

DEVELOPING RUBRICS FOR PERFORMANCE BASED ASSESSMENT THROUGH COLLABORATIVE EFFORT

Souba Rethinasamy¹

Joseph Ramanair¹

Freddy Yeo²

¹Faculty of Language and Communication

**² Faculty of Resource Science and Technology
Universiti Malaysia Sarawak**

Introduction

- ❖ Assessment is a crucial integral part of teaching and learning
- ❖ Among the different types of assessments, the multiple benefits of alternative assessment which includes performance based assessment are often highlighted especially in relation to Education 4.0 as well as 21st century learning skills
- ❖ However, the value of performance based assessments is clouded by subjectivity in scoring
- ❖ To help improve objectivity in scoring, the development and use of rubrics are highly recommended
- ❖ According to Gallardo (2020, p. 16), "rubrics have evolved in the last years as a powerful support tool to make judgments about students' learning in several disciplines."
- ❖ The usage of rubrics are currently among the most popular innovations in education (Andrade, 2001).
- ❖ Rubrics, when properly developed, promotes teaching and learning by setting clear goals, offer targeted input and direct the evaluation process (Ghaffar et al., 2020)

Introduction

What are rubrics?

- ❖ scoring tool or guide that is used to evaluate the quality of students' responses to a given task
- ❖ contains a list of criteria, performance levels and descriptions of levels of performance quality for the listed criteria (Brookhart, 2018; Cargas et al., 2017)

Criteria	Level & Descriptors				
	poor	weak	average	good	excellent
	performance descriptors	performance descriptors	performance descriptors	performance descriptors	performance descriptors
	performance descriptors	performance descriptors	performance descriptors	performance descriptors	performance descriptors

Introduction

Types of rubrics

- ❖ Generally, there are two main types of rubrics: holistic rubrics and analytic rubrics.
- ❖ Holistic rubrics provide a general overview of what is expected in a given task. The criteria for evaluation are considered together.
- ❖ Analytic rubrics is often highly recommended because it enables the student's performance to be matched to the appropriate level of performance for each criterion, providing students with specific guidance and feedback related to each criterion and helps assessors to assess consistently (Andrade & Brookhart, 2020).
- ❖ Analytic rubrics can serve as teaching learning tool as well as an assessment tool.

- ❖ Benefits of Rubrics
- Many previous research has claimed the benefits of using a rubrics as an evaluation tool (Andrade et al., 2008; Becker, 2016; Brookhart, 2018; Ene & Kosobucki, 2016; Andrade & Du, 2005; Jonsson & Svingby, 2007; Laurian & Fitzgerald, 2013; Rezaei & Lovorn, 2010; Sundeen, 2014).

For students

- help students **understand what is required** in an assignment, **how it will be graded**
- give students **clearer idea of the important elements** that they should pay attention to
- help students **understand** what are the expected targets or **desired performance** required from their learning serve as a guideline for students to follow and address in order to meet the expectation of the assessment task
- helps students make reliable judgments about their own work, do appropriate revisions and improvements
- help students monitor and assess their progress as they work towards the stated goals
- helps facilitate students self-assessment helps students **produce a better product, perform at their best possible**
- help students focus on what they've learned, how to apply the input they have received and assesses how far they have comes

For instructors/assessors

- help instructors to develop clear and attainable learning objectives for their students
- help instructors communicate to students the specific requirements and acceptable performance standards for a given task
- assist in evaluating students' learning achievement for that particular task.
- enables instructors to better understand what to assess according to specific criteria and implements them accordingly (Beyreli & Ari, 2009)
- serve as documentation for students' achievement
- provides instructors with a tangible form of accountability
- Assist in providing feedback to students
- rubric to improve the quality of evaluation by teachers

Research Problem

- ❖ According to Gallardo (2020), “rubrics design is a topic of upward interest in the educational process around the world” (p. 74).
- ❖ Despite the benefit of rubrics, educators tend shy away from using performance based assessment due to the challenges faced in designing good scoring rubrics.
- ❖ While many studies have investigated the effect of using scoring rubrics on students’ performance and assessors’ rating judgement and rating accuracy, only limited studies have focused on the construction of rubrics (Zhao et al., 2021).
- ❖ Collaborative effort has often been advocated especially for tertiary level in developing rubrics that can be used as guidelines to developing task specific rubrics. However, how faculty members can work together in developing good quality guideline rubrics have not been dealt sufficiently (Gallardo, 2020)

Introduction

Purpose of the study

- to provide a detailed description of how rubrics can be developed collaboratively by academics to serve as guidelines for designing task specific rubrics by academic from various disciplines

Method

- qualitative study
- consisted of 5 stages

Stage 1

Draft the rubrics

Stage 2

Gather lecturers' feedback on the draft

Stage 3

Analyse and discuss the feedback from the lecturers

Stage 4

Make the relevant improvements to the rubrics

Stage 5

Make the guideline rubrics available via online platform

Stage 1

- Involved 5 experienced lecturers from different disciplines of study with 15-20 years experience in teaching learning and assessment
- meet every weekly to discuss and develop the first draft of the rubrics
- Before Meeting
 - the team gathered sample rubrics for oral presentation from their faculties and internet and studied the samples.
- During Meeting
 - discussed and listed the criteria that should be included for the benefit across various faculties
 - drafted the performance descriptors for the highest level for each criterion were written.
 - the descriptors for the lower levels were written for each criteria
 - the descriptors in the sample rubrics were referred to and the appropriate words/phrases were identified.
 - for the less important criteria but need to be included to maintain the comprehensiveness of the guideline rubrics, 3-4 levels of performance indicators were included instead of 5 levels.
 - After the draft was completed, the team met again for the final time to go through the descriptors and refined them before the next stage.

Example of rubrics databases

- i-rubrics -
<https://www.rcampus.com/indexrubric.cfm>
- Rubistar -
<http://rubistar.4teachers.org/index.php>
- Rubrics for All -
<https://www.forallrubrics.com/>

Stage 2

- A survey questionnaire consisting of open ended questions was sent out to lecturers.
- A total of 60 lecturers for various faculties responded.

Respondents	No
Faculty of Applied and Creative Arts	8
Faculty of Cognitive Sciences	9
Faculty of Economics and Business	9
Faculty of Engineering	6
Faculty of Language and Communication	9
Faculty of Medicine and Health Sciences	3
Faculty of Resource Science and Technology	9
Faculty of Social Sciences	7
Total	60

Instrument

The assessment rubrics for Oral Presentation designed to serve as guideline for educators to adapt for their own specific assessments.

Please review the oral presentation rubrics. Your review could include but not limited to the following;

- Relevance of the criteria included
- Sufficiency of the levels
- Clarity of the performance descriptors
- Suggestions for improvement

Stage 3

- Analyse and discuss the feedback from the respondents

Feedback from the respondents

- Overall, the criteria included are relevant for assessing oral presentation
- 5 levels are included for the important criteria and 3 levels for the less important but still relevant to oral presentation
- The performance descriptors are clearly written and using simple words that can be easily understood by both students and lecturers.

Stage 3

- Analyse and discuss the feedback from the respondents

Sample excerpts from respondents

Criteria

“the criteria listed are **clear** and **relevant** for assessing oral presentation assessment”

“The criteria are **appropriate** to the knowledge and skills that are evaluated in oral presentation”

“Rubrics provide a **clear** set of criteria. Each criterion is obvious enough to be **comprehensible for the students** and is **relevant to the task**. Some of the **criteria are divided into sub criteria**. This is **useful** as this will **allow for a more** consistency in scoring - more objective, and fairer evaluation by the educators”

Levels

“performance levels are also **realistic**, ranging from the **lowest**, a wide **middle** range and the highest being **excellent**”

“The gradation or levels in the rubrics given are **clear and precise**. It is **easily understandable** and **the breakdown in each level is useful** as this will allow for a more **objective, and fairer evaluation** amongst the educators”

Stage 3

- Analyse and discuss the feedback from the respondents

Sample excerpts from respondents

Performance Descriptors

“Each performance level shows **clear and concrete differences** between the levels”

“the descriptors are **well constructed** with **simple language** that will not mislead the students when working on their tasks.”

“The adoption of **plain English** in rubrics is **commendable** as the assessors can come from different backgrounds with different levels of prior knowledge and experiences”

“The descriptors for each of the criteria are **clear, detailed and measurable**. spelled out using plain English that is **relatively easy to comprehend**”

“The quality of the performance level **matches the level of importance** of each criterion in this guideline. The major criterion have more detailed descriptors,”

Stage 3

- Analyse and discuss the feedback from the respondents

**Sample excerpts from respondents
Suggestions for improvement**

Criteria

***Include
Attire***

“The students’ attire on the presentation day is important - it indicates that they respect the occasion and the audience ”

“The clothing the presenter is wearing will influence the way the information delivered is received and the audience’s perception of both the presenter and the presentation”

“Although students are presenting in a classroom environment, their presentation tasks would normally be based on a specific situation given in the assignment. show that they are sensitive and care about their audience and occasion.”

- Suggestion accepted and the criterion attire is included in the rubrics.

Attire	<ul style="list-style-type: none"> non-appropriate not suitable/untidy 	<ul style="list-style-type: none"> acceptable Reasonably suitable/tidy smart casual 	<ul style="list-style-type: none"> appropriately dressed suitable and tidy
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Stage 3

- Analyse and discuss the feedback from the respondents

**Sample excerpts from respondents
Suggestions for improvement**

Criteria

Include 'Citation'

“giving credit wherever it is due to the sources that are used to create the oral presentation content is important.”

“By making the student make proper citations and references of the sources, the students are being trained to be responsible for the integrity of the knowledge that they have gained”

- Suggestion accepted and 'citation' included as a sub-criterion for content

Citation	<ul style="list-style-type: none"> sources cited are mostly unreliable and irrelevant 	<ul style="list-style-type: none"> some of the sources cited are reliable and relevant citations are incorrectly written 	<ul style="list-style-type: none"> most of the sources cited are reliable and relevant mostly correctly written 	<ul style="list-style-type: none"> All sources are reliable and relevant Correctly written
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Stage 3

- Analyse and discuss the feedback from the respondents

**Sample excerpts from respondents
Suggestions for improvement**

Criteria

***Separate
'eye-contact'
and 'body
movement'***

“divide ‘Non-verbal communication’ into two (2) distinct sub-criteria – namely ‘Eye contact’ and ‘Body language’ some presenters are good at engaging eye contact with their audience, but they are lacking with the body language and gestures to enhance their articulation and visualisation.”

“a good presenter not only uses effective eye contact, he/she also needs to constantly attract the attention of the audience with appropriate body language such as simple hand gestures or even moving around from time to time to actively engage audiences seated at different parts of a setting”

- Suggestion accepted and ‘citation’ included as 2 different sub-criteria under Delivery

Stage 3

- Analyse and discuss the feedback from the respondents

**Sample excerpts from respondents
Suggestions for improvement**

Criteria

***Place
'enthusiasm'
under
'Delivery'***

“enthusiasm is important because audience will not pay attention the presenter if they present in an unenthusiastic or boring way. However, it should be a sub-criterion under the criteria for delivery”

- Suggestion accepted and 'enthusiasm' included as a sub-criterion under Delivery

Stage 3

- Analyse and discuss the feedback from the respondents

Sample excerpts from respondents
Suggestions for improvement

Level of Performance

***Add
'note'***

“there are a few criteria that have only 3-4 levels whereas the rest have 5 levels and this may be seen as incomplete and can cause confusion. Suggest to add a brief explanation under the rubric to justify the rubric design”

- Suggestion accepted and 'note' included

Note: only 3-4 levels of descriptions included for the minor criteria

Stage 3

- Analyse and discuss the feedback from the respondents

Sample excerpts from respondents
Suggestions for improvement

Performance descriptor

***modify
descriptor for
sub-criterion
'knowledge of
topic'***

“Under the criterion ‘knowledge of topic, the descriptor includes understanding of topic-it is redundant as the ability to provide accurate and clear points and providing great details and relevant examples are enough to measure the presenter’s understanding of the topic”

- Suggestion accepted and ‘level of understanding of topic’ deleted from the descriptor for

Stage 3

- Analyse and discuss the feedback from the respondents

**Sample excerpts from respondents
Suggestions for improvement**

Not accepted

**Add
'quantity'**

“The levels will be clearer it is labelled as excellent, good, average, fair, poor) or numbered 5 for excellent and 1 for ‘poor’. Although the current oral presentation rubric has labelled the two ends of the continuum, “Inadequate” and “Excellent”, it is recommended that each level of performance be labelled.

- Suggestion not accepted – the rubrics is meant to serve as a guideline. The labels and quantity can be added by lecturers to suit their specific assessment task.

Stage 3

- Analyse and discuss the feedback from the respondents

**Sample excerpts from respondents
Suggestions for improvement**

Not accepted

***Exclude
'technical
matters'***

“While it is the students’ responsibility to ensure all of their AV materials can be presented well, technical errors can also happen due to external factors such as virus in the computer or software incompatibility. It is unfair for the students to be marked down if the technical error happens due to these external factors.”

- Suggestion not accepted – the expert members felt that it is better to include it in the guideline rubrics as some of the lecturers may need to include this criterion to ensure that the students check that their presentation materials/devices are working before their presentation.

Stage 4

Make the relevant improvements to the rubrics


Stage 5

Make the guideline rubrics available via online platform
(refer to Appendix)

Conclusion

- This study was to provide a detailed description of how rubrics can be developed collaboratively by academics to serve as guidelines for designing task specific rubrics by academic from various disciplines
- The designing of the rubrics is supported by feedback data from respondents
- Future study could investigate how the guideline rubrics is utilised by the academics in constructing task specific rubrics and how it affects the student's performance and the lecturers' rating judgement

Guideline Rubrics for Oral Presentation

Criteria		Inadequate		Excellent		
Content	Knowledge of Topic	<ul style="list-style-type: none"> information/explanation presented are unclear/inaccurate 	<ul style="list-style-type: none"> parts of information/explanation are unclear/inaccurate 	<ul style="list-style-type: none"> information/explanation lacks details/examples 	<ul style="list-style-type: none"> explained pertinent information with details and some examples 	<ul style="list-style-type: none"> Clearly explained the information accurately with great details and relevant examples
	Organization	<ul style="list-style-type: none"> content is not organized sequencing is not observable Difficult to follow 	<ul style="list-style-type: none"> Most parts of the content is not organized & sequenced content is rather mixed up and random most parts are difficult to follow 	<ul style="list-style-type: none"> content is organized some parts are sequenced and connected some parts are difficult to follow 	<ul style="list-style-type: none"> most parts of the content are well organized mostly well sequenced and connected most parts are easy to follow 	<ul style="list-style-type: none"> content is well organized logically sequenced and well connected easy to follow
	Citation	<ul style="list-style-type: none"> sources cited are mostly unreliable and irrelevant 	<ul style="list-style-type: none"> some sources are reliable and relevant citations are incorrectly written 	<ul style="list-style-type: none"> most references reliable and relevant most correctly written 	<ul style="list-style-type: none"> All sources are reliable and relevant Correctly written 	
Delivery	Eye contact	<ul style="list-style-type: none"> eye contact merely reading the notes 	<ul style="list-style-type: none"> occasional eye contact mostly read the notes 	<ul style="list-style-type: none"> maintains reasonable eye contact regular reference to notes 	<ul style="list-style-type: none"> maintains eye contact most of the time minimal reference to notes 	<ul style="list-style-type: none"> maintains good eye contact no reference to notes refer to notes only when necessary
	Body movement	<ul style="list-style-type: none"> no body movement or descriptive gestures 	<ul style="list-style-type: none"> minimal movement or descriptive gestures 	<ul style="list-style-type: none"> occasional use of body language/gesture 	<ul style="list-style-type: none"> Made movements or gestures that enhanced articulation 	<ul style="list-style-type: none"> fluid movement or gestures that enhanced articulation and visualization
	Voice projection	<ul style="list-style-type: none"> monotonous low volume no control of stress and intonation patterns 	<ul style="list-style-type: none"> generally monotonous some intonation uneven volume limited control of stress and intonation patterns. 	<ul style="list-style-type: none"> some variations in tone occasionally speaks in uneven volume Satisfactory control of stress and intonation patterns 	<ul style="list-style-type: none"> appropriate intonation - speaks with satisfactory variation in tone and volume good control of stress and intonation patterns with minor problems 	<ul style="list-style-type: none"> appropriate intonation - speaks with appropriate variation in tone and volume very good control of stress and intonation patterns
	Fluency	<ul style="list-style-type: none"> Speech is jerky with frequent hesitations/false starts/pauses 	<ul style="list-style-type: none"> speech is generally jerky with some hesitations/false starts/pauses 	<ul style="list-style-type: none"> speech is fairly fluent with occasional hesitations/false starts/pauses 	<ul style="list-style-type: none"> Speech is mostly fluent and natural 	<ul style="list-style-type: none"> speech is very fluent and natural
	Grammar	<ul style="list-style-type: none"> grammatical errors are serious errors impede comprehension 	<ul style="list-style-type: none"> grammatical errors are frequent errors hinder comprehension 	<ul style="list-style-type: none"> intermittent grammatical errors errors sometimes hinder comprehension 	<ul style="list-style-type: none"> good command of grammatical structure with some minor mistakes/slips – mistake/slips do not hinder comprehension 	<ul style="list-style-type: none"> good command of grammar
	Vocabulary	<ul style="list-style-type: none"> no attempt to use relevant vocabulary/terms 	<ul style="list-style-type: none"> limited use of relevant vocabulary/terms 	<ul style="list-style-type: none"> uses relevant vocabulary/terms fairly well 	<ul style="list-style-type: none"> uses relevant vocabulary/terms well 	<ul style="list-style-type: none"> Uses relevant vocabulary/terms effectively
	Pronunciation	<ul style="list-style-type: none"> pronunciation is not intelligible comprehension severely hindered 	<ul style="list-style-type: none"> repeated problems with pronunciation comprehension generally hindered 	<ul style="list-style-type: none"> occasional problems with pronunciation comprehension is sometimes hindered 	<ul style="list-style-type: none"> pronunciation is generally good occasional slips comprehensible 	<ul style="list-style-type: none"> pronunciation is good no pronunciation error clearly comprehensible
	Enthusiasm	<ul style="list-style-type: none"> shows no interest in the presentation 	<ul style="list-style-type: none"> shows little or mixed interest in the presentation 	<ul style="list-style-type: none"> shows strong enthusiasm during the entire presentation 		

Audio-Visual Aids	Audio-Visual Aids	<ul style="list-style-type: none"> no attempt to use audio-visual aids to support the oral presentation 	<ul style="list-style-type: none"> use of audio-visual aids is appropriate but severely lacking in appeal and not well integrated 	<ul style="list-style-type: none"> use of audio-visual aids is appropriate and satisfactorily integrated but lacking in appeal 	<ul style="list-style-type: none"> use of audio-visual aids is generally appropriate, interesting, meaningful and well integrated – slightly lacking in effective integration 	<ul style="list-style-type: none"> use of audio-visual aids is appropriate, interesting, meaningful and effectively integrated
	Technical matters	<ul style="list-style-type: none"> slides/videos cannot be opened or corrupted. 	<ul style="list-style-type: none"> many technical issues related to slides/videos presented 	<ul style="list-style-type: none"> minor technical issues on the slides/videos presented 	<ul style="list-style-type: none"> no technical issues on the slides/videos presented 	
	Fonts and Size	<ul style="list-style-type: none"> text is extremely difficult to read with small font size, poor use of headings, subheading, indentation or bold formatting 	<ul style="list-style-type: none"> text readability is difficult with too many different fonts, overuse of bold or lack of appropriate indentations 	<ul style="list-style-type: none"> sometimes fonts are easy to read but in a few places the use of fonts, italics, bold, distracts and do not enhance readability 	<ul style="list-style-type: none"> fonts are easy to read and fonts type and size varies appropriately for heading, subheading 	
	Background	<ul style="list-style-type: none"> inappropriate contrasting colours very busy background 	<ul style="list-style-type: none"> colours/background detract and do not enhance readability 	<ul style="list-style-type: none"> background and colours enhance readability of text 		
Attire		<ul style="list-style-type: none"> non-appropriate not suitable/untidy 	<ul style="list-style-type: none"> non-appropriate not suitable/untidy 	<ul style="list-style-type: none"> non-appropriate not suitable/untidy 		
Questions &Answers		<ul style="list-style-type: none"> inappropriate response indirectly respond to questions/avoid questions/response 	<ul style="list-style-type: none"> response lacks relevance/adequacy 	<ul style="list-style-type: none"> Response adequately/appropriately to questions/comments 		
Teamwork		<ul style="list-style-type: none"> team presentation is lacking lacks transition between presenters lacks coordination from all group members 	<ul style="list-style-type: none"> team presented well together most of the time there is a sense of transition from one member to another coordinated participation from most group members 	<ul style="list-style-type: none"> team presented well together clear sense of transition from one member to another well-coordinated participation from all group members 		
Time management		<ul style="list-style-type: none"> serious under or over usage of time too long or too short 	<ul style="list-style-type: none"> slightly under or over usage of time 	<ul style="list-style-type: none"> good time management task completed on time 		

Note: only 3-4 levels of descriptions included for the minor criteria.