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## How to Develop Rubrics – A Step-by-Step Guide

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### Abstract

*This paper describes the need and importance of self-assessment in school education. We all know that the focus of learning and assessment of children must include different skills, concerns, values, dispositions and sensitivities besides knowledge. In this context Rubrics as efficient tools for teacher assessment, self-assessment and peer-assessment are presented in this paper. Further, this paper also describes the development of Rubrics step-by-step with illustrations. It also elaborates the use of rubrics in bringing transparency and objectivity in assessment; developing preparedness and responsibility among learners and helping teachers to identify gaps and weaknesses in students' understanding.*

### INTRODUCTION

Self-assessment is defined as a process by which students monitor and evaluate the quality of thinking and behaviour when learning and identify strategies that improve their understanding and skills. That is, self-assessment occurs when students judge their own work to improve performance as they identify discrepancies between current and desired performance. This aspect of self-assessment aligns closely with standards-based

education, which provides clear targets and criteria that can facilitate student self-assessment. Finally, self-assessment identifies further learning targets and instructional strategies (correctives) students can apply to improve achievement. Thus, self-assessment is conceptualised as the combination of three components related to a cyclical, ongoing process: self-monitoring, self-evaluation, and identification and implementation of instructional correctives as needed. Essentially, students identify their

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learning and performance strategies, provide feedback to them based on well-understood standards and criteria, and determine the next plans to enhance their performance (Bruce, 2001; Schunk, 2004). Research suggests that self-regulation and achievement are closely related: Students who set goals, make flexible plans to meet them, and monitor their progress tend to learn more and do better in school than students who do not. Self-assessment is a core element of self-regulation because it involves awareness of the goals of a task and checking one's progress toward them. As a result of self-assessment, both self-regulation and achievement can increase (Schunk, 2003).

Holistic development helps children imbibe all of these, and the teachers need to assess them continuously to find out their learning requirements and gaps. The evidence or information from different sources for the same may be collected using diverse learning situations and monitored to provide regular and timely feedback and plan the teaching-learning accordingly (Assessment for Learning). To build the capacity for self-assessment and self-learning among children (Assessment as Learning) and help them progress, opportunities for self and peer reflections need to be created. To provide a sense of accomplishment to children, including those with special needs, and help them know where they are and decide where they need to be, requires sharing their progress

at certain intervals (Assessment of Learning) with them and their guardians (or other stakeholders who could potentially contribute towards children's progress), giving a comprehensive picture of the learning and personality. This is possible by mapping their progress through information gathered on their knowledge, comprehension, skills, interests, attitude, motivation, etc., in response to various learning situations and opportunities both in and beyond school. Alternate assessment of authentic assessments or performance assessment practices would help in achieving the above objectives of assessment in the schools. Rubric is one efficient assessment practice which is suitable for teacher assessment, self-assessment, and peer assessment.

## **RUBRICS**

Rubric means a guide listing specific criteria for grading any process, performance and product. It is a systematic scoring guideline (in the form of a matrix or grid) to evaluate students' performance through the use of a detailed description of performance levels. Hence, it is also called a criteria sheet or grading scheme or scoring guide. While the students learn and demonstrate the learnt, in both the cases they need to be observed and checked. Thus, whether it is a process or a product, the student herself needs to check how she is progressing and how she has done. In both the contexts, a child has to reflect on

her performance on assignments, projects, activities, etc. when it comes to process, what is that the teacher needs to observe — physical skills (playing a musical instrument), use of apparatus, equipment (preparing a slide of onion peel for the microscope), communication (language), work or study habits (working independently), social skills (cooperation). In the case of products like preparing reports, poems, essays, artefacts, exhibits, paintings, models, charts, portfolios, presentations, concept maps, etc., rubric also helps in assessing performance of the students. All the intended performances of standards or learning outcomes can be assessed through rubrics. Except for the items which have one correct and wrong answer like True or False statements or oral questions of that category, rubrics can be used for grading the performance of the students. The result of using the rubric not only fetches the description of the performance but also their quality while grading. That is the reason why it is very useful to teachers as it provides feedback in the teaching-learning process. It also brings consistency in assessment by reducing the inter-observer effect due to description. Overall, they help teachers teach coordinate instruction and assessment in a focused manner by increasing objectivity and reducing subjectivity in the grading process. As a result, the assessment process becomes transparent and objective where dependency only on teacher assessment is reduced.

Rubrics are descriptive, not evaluative; it allows students to clarify the expected or desired qualities of their work or performance and consequently improve their performance. Depending upon the purpose of the rubrics (Brookhart and Nitko, 2008), the following types of rubrics can be developed:

**Analytical Rubrics** — Each criterion (dimension, trait) is evaluated separately, which is diagnostic. It provides feedback to students and facilitates instruction. These are used to assess the performance of the students over an activity to check their progress on various criteria (stages, components, qualities) by providing specific feedback to students.

**Holistic Rubrics** — All criteria are evaluated simultaneously, hence scoring is faster than that of analytical rubrics. It is in general good for summative assessment to check the overall performance of students and comparatively easier to score when compared to analytical rubrics.

#### **ELEMENTS OF RUBRICS**

- Criterion can be stages, features, dimensions, performance, behaviour, quality.
- Levels of performance — adjectives describing performance — exemplary, accomplished, developing, beginning, undeveloped (highest to lowest).
- Scores.
- Descriptors show how the score is derived — graded on the basis of difficulty, frequency, clarity, quality, etc.

Poster making on Air pollution			
Criteria/Levels	Excellent	Good	Poor
Scores	3	2	1
Handwriting on poster	Well written, easy to follow	Adequately written, reasonably easy to follow	Poorly written, and difficult to follow

## STEPS TO DEVELOP A RUBRIC

### 1. Determine the purpose to develop a Rubric

**A. Clearly define the task:** It is very essential to know the purpose for which the rubric is to be made. One has to know whether the assessment is for a process/product; or qualitative/quantitative aspects. Hence, the task has to be defined clearly and explicitly. For e.g., poster making on measures to control air pollution. The teacher can explicitly state: What is the student expected to produce? What are the common expectations among teachers?

For instance, students are encouraged to carry out a survey where they are asked to collect data and prepare a report of it. Hence, the task for which a rubric has to be prepared is to assess the report of the survey conducted on preservation techniques used in households.

### B. Map with the learning outcomes to be assessed:

The task has to be mapped with the learning outcomes or standards specified for the specific group of students and the subject. There can be generic and task-specific rubrics as per the requirements of the class and teacher. For instance: In Class IV Environment Science, *Learning outcome: Records observations/experiences/information for the places visited in different ways and predicts patterns in activities or phenomena.*

### 2. Determine the key criteria or components to assess

One has to be clear on what aspects are going to be assessed. For instance, if the students are expected to make a poster in groups, then clarity in content, colour combination, layout and organisation, cooperation among the members, etc., are the components

of a poster to be assessed and hence become the key criteria. The criteria have to be brief, and comprehensible and should be able to explain what performance looks like at each level ensuring that they are discrete enough to show real differences.

For example, if the students conducted a survey and submitted the report, then the criteria may include:

### 3. Determine the level of performance adjectives

The levels of performance determine the degree of performance by students. These levels should match with the related criterion that can be in even or odd numbers. They help in providing consistent and objective assessment and better feedback to students. They tell the students where they are, what they are expected to do, etc. As much as possible, avoid odd numbers on the rating scale. (Studies show that evaluators tend

to choose the neutral middle grade more often on odd-numbered scales. The levels should be discrete enough to show real differences in quality, development/mastery, intensity, etc. Depending on the criteria, the levels are determined. For example: How did the students collect data through the interview? To assess this criterion, one may have five levels ranging from missing to exemplary which shows improving competency/quality in data collection. It is better to avoid adjectives which could influence students' interpretation of performance level (such as superior, moderate, poor etc.)

Learners can be placed under different levels based on their performance (reporting the survey):

Level 1 — requires more support and guidance

Level 2 — performs with adequate support

Level 3 — performs with little or no support

Report of the survey			
Criteria/Levels			
Framing questions			
Data collection through interviews			
Data recording			
Drawing conclusion			
Reporting			
Working together			

<b>Report of the survey</b>			
<b>Criteria/Levels Scores</b>	<b>Requires more support and guidance</b>	<b>Performs with adequate support</b>	<b>Performs with little or no support</b>
Framing questions			
Data collection through interviews			
Data recording			
Drawing conclusion			
Reporting			
Working together			

For example, the levels of performance for poster making could be Master, Apprentice, Beginner or Exemplary, Accomplished, Developing, Beginning, Undeveloped.

#### **4. Determine scores (range of performance in numerical value)**

Depending on the criteria and the range of performance, numerical values or scores are decided. This can be done

by describing the range of performance one can expect the students to perform. For example, In the report, one has to check on the summary provided, then maybe we can have a five-point scale which can begin with missing to exemplary. We may expect that some might not submit, but a few would make an exemplary effort or can be exemplary performance. It also depends on the criteria decided.

<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Missing</i>	<i>Unsatisfactory</i>	<i>Emerging</i>	<i>Proficient</i>	<i>Exemplary</i>

<b>Report of the survey</b>			
<b>Criteria/Levels Scores</b>	<b>Requires more support and guidance</b>	<b>Performs with adequate support</b>	<b>Performs with little or no support</b>
	1	2	3
Identify and state the problem			
Framing questions			

Collection of data through interview			
Recording of data			
Drawing conclusion			
Reporting			
Working together			

**5. Establish clear and detailed descriptors for each performance level for every criterion**

Descriptors are explicit descriptions of the performance and show how the score is derived and what is expected of the students. It describes how one student's work is distinguished from others. The same descriptors can be

used for different criteria within one rubric. It is usually easier to begin by describing the highest level of performance. Descriptors need to be brief, understandable and arranged in a logical order so that there are chances that multiple faculty members will similarly apply the rubric. Rubrics can be made either involving the students in developing or seeking their feedback after developing them.

Criteria	Requires more support and guidance	Performs with adequate support	Identify and state the problem
	Level 1	Level 2	Level 3
Identify and state the problem	Brings some ideas but not related to the issue	Needs some probes to identify issue-based problems and not stated on his own	Identifies and states issue-based problems by himself
Framing questions	Frames questions taking help of others	Frames new questions on his own and finalises with others	Frames questions on his own
Collection of data through interview	Asks questions using a few probes	Asks questions with many probes	Probes deeply and even modifies or frames new questions on the spot
Recording of data	Recording the responses but not in an organised manner	Records the collected information systematically	Records and presents the information systematically

Drawing conclusion	Makes some sense of the information	Draws appropriate meaning	Makes meaning and explains logically
Reporting	Prepares report but not confident while presenting	Prepares report and presents with confidence	Prepares the report comprehensively and explains logically with confidence
Working together	Difficulty in working with others sometimes	Works patiently in groups	Works patiently in groups and also helps others

## 6. Try out the rubric on a few students

It is very essential to evaluate the rubric each time it is used to ensure that it matches with instructional goals and objectives. It is always advised to try out with students or review with colleagues for refinement. Rubrics can be developed using online tools like Rubistar, rubric, etc. which have readymade templates that can be filled and used.

### SUMMARY

Rubrics are efficient tools for consistent and objective assessment of a variety of performances which can be judged on purpose, organisation, details, voice and mechanics. It can be used in individual assessments within the project or work. It is better to develop a different rubric for each assignment involving the students and use it for

self-assessment/peer assessment along with teacher assessment. The rubrics help in student self-reflection and self-assessment as well as communication between an assessor and those being assessed. Thus, it is better to develop a different task-specific rubric for every assignment or task given. The feedback received from the rubrics can help the students to improve their performance by identifying the weak strands or areas of improvement. It is used to assess or communicate product, performance or process tasks. Further, the use of rubrics brings transparency and objectivity to assessment; develops preparedness and responsibility among learners and helps the teacher to identify gaps and weaknesses in students' understanding of that particular criterion and address them accordingly.



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