is not just because the task can be daunting and time-consuming. Kohn (2006) bemoaned that scoring systems do not help students to focus on *learning* as opposed to working towards the coveted "A," and Soniak (2010) complained that students often sign up for courses for which they feel most confident in earning high marks. While these may be true, Chan and Ho (2019) indicate high-quality rubrics are hallmarks of successful educational programs. Jönsson (2020) furthermore relates assessment to the achievement of goals and even self-efficacy. To put the idea of grades into perspective, it is helpful to briefly review a history of grading, which of course is directly related to rubrics.

An Historical Perspective

Not surprisingly, the educational systems in place in the United States over a hundred years ago did not resemble current practices. In pre-college schools, measurement of achievement was inconsistent at best, and one-room schoolhouses with children of many ages made content choice and expected outcomes difficult to determine. Turner (2010) explains it was Horace Mann (1796-1859) who, after visiting Prussian schools and observing their systems, introduced the idea of age-grouped curriculum and delivery in the U.S. in 1848. Thus, each grade level would be comprised of children approximately the same age who work towards the same learning outcomes. This "factory model" was deemed "innovative, [and] cost- and time-efficient" (Turner, 2010, p. 33).

These changes stoked the need for clear methods of assessment at each of these levels, a concept which was already being explored at the collegiate level. Durm (1993) clarifies that as early as 1785, Yale University used descriptors to indicate the quality of exam results: Optimi, Second Optimi, Inferiores, and Pejores; a numeric value which is now called the 4.0 scale was employed later in 1813, with change to a 9-point scale before returning to 4.0 in 1832. During that decade, Harvard was using a 20-point scale for exams in rhetoric and 100-points for mathematics exams. The University of Michigan used P (passing), C (conditioned), and A (absent) in 1867. Many other scales and descriptors were recorded as each school experimented with methods to describe the quality of student work. In 1883, the letter

grade appeared for the first time when Harvard awarded a B. By 1897, A, B, C, D, and E grades were assigned percentage values for students attending Mount Holyoke College; notably, E was failure and set at a value of less than 75% attainment (Durm, 1993). Letter grades, percentages, and assessment descriptors were inconsistent, but in the throes of development.

The turn of the 20th century saw important efforts from several educators. Joseph Mayer Rice (1857-1934), focusing on evaluating *teaching* instead of the student, administered a spelling test in 1894 to assess the effectiveness of his instruction (Love, 1962). Nine years later, he sorted student essays into five piles (Excellent, Good, Fair, Poor, and Failure) and worked to identify the qualities he felt best fit each level (Hudelson, 1923).

Edward Lee Thorndike (1874-1949) published a book about measuring achievement in 1904, which is considered perhaps the most compelling impetus for academic grading measurement development (Love, 1962). Milo Burdette Hillegas (1872-1961) worked with Thorndike extensively and developed what is known as the *Hillegas Scale for Measurement of Quality in English Composition by Young People*. Notably, Turley and Gallagher (2008) claim the original purpose was to evaluate programs rather than individuals. The scale was developed in several steps:

1. First, approximately 7000 student compositions were organized into ten groupings determined by general quality, and 75 essays chosen as representations for further review (Johnson, 1913).
2. To this, eight additional examples were added, as it was determined there was inadequate representation of the lower end of essay quality (Johnson, 1913).
3. Approximately 100 people read and rated these 83 compositions from best to worst (Turley & Gallagher, 2008).
4. The 27 best examples (plus two additional essays) were then rated by over 500 teachers, scholars, and psychologists (Johnson, 1913).
5. The resultant Hillegas Scale graded 10 norms, and the overall scale ranged from 0 to 937, out of which a percentage could be assigned (Thomas, 1913).

While the experiment was lauded, application was deemed difficult by many and the lack of grade/maturity level as a condition was questioned as rendering the scale impractical (Thomas, 1913). In contrast, Ernest Clapp Noyes (1877-1966), a high school teacher from Pittsburgh, PA, wrote in 1912 about "a concrete scale of measurement for composition" proposed by Columbia University professors (Noyes, 1912, p. 532). He bemoaned the inadequacy of simply assigning letters, seemingly random numbers, and simplistic words such as "good" and "fair" to assess written work, and saw Hillegas' scale as a hope to create a more concrete method that could be applied at any school and "make it difficult for mere opinion to control" grades (Noyes, 1912, p. 532). Noyes' work is considered the beginning of rubric development (Lee, 2021).

Thorndike himself noted in 1918 the complexity of assignments and the fact all things possess quantity and quality, claiming:

Great care should be taken in deciding anything about the fate of pupils, the value of methods, the achievement of school systems and the like from the scores made in a test, unless the significance of the test has been determined from its correlations. (Thorndike, 1918, p. 22)

While it may seem the focus of grading scales might be only for essay writing, starting in the 1910s there have been numerous other "scales" (often named for their developers) for grading arithmetic, handwriting, spelling, and even drawings done by children (Love, 1962).

These ideas continued developing throughout the 20th century, but Lee (2021) noted, "it wasn't until the 1990s, when standards-based educational reforms were first mandated and implemented, that rubrics became more widespread" (para. 5). The U.S. government formed guidelines and individual states followed by creating assessments to meet the standard goals (Lee, 2021). Other countries, such as Japan, also are seeing rubrics written to help fulfill standards (Ito, 2015).

Discussion

Reasons to use Rubrics Today

The main premise of rubrics is to apply uniformity and fairness to the grading process (Chowdhury, 2019). They save time for the person reviewing student work (Ito, 2015), justify awarded grades (Chan & Luo, 2022), tend to reduce the number of complaints (Arcuria & Chaaban, 2019), and can result in better learning (Pang et al., 2022).

In addition, these evaluation instruments make substituting for another teacher a far easier task for the substitute and provide consistent expectations for the student who is accustomed to a different teacher (Ito, 2015). In some locales, teachers might come from a background far different than that of their students, and rubrics help them provide transparency and equity (Ragupathi & Lee, 2020).

For the student, rubrics may bolster motivation to do good work (Chan & Luo, 2022; Ito, 2015) and could be used for self-assessment as well (Pang et al., 2022). A well-written one can provide guidance in breaking assignments into manageable parts (Dueck, 2021). Moreover, providing the grading criteria *before* students begin work on an assignment helps them to gauge their time and plan their output more readily (Jönsson, 2020). Standardized online curricula benefits from rubric use with the ability to assess the student's mastery of declared course outcomes (Lewis, 2021).

This concept can also be used for hiring faculty and staff (or any employee in a business). A well-constructed rubric can help alleviate natural biases; as Culpepper et al. (2023) explained in relation to a hiring scenario using rubrics, "we were concerned with the social construction of reality" (p. 834).

Negatives to Note

Rubrics have been criticized by some as being too inflexible (Chowdhury, 2019). The *law of distal diminishment* is the term serving as a warning not to separate a rubric from its original context (Turley & Gallagher, 2008); one grading instrument cannot fit all assignments.

Some faculty may also dislike rubrics as over-controlling of the learning experience, fearing that "giving them a rubric or checklist for every assignment [makes students] become doers rather than engagers" (Bolliger & Martin, 2018, p. 576). However, Chowdhury (2019) claims the opposite, that rubrics "promote active learning" and "help students regulate their progress" (p. 64).

Some students may feel instructions not specifically mentioned in the rubric are therefore unimportant and miss the finer details of the assignment (Chowdhury, 2019). The student mindset might also focus only on the results of the appraisal – the actual grade or "outcome" – rather than any valuable feedback provided therein (Brinson, 2022; Chan & Luo, 2022) – thereby becoming the "doers" mentioned above.

Another consideration is instructor skill in curriculum development and ability to apply rubrics as they are intended. This requires training plus ongoing review/revision; however, these activities take time away from other job responsibilities (Kenworthy & Hrivnak, 2014).

Argument

Despite the aforementioned drawbacks, rubrics can facilitate learning for the student and enable consistency in evaluation by the instructor, and thereby are beneficial to the institution itself. In the last few decades, the proliferation of grading rubric styles, their use in K-12 and college classrooms, and desire for some curriculum standardization (at the very least, in stated course outcomes) indicate that rubrics are now well established as a tool and cannot be ignored.

What is needed, then, is a set of balances. First, a balance must be attained between quantitative and qualitative feedback within a structure that matches the educational intent of the specific assignment. Rubrics should be shared with students at the time assignment instructions are given to balance work and expectations. Faculty time and training must find balance within the logical framework of their teaching duties. Lastly, institutions must promote rubric use and consider creating appropriate rules for development. The keys are transparency and flexibility, as there is no one-style-fits-all rubric construction.

Research Method

Examples of rubric construction is prudent, as is an examination of benefits and drawbacks to each. Curiously, much of the academic literature focuses on effectiveness, faculty and student perspectives, studies, and statistics, with presentation of process diagrams, charts, and graphs – but these sources present few actual rubrics for study. Of those that do include rubrics, most espouse an analytical structure, with some preferring holistic; variants are thus not widely explored. Websites, on the other hand, abound with examples for practical use. For each rubric design shown in the following section, at least three sources are cited for providing ideas and inspiration as a means to cover theoretical as well as practical development: an academic journal article or book, a university website, and a teacher's website or

other web source. EBSCOhost, ERIC, and Google Scholar were searched, and Google, Bing, and Yandex search engines used to find representative examples upon which these new specimens could be written.

Practical Application: Rhetoric and Rubric Styles

The rubric framework begins with three main features identified by Popham (1997): criteria to identify what content is expected, an explanation of quality, and a scoring scheme. These can be accomplished through various organizational techniques as shown in the sections below.

One additional term that appears in many sources is the "developmental" rubric, which provides formative feedback based on instructor comments rather than focusing on grades or earned points. This promotes growth in learning and may assume revision is an option or improvement with future activities will be expected. While often considered a subset of the analytic style (DePaul University, n.d.), a developmental rubric could be organized in any format and so is not examined below.

Preliminary steps in writing a rubric include determining exactly what skills or knowledge is intended to be learned from the graded activity and then writing criteria that adequately measure the individual student's performance (Ayhan & Türkyılmaz, 2015). A few generalizations may help developers decide which design to use for any particular assignment: first, some sources promote using the fewest possible number of criteria when writing rubrics (Duerr, 2019), however, this may make it more difficult to write criteria to truly meet the needs of the learning outcomes. Also, Chan and Luo (2022) explain both strengths and opportunities for improvement need to be identified. Interestingly, it has been said that students tend to read rubrics "vertically" starting at the top left corner (Matshedisho, 2020), which suggests the most important criteria should begin in the top left corner.

Recommendations for all styles include parallel language/syntax such as always starting descriptions with a verb, and using both specific and descriptive wording (Miller, 2012). The rhetoric chosen for category descriptors may be dictated by institutional rules and could range from simple numbers to generalized wording such as excellent, very good, fair, and poor; links to several descriptor lists are provided in Appendix A for consideration.

Holistic

In a holistic rubric, the assignment criteria are grouped so only one selection is made by the instructor.

- Uses: Emphasizes overall achievement (Skibba, n.d.) and main purposes (Balch et al., 2016).
- Creation: Does not take very long to develop.
- Grading: Saves time since there is only one choice to make.
- Potential problems: May seem practical (Ishikawa, 2018) but relies on generalizations without attention to details. This may result in a student's work not fully meeting the achievements listed or straddling categories.

Figure 1
Example assignment rubric: Annotated bibliography.

This assigns letter grades to four levels and within each level describes full expectations.

Level	Achievements
Meets all expectations (A)	Chose six appropriate sources. Presented correctly written reference entries. Wrote both summative and evaluative comments. Ensured that every annotation met the required length. Formatted per instructions.
Acceptable (B)	Chose six appropriate sources. Presented written reference entries; there may have been minor errors. Wrote both summative and evaluative comments. Ensured that most annotations met the required length. Formatted mostly per instructions.
Developing competence (C)	Chose six sources, but at least one was not appropriate for master's work. Presented written reference entries; there may have been minor errors. Wrote summative comments; evaluative comments may not have been fact-based. Ensured that most annotations met the required length. Formatted mostly per instructions.
Below expectations (D)	Chose only five sources, and/or more than one was not appropriate for master's work. Presented written reference entries but with major errors. Wrote summative comments; evaluative comments may not have been fact-based. Ensured that some annotations met the required length. Formatted somewhat per instructions.

Created by the author, 2023.

Rubric styling ideas from Kayaalp et al. (2021, p. 105), Western Michigan University (n.d.), and Gonzalez (2014).

Analytic

This style of delineates three to five leveled categories for each criterion and provides prose descriptions for each expectation. The instructor selects the most appropriate description to indicate earned points for that criterion.

- Uses: Gauges problem-solving skills (Skibba, n.d.).
- Creation: Takes quite a bit more time to develop than the holistic approach (Ishikawa, 2018).
- Grading: Shortens grading time since there is no individual commentary needed. Balch et al. (2016) claim analytic evaluations result in more consistent scoring.
- Potential problems: May create some confusion when student work does not fully fit into a category.

Figure 2
Example assignment rubric: Descriptive essay.

Here, the instructor chooses the most accurate descriptions in each criterion row. Columns are assigned a value and results are added. A scale is necessary to identify a letter grade based on the total score.

	Excellent (3)	Emergent (2)	Needs Improvement (1)	Score
Organization of ideas	Paragraphing met instructions.	Paragraphing mostly met instructions but the boundaries of the introduction or conclusion are unclear.	Paragraphing did not clearly show the flow of ideas OR the entire essay was presented in just one paragraph.	2
Overall length	Overall length/detail fulfilled assignment parameters of 400-500 words.	The overall length/detail was only 300-400 words or significantly more than 500 words	The overall length/detail was less than 300 words but at least 250.	3
Descriptive content	Details were descriptive without emotional or opinionated connection per instructions.	Details were descriptive but demonstrated some emotional or opinionated connection. This may have included first person wording.	Details did not provide true description and may have included first person wording.	3
Writing mechanics	There are few to no writing errors.	There are some writing errors.	There are too many writing errors that detract from readability.	2
Total points out of 12:				10

Scale:

- A = 11-12
- B = 10
- C = 9
- D = 8
- F = less than 8

Created by the author, 2023.

Rubric styling ideas from Pang et al. (2022, p. 23), University of New Brunswick Fredericton (n.d.), and Gonzalez (2014).

Single-point

There are three columns for single-point rubrics, with the criteria defined in the center. Instructor-input commentary indicates not meeting expectations (usually in the left column) or meeting/exceeding expectations (in the right column). Criteria may be accompanied by a point or percentage structure.

- Uses: Works well for developmental projects to "benchmark" expected outcomes (Duerr, 2019). Brinson (2022) notes some push for pass/fail grading, and this style could easily be applied to that concept by eliminating points and maintaining focus on comments.
- Creation: May not take long to develop.
- Grading: Takes longer than holistic or analytic schemes due to the need for personalized commentary. Brinson (2022) points out the reader's full attention is drawn to the two opposing sides rather than to point structures.
- Potential problems: Does not take into consideration criteria falling between acceptable and not acceptable.

Figure 3
Example assignment rubric: Controversial topic presentation.

The instructor must choose the Needs Improvement column or Meets/Exceeds expectations and input qualitative comments directly addressing how the individual student's work was assessed for each criterion. In this example, a point structure is included in the middle column, and since the total possible points equal 100, a percentage scale can easily determine a letter grade.

Needs improvement	Criteria	Meets/Exceeds expectations
	Debate topic is clearly stated [15] out of 15 points	Great topic choice, and very strong introduction
You chose utilitarian, but seemed to gravitate comments towards virtue ethics instead. This made it a little confusing for the audience.	A strong argument using metaethics, normative, deontological, utilitarian, or virtue ethics is presented [15] out of 25 points	
	Resources were appropriate to the topic and meet selection parameters given in the instructions [20] out of 20 points	Excellent sources (note that you have a virtue ethics source, which could have helped the argument).
	The PowerPoint slides are designed for easy reading [15] out of 15 points	Excellent visuals, thanks
A little more practice before talking in front of others is always helpful. Slow down a little and work to avoid "um."	The vocal presentation during the live session was clearly practiced [20] out of 25 points	

Total points:
[85] out of 100

Created by the author, 2023.

Rubric styling ideas from Balch et al. (2016, p. 49), University of Colorado Boulder (n.d.), and Ripp (2019).

Free Form (sometimes called Scoring Guide Rubric)

Parameters and point ranges in this approach are accompanied by instructor-input commentary. Possible points are identified in one column and earned points in another.

- Uses: Allows for individualized feedback and partial points.
- Creation: Rather easy to develop. Parameter descriptions setting set the highest level of accomplishment expected (Stevens & Levi, 2012; University of Connecticut, n.d.).
- Grading: May take longer to grade since every parameter is open to individual commentary.
- Potential problems: Could be confusing, as points awarded within each section may be somewhat subjective (Ito, 2015).

Figure 4
Example assignment rubric: Music class research paper.

In this example, the teacher inputs comments for each graded item. Possible points are identified, and the teacher must exercise judgement in determining how many of those points are appropriate for each parameter.

Parameter	Comments	Possible points	Earned points
Composer biography is covered.	Very good, except his death year is incorrect; Bach died in 1750.	25	23
History of the work is explained.	Good start here. A major omission is that the Christmas Oratorio is actually a set of six cantatas, and that Bach did not use the same librettist for all of them. This caused some inconsistencies.	30	24
Musical terminology is correctly used.	Remember that "song" is not a term used for oratorio/operatic solo pieces; these are arias, duets, instrumental pieces, etc.	10	8
At least three appropriate sources were used	The first two listed works were well chosen. The last one is from Wikipedia, which per the instructions is not a suitable source for college work. Please do be more careful.	15	10
MLA formatting and citation/works cited are included with few errors	Very good MLA work here, thanks.	10	10
Writing style is formal with no first-person wording, and there are few if any writing errors	Be careful with "we" (first person plural). Check for comma splices and a few capitalization errors.	10	6
Point deductions are made if the assignment was submitted late.			
Total Points		100	81

Created by the author, 2023.

Rubric styling ideas from Ayhan & Türkyılmaz (2015, p. 84), Stevens & Levi (2012, p. 201), University of Connecticut (n.d.), and Ramin (2018).

Free Form (variation)

This variant of the free form design assigns points within a small scale (such as 0-4) in separate columns. Some call this another kind of single-point rubric and others call it analytic.

- Uses: This approach was often implemented in junior and senior high music competitions in the past, although online searches today reveal a move towards analytical; the two are compared in Norris and Borst (2007).
- Creation: Does not take too long to develop.
- Grading: This numbered-column technique allows for rather quick overall assessment. It can be somewhat subjective in determining which column should be chosen for each parameter, and scores not earning top points must be explained in the comment section. Column values can be easily and quickly added.
- Potential problems: Requires each criterion to be worth the same total (highest) value.

Figure 5
Example assignment rubric: Microsoft Excel project.

The teacher indicates by "x" which quality level is appropriate for each parameter and provides comments to explain the scoring choice. Columns are added separately and then totaled for a final score.

Parameter	4	3	2	1	0	Comments
All required content was included (see instructions)		X				Everything except the monthly tax was included
All calculations were accomplished via formulas			X			Cells in columns F and H needed to be calculated by formula, not hand-input. The other calculations were good.
Formatting is easy to read and includes borders, color	X					Looks very professional, thanks.
Conditional formatting was applied to the bottom row					X	This was missing; check the textbook page 42 to learn about this
The file and the worksheet tab were named per instructions	X					This was done well.
Total points from each column:	8	3	2	0	0	Points earned: 13

Scale:

- A = 20-18
- B = 15-17
- C = 12-14
- D = 9-11
- F = 0-8

Created by the author, 2023.

Rubric styling ideas from Norris & Borst (2007, p. 243), California State University San Marcos (n.d.), and Lyons Township (n.d.).

Sliding Scale

In this style, a consistent point structure is shown in grid format (starting with 1 or 0) for each criterion. It is similar to the free form shown above but typically includes more numbers in each scale and can be used for work that is expected to be revised. Comments might be written in rows inserted in the grid itself or freely written under the rating table.

- Uses: Shows growth when the same scale is applied to subsequent assignments or revisions (Mahmood & Jacobo, 2019).
- Creation: Easy to develop, although "stages" need to be carefully worded; for example, the University of Minnesota (n.d.) suggests Lacking, Emerging, Demonstrating, and Excelling to show developmental stages.
- Grading: Fairly easy to grade, with a little time needed for individual commentary.
- Potential problems: Sections for comments need to be included, as numeric values alone may not provide enough reasoning for grades. As Carstens and Fletcher (2010) mention, every item needs to be worth the same amount of points.

Figure 6
Example assignment rubric: Math assignment.

Here, both descriptors such as "mastery" and numeric values are present for each criterion. A section is added under the number scale for comments. Not all sliding scale implementations include an area for commentary.

Student shows an understanding of strategies, patterns, and processes.									
Novice		Emergent		Acceptable		Proficient		Mastery	
1	2	3	4	5	6	7	8	9	⑩
Excellent work explaining your strategies and especially in finding the Fibonacci pattern in exercise #4.									
Student's submission contains correct answers.									
Poor		Emergent		Acceptable		Proficient		Mastery	
1	2	3	4	5	6	7	8	⑨	10
Overall good but the decimal points in exercises #7 and #8 should have been included in the answer; they were not to be rounded.									
Student shows their work, and explains clearly the processes used.									
Poor		Emergent		Acceptable		Proficient		Mastery	
1	2	3	4	5	6	7	8	⑨	10
Again, overall you did well, but use the most logical operation such as 4×8 instead of $8+8+8+8$.									
Student created a graph and then analyzed the data with fine detail.									
Poor		Emergent		Acceptable		Proficient		Mastery	
1	2	3	④	5	6	7	8	9	10
Make sure you read instructions carefully; steps 2 and 6 were missed, resulting in a graph that had too many errors. This made it more difficult to analyze the graph.									

Total Points: [32] of 40 possible.

Created by the author, 2023.

Rubric styling ideas from Carstens & Fletcher (2010, pp. 59-60), University of Minnesota (n.d.), and Howell (n.d.).

Comparison: Likert Scale

The Likert scale is similar to sliding scale rubrics with a rather simple list of numeric values for each criterion, but is generally a bad-to-good or never-to-always indicator without additional value descriptors. Uses include surveys where an aggregate numeric value of all submissions is prepared for meta-analysis, but the lack of commentary would make a simple Likert scale impractical for grading.

Checklist

While not literally a "rubric" in table form, the checklist is an alternative with the same purpose – to explain an earned grade – and so it is included here. With a checklist, skills are listed and checked only if said skills were indeed demonstrated or completed. Dueck (2021) claims the developer should be aware of "separating compliance from learning targets," meaning that checklists are the former and rubrics are the latter (p. 60). Importantly, Balch et al. (2016) suggest a checklist can be written as a first step in developing a rubric.

- Uses: Works well for outcome-based assignments, wherein task completion is the goal.

- Creation: Easy and quick to develop using assignment instructions as a guideline.
- Grading: Very easy and quick to grade.
- Potential problems: All items have the same value towards the grade. This means not all skills-based assignments would work in this format (DePaul University, n.d.). Also, checklists may become too long/wieldy depending on the detail of the assignment instructions themselves.

Figure 7

Example assignment checklist: Web development HTML and CSS project.

Each completed item is check-marked by the teacher. The total number of checked boxes is then added to determine the grade.

<p>HTML file:</p> <ul style="list-style-type: none"><input checked="" type="checkbox"/> The DOCTYPE tag is included and is correct.<input checked="" type="checkbox"/> There are properly placed html, head, and body tag pairs.<input type="checkbox"/> A correctly placed title tag pair includes suitable content.<input checked="" type="checkbox"/> The language is declared in the beginning html tag.<input checked="" type="checkbox"/> A link tag correctly connects the html file to a CSS file.<input checked="" type="checkbox"/> At least two different levels of heading tag pairs are used in the body.<input checked="" type="checkbox"/> An explanatory paragraph is coded per instructions and includes a CSS class.<input checked="" type="checkbox"/> A bulleted or numbered list is correctly coded.<input checked="" type="checkbox"/> An image is placed in a file named "images."<input type="checkbox"/> The image is properly coded for the page and includes alt text.<input checked="" type="checkbox"/> A comment with the student's name and date is inserted in the head.
<p>CSS file:</p> <ul style="list-style-type: none"><input checked="" type="checkbox"/> The body includes a correctly defined font-family declaration.<input checked="" type="checkbox"/> h1 headings are styled for a defined hexcode color.<input type="checkbox"/> A class is defined for the paragraph that includes a border.<input checked="" type="checkbox"/> Margins are declared for at least one selector.

Total checked boxes: 11 out of 15

Scale:

- A = 14-15
- B = 12-13
- C = 10-11
- D = 9
- F = 8 or less

Created by the author, 2023.

Checklist styling ideas from Joly (2020, p. 122), University of Saskatchewan (n.d.), and Smith (n.d.).

Results

Research showed that there are manifold varieties of rubric structure and content differs widely. Each specific style as demonstrated above has benefits and drawbacks as well as various uses. Notably, each can be altered to best fit the specific work to be graded. For example, an analytic rubric could have four or five categories instead of three or could have different criteria weighted so that some are worth more than others. Category names could easily be changed. Single-point rubrics could dispense with points entirely if the purpose is purely developmental. A sliding scale rubric could use 0-8 or any other incremental point designation instead of 1-10. Where time is of the essence in grading, checklists could be inserted in comment areas. It must be pointed out that further adjustments may be necessary when an assignment is based on teamwork, has a time or revision component, or otherwise requires something atypical. Unless an institution requires a specific style, an instructor has much academic freedom for rubric development that meets the needs of both student and the person grading the student's work.

Conclusion

Kenworthy and Hrivnak (2014) rightly insist that rubrics are neither perfect nor a final answer to assessment woes, and cannot "take the place of faculty member experience, passion, and motivation" (p. 351). This being said, rubrics are a current and accepted method for assessing work. Understanding the background, positive and negative perceptions, and reviewing facets of rubric styles is a practical approach for instructors and curriculum designers. (For the sake of practical application, the three appendices offer additional guidance for creating rubrics.)

Indeed, the historical context of grading shows that educational processes are ever evolving and the mere concept of grades is perhaps not far past its infancy. Within the last few decades, rubrics have become the tool of choice in the pursuit of assignment instructions clarification and guidance, evaluation transparency and fairness, and a means to prove outcomes are met as students make progress through their academic programs. While choosing a rubric scheme from current models, making modifications, writing suitable content, and making revisions when appropriate takes critical review, time, and patience, ultimately student learning will benefit, and time will be saved so that instructors can focus on teaching course concepts.

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Appendix A: Rubric Creation Resources

Learning Management System Rubrics

These LMS programs are among those most commonly used for education today ("What are the most popular," 2023). They allow analytic or holistic style rubrics, although most will promote analytic grids. There are typically choices for scoring, feedback, and connections to course outcomes.

- Blackboard (Anthology):
 - <https://help.blackboard.com/Learn/Instructor/Ultra/Grade/Rubrics>
- Bright Space (D2L):
 - <https://community.d2l.com/brightspace/kb/articles/5795-create-a-rubric-using-the-rubrics-tool>
- Canvas (Instructure):
 - <https://community.canvaslms.com/t5/Instructor-Guide/How-do-I-add-a-rubric-to-an-assignment/ta-p/1058>
- Google Classroom
 - <https://support.google.com/edu/classroom/answer/9335069>
- Moodle:
 - <https://docs.moodle.org/401/en/Rubrics>
- Schoology
 - <https://uc.powerschool-docs.com/en/schoology/latest/guide-to-using-rubrics>

Free Online Rubric Generators

Where faculty are not restricted to institutional requirements or LMS limitations, these generators can be helpful in the development process:

- iRubric:
 - <https://www.rcampus.com/indexrubric.cfm>
- Quick Rubric:
 - <https://www.quickrubric.com/r#/create-a-rubric>
- Rubistar:
 - <http://rubistar.4teachers.org/index.php>
- Teach-nology:
 - https://www.teach-nology.com/web_tools/rubrics/general/

Descriptor and Content Rhetoric Lists

- Brown University – The Harriet W. Sheridan Center for Teaching and Learning:
 - <https://www.brown.edu/sheridan/teaching-learning-resources/teaching-resources/course-design/classroom-assessment/grading-criteria>
- Northern Illinois University Center for Innovative Teaching and Learning:
 - <https://www.niu.edu/citl/resources/guides/instructional-guide/rubrics-for-assessment.shtml>
- De Jesus, D. – Lattice.com:
 - <https://help.lattice.com/hc/en-us/articles/1500001592302-Sample-Rating-Scales-and-Rubric>
- SAS in School:
 - <https://www.asrt.org/docs/default-source/educators/rubricguide.pdf>

Appendix B: Do-It-Yourself Excel Rubrics

For faculty who are used to using Microsoft Excel, this option offers the ability to use formulas for point and grade calculations as well as styling capabilities such as borders, cell color, font changes, text alignment, merging cells, etc. Two examples with formula explanations and tips are provided below.

Example 1

	A	B	C	D	E	F	G
1							
2		Criteria	Excellent	Good	Fair	Needs work	Comments
3		Item #1	4				
4		Item #2		3			
5		Item #3		3			
6		Item #4				1	
7		Subtotals >	4	6	0	1	
8							
9		Total >	11				
10							

Add values from cells C3 through C6 by typing this in C7 and then striking the enter key:

=SUM (C3 : C6)

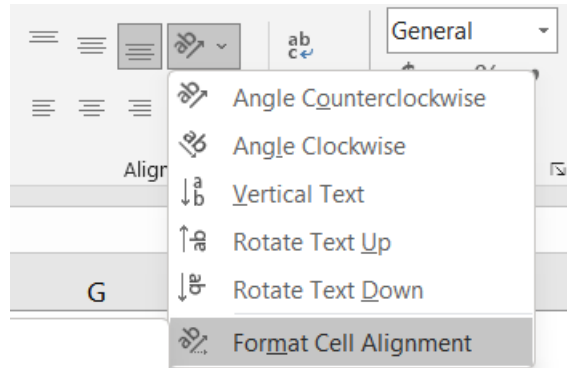
Click back into C7 to find the "autofill handle," a small square found at the bottom right corner of the cell. Click and drag this to the right to automatically fill the column subtotals in cells D7, E7, and F7.



Next, add the subtotals in cell C9 with this formula:

=SUM (C7 : F7)

The words in cells C2-F2 were aligned at 90° by going to the Alignment section of the Home ribbon to find Format Cell Alignment as shown below. A dialogue box providing options will appear.



While it is obviously possible to modify column width, the "wrap text" option should be applied to cells expected to contain more input than will comfortably fit without undue sideways scrolling. Click in the intended cell(s) such as the comments column in Example 1, and click the Wrap Text button in the Alignment section of the Home Ribbon:



Example 2

	A	B	C
1			
2		Complete	Criteria
3		x	Item #1
4		x	Item #2
5			Item #3
6		x	Item #4
7		x	Item #5
8		x	Item #6
9		x	Item #7
10		x	Item #8
11			Item #9
12		7	Total (out of 9)
13			
14		77.8%	Grade
15			

Use the CountA formula with checklists, as it indicates how many cells in a range have any kind of content. In cell B12, add the number of Xs in cells B3 through B11 with this formula:

=COUNTA (B3 : B11)

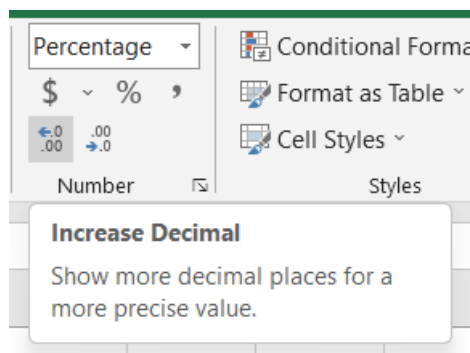
If a specific value is to be counted but other input is allowed, the CountIF formula should be applied. The following would be used if only Xs are counted but other values such as "o" are present:

=COUNTIF (B3 : B11 , "x")

To calculate the percentage, enter cell B14. Type the equals sign and then click once in B12. Follow this by typing /9 since there are nine criteria. Press the enter key as usual to complete the process. Re-entering B14, the formula should look like this:

=B12/9

A percentage may be the preferred output instead of a fraction. While still in cell B14, click on the percentage sign button in the Number section of the Home Ribbon. For more or fewer decimal points, click on the buttons at the bottom of this section:



Advanced Formula: The Letter Grade

In Example 2, the following formula could be inserted in a new cell to determine the letter grade based on the percentage in cell B14:

```
=IF (B14>=90% , "A" , IF (B14>=80% , "B" , IF (B14>=70% , "C" , IF (B14>=60% , "D" , IF (B14<60% , "F" ) ) ) ) ) )
```

Google Sheets

The same features and capabilities found in Excel are also available in Google Sheets. The autofill handle, however, will look like a ball instead of a square:



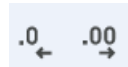
The other items to complete the aforementioned actions are found in the program's default ribbon:



Vertical align button



Text wrapping button



Increase or decrease decimal button

Implementation Ideas

In courses with several assignments, each one's rubric can be developed in a separate worksheet within a single workbook. Faculty can then make a copy of the workbook for each student at the beginning of the term and return to it each time a new assignment submission is assessed. Note it is also possible to print to PDF, which would mean carefully ensuring no content is beyond page margins.

For Further Help

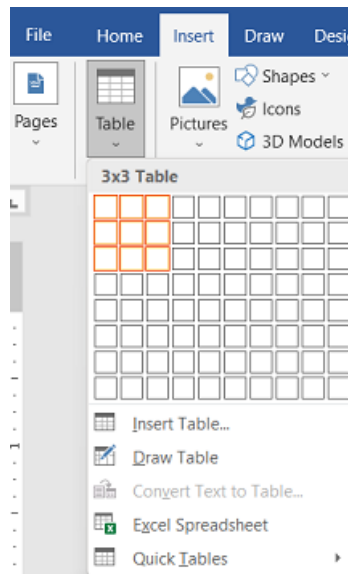
- Microsoft Excel
<https://support.microsoft.com/en-us/office/basic-tasks-in-excel-dc775dd1-fa52-430f-9c3c-d998d1735fca>
- Google Sheets
<https://support.google.com/a/users/answer/9282959>

Appendix C: Do-It-Yourself Word Rubrics

Faculty who prefer working with Microsoft Word instead of Excel still have some calculation options, plus formatting features such as cell color, font changes, text alignment, merging cells, etc.

Creating the Table

To produce a Word table, first go to the Insert ribbon's Tables section, and select the preferred number of columns and rows.

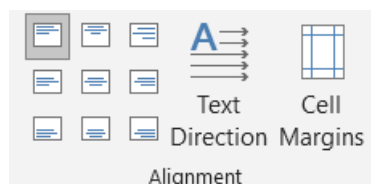


While 10x8 appears to be the maximum size, it is possible to add rows and columns. To add a column, hover the mouse near the top of a column line until a plus sign appears (see below) and click it. Similarly, rows can be added by hovering towards the left end of the table. Rows can also be added by clicking in the bottom-right cell and then pressing the tab key.



Styling Hints

- Merge cells: Highlight the intended cells and then right-click and choose Merge Cells.
- Click and drag column or row lines to change width or height. Columns can be resized via the ruler as well.
- Use the bucket in the Home ribbon's Paragraph section to add background color to selected cells. This can also be done by the Shading bucket found in the Table Design ribbon, which will appear only when the cursor is placed inside the table.
 - Alternatively, a full table can be styled with pre-set colors and borders using the Table Design ribbon, Table Styles section.
- Text will automatically wrap inside each cell, unlike content in a spreadsheet. Align text using the features in the Home ribbon's Paragraph section or checking options in the Layout ribbon's Alignment section. This ribbon appears only if the mouse cursor is currently inside the table.



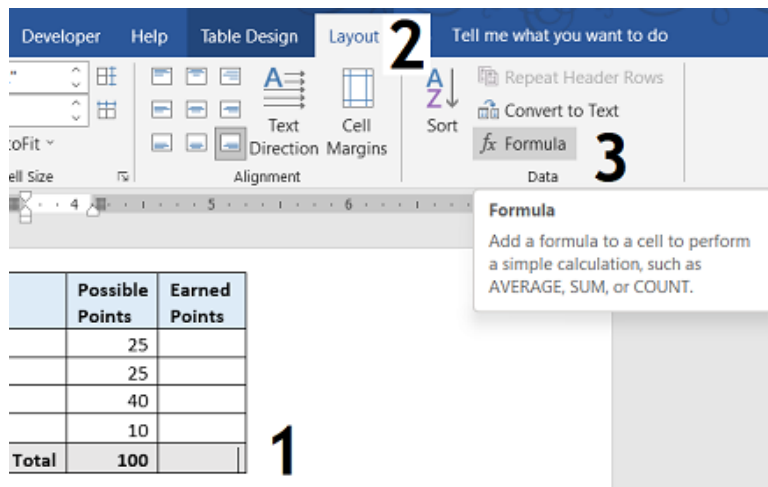
Calculations

In the example rubric below, Possible Points have been added to show the optimum grade is 100.

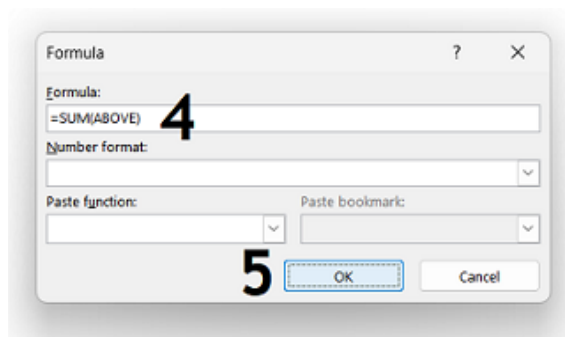
Criteria	Comments	Possible Points	Earned Points
Item #1		25	
Item #2		25	
Item #3		40	
Item #4		10	
Total		100	

Rather than using a calculator or paper and pencil, the Earned Points column can be added via formula by following these steps:

1. Click in the cell where a total is desired.
2. Go to the Layout ribbon and look in the Data section. If it does not appear, widen the document window and look at the right end of the ribbon.
3. Click on Formula. Note that average, sum, and count are possible.



4. Once the Formula popup appears, verify the sum total should add the numbers *above*. It is possible to add numbers from the left as well.
5. Click the OK button. If there are no values inserted above the total, the cell will display 0. Ensure all cells are appropriately complete, as only the filled cells directly above the total cell will be included in the sum.



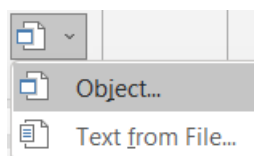
Important: Changes in the total do *not* automatically occur as they do in Excel. After making any value changes, update the total by right-clicking in the middle of the total cell and choosing Update Field.

There are other calculations possible. Right-click in the cell currently holding any formula and choose "Edit field" to peruse advanced possibilities.

Embedding Excel

Where more complicated formulas are desired but Word is still preferred as the delivering vehicle, embedding an already-created Excel rubric may be an appropriate solution.

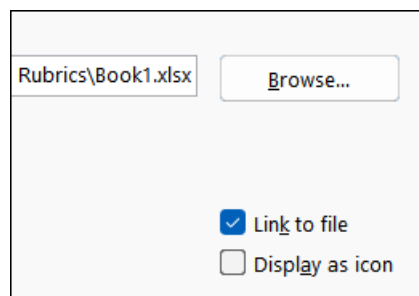
In Word, go to the Insert ribbon and look in the Text section towards the right end. If this does not appear, widen the Word window. Find the Object button and choose Object from the dropdown:



Select the Create from File tab if the rubric has already been created and saved in Excel. Then browse for the specific file and click OK.

Edit the embedded table by double-clicking inside it. After a few moments, Excel ribbons will appear inside the Word document and editing can commence. To save the changes, click elsewhere in the Word document.

Any changes made in an embedded Excel table will not affect the original Excel file unless the "Link to File" checkbox has been checked during the embedding process:



Google Docs

Many of the same features and capabilities found in Word are also available in Google Docs but require a different approach:

- Create a table by going to the software's top navigation and choosing Insert and then Table. The maximum beginning size is 20x20. Rows and columns can be added by right-clicking in a cell to see options.
- Merge cells by highlighting the intended target cells and right-clicking to select the Merge cells option.
- Background color is found by going to the three dots at the right end of the default ribbon ("More") to look for the bucket.

Notably, calculations would require an add-on.

Implementation Ideas

Once a rubric is created in a Word document and saved, the faculty member could make a separate copy of that particular document for each student. Once assessment of the individual's work is complete, saving as a PDF would lock in the comments and values prior to sending the file by email. In the traditional classroom, a printout for each completed assessment would work well.

For Further Help

- Microsoft Word
<https://support.microsoft.com/en-us/office/basic-tasks-in-word-87b3243c-b0bf-4a29-82aa-09a681999fdc>
- Google Docs
<https://support.google.com/a/users/answer/9282664>