

Workshop Series on Developing and Adopting Marking Rubrics in Relation to Assessment Types

Part 2b:

Marking Rubrics for Essays/ Long Questions, Short Questions

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Reflection & Discussion in Pairs

1. Indicate assessment tasks that you commonly use in your courses

2. Analyse how the assessment tasks indicated relate to measuring different levels of knowledge

	Factual knowledge	Conceptual/ Procedural knowledge	Metacognitive knowledge
<input type="checkbox"/> Class participation			
<input type="checkbox"/> Group project			
<input type="checkbox"/> Presentation			
<input type="checkbox"/> Short Answer Question			
<input type="checkbox"/> Essay			
<input type="checkbox"/> Poster			
<input type="checkbox"/> Practical (labs, field study)			
<input type="checkbox"/> Quiz			
<input type="checkbox"/> Other, please specific: _____			

- Adapted from the revised taxonomy by Bloom (2001)
 - ❑ Factual knowledge
 - ✓ by reproduction (*to recognize, recall*)
 - ❑ Conceptual/ Procedural knowledge
 - ✓ by understanding (*to interpret, exemplify, summarize...*)
 - ✓ by application (*to execute, implement...*)
 - ❑ Metacognitive knowledge (higher order thinking skills)
 - ✓ Analysis (*to differentiate, organize...*)
 - ✓ Evaluation (*to check, critique...*)
 - ✓ Creation (*to generate, plan, produce...*)

Recap

What is a rubric? Rubric is

- a **common assessment tool** used in higher education.

(Andrade, 2000; Greenberg, 2015;
Reddy & Andrade, 2010)

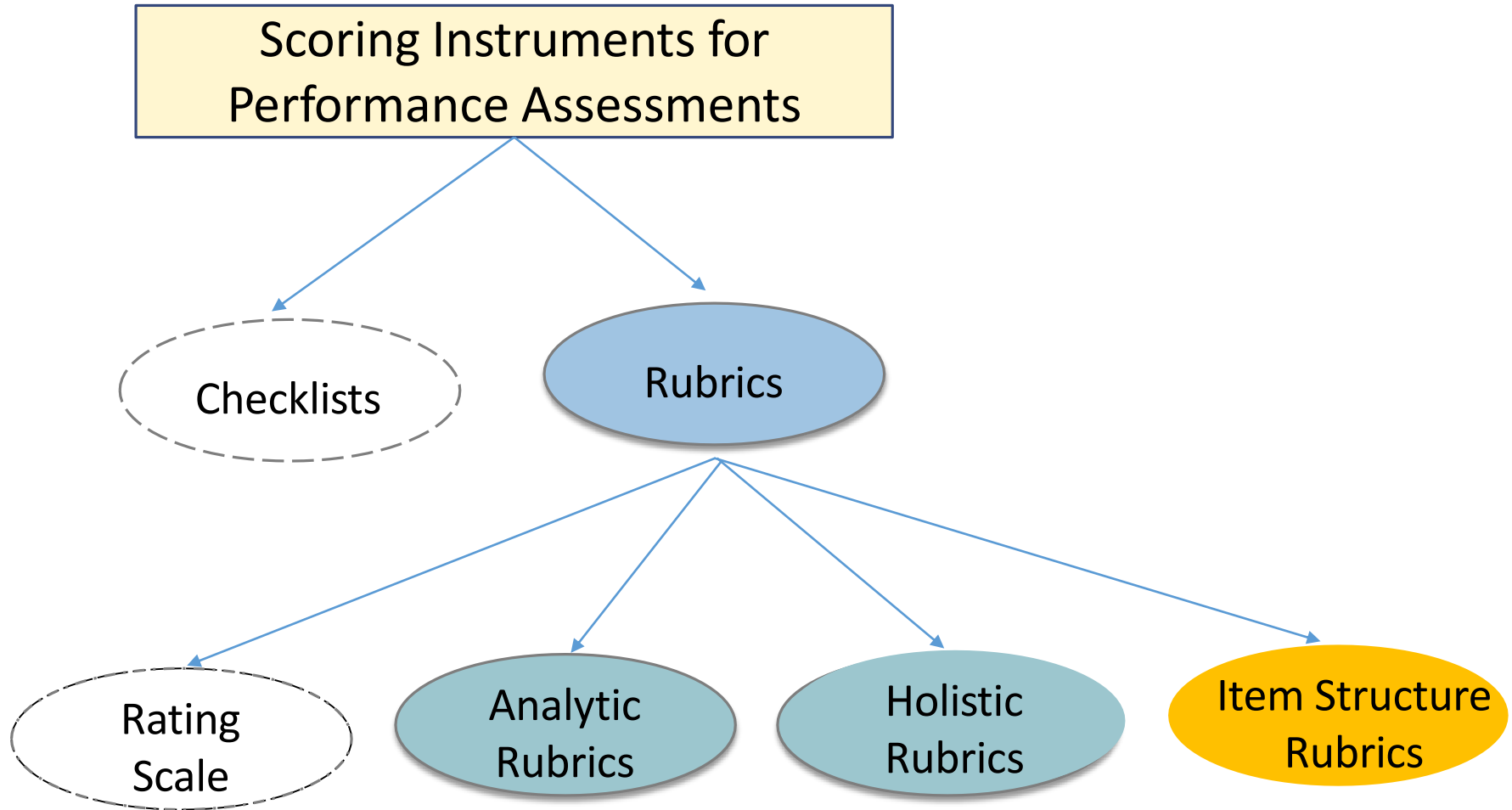
- a scoring tool that lays out the *specific expectations for an assessment task*.

(Stevens & Levi, 2005)

- a set of clear explanations or criteria used to help teachers and students focus *on what is valued in a subject, topic, or activity*.

(Russell, & Airasian, 2012)

Recap



Using rubrics for Essays/ Long Questions

Source: HKU

Faculty or Programme Level Grade Descriptors – Based upon Faculty of Arts

(A)	Demonstrate evidence of original thought, strong analytical and critical abilities as well as a thorough grasp of the topic from background reading and analysis; should demonstrate excellent organizational, rhetorical and presentational skills.
(B)	Demonstrate evidence of critical and analytical thinking but not necessarily original in their thinking; show adequate grasp of the topic from background reading and analysis; should demonstrate strong organizational, rhetorical and presentational skills.
(C)	Demonstrate evidence of a reasonable grasp of their subject but most of their information is derivative, with rather little evidence of critical thinking; should demonstrate fair organizational, rhetorical and presentational skills.
(D)	Demonstrate evidence of being able to assemble the bare minimum of information, poorly digested and not very well organized in presentation. There is no evidence of critical thinking.
Fail	Demonstrate evidence of poor knowledge and understanding of the subject, a lack of coherence and organization, and answers are largely irrelevant. Work fails to reach degree level

Rubric for Writing

Task Description: (Teacher may explain specific assignment in this space.)

Criteria	weight	Exemplary 4 Yes	Accomplished 3 Yes, but	Developing 2 No, but	Beginning 1 No
Topic	10%	<input type="checkbox"/> Directly relevant	<input type="checkbox"/> Somewhat relevant	<input type="checkbox"/> Remotely related	<input type="checkbox"/> Totally unrelated
Organization	10%	<input type="checkbox"/> Good organization; points are logically ordered; sharp sense of beginning and end	<input type="checkbox"/> Organized; points are somewhat jumpy; sense of beginning and ending	<input type="checkbox"/> Some organization; points jump around; beginning and ending are unclear	<input type="checkbox"/> Poorly organized; no logical progression; beginning and ending are vague
Quality of Information	25%	<input type="checkbox"/> Supporting details specific to subject	<input type="checkbox"/> Some details are non-supporting to the subject	<input type="checkbox"/> Details are somewhat sketchy. Do not support topic	<input type="checkbox"/> Unable to find specific details
Grammar, Usage, Mechanics, Spelling	25%	<input type="checkbox"/> No errors	<input type="checkbox"/> Only one or two errors	<input type="checkbox"/> More than two errors	<input type="checkbox"/> Numerous errors distract from understanding
Interest Level	10%	<input type="checkbox"/> Vocabulary is varied; supporting details vivid	<input type="checkbox"/> Vocabulary is varied; supporting details useful	<input type="checkbox"/> Vocabulary is unimaginative; details lack "color"	<input type="checkbox"/> Basic vocabulary; needs descriptive words
Neatness	10%	<input type="checkbox"/> Typed; clean; neatly bound in a report cover; illustrations provided	<input type="checkbox"/> Legible writing, well-formed characters; clean and neatly bound in a report cover	<input type="checkbox"/> Legible writing, some ill-formed letters, print too small or too large; papers stapled together	<input type="checkbox"/> Illegible writing; loose pages
Timeliness	10%	<input type="checkbox"/> Report on time	<input type="checkbox"/> Report one class period late	<input type="checkbox"/> Report two class periods late	<input type="checkbox"/> Report more than one week late

Rubric for a Sociology Research Paper

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Desired Traits


- Argument
- Use and interpretation of data
- Reflection on personal experiences
- Application of course readings and materials
- Organization, writing, and mechanics

Grade/ Point	Characteristics
5	Argument pertains to relationship between social factors and educational opportunity and is clearly stated and defensible.
4	Argument pertains to relationship between social factors and educational opportunity and is defensible, but it is not clearly stated.
3	Argument pertains to relationship between social factors and educational opportunity but is not defensible using the evidence available.
2	Argument is presented, but it does not pertain to relationship between social factors and educational opportunity.
1	Social factors and educational opportunity are discussed, but no argument is presented.

Type of Rubrics	Advantages	Disadvantages
<h2>Holistic</h2> <p>(a summary description of qualities for each grade)</p>	<ol style="list-style-type: none"> 1. Quick scoring and provide an overview of student achievement. 2. Use as summative assessment. 3. Use when errors in some part of the process can be tolerated provided the overall quality is high 	<ol style="list-style-type: none"> 1. Difficult to assign scores consistently, because few students meet one description accurately. 2. Does not yield feedback on students' strengths and weaknesses.
<h2>Analytic</h2> <p>(multiple criteria for grading, each with levels of quality description)</p>	<ol style="list-style-type: none"> 1. Provide specific strengths/weaknesses are desired. 2. Scoring is more consistent across students and grades 3. Provides meaningful and specific feedback along multiple dimensions 	<ol style="list-style-type: none"> 1. Takes more time to create and use 2. Unless each point for each criterion is well-defined, assessors may not arrive at the same score.

Using rubrics with Short questions

General and common in use for short questions, but sufficient?

Short Answer Test Assessment Rubric 					
	No Answer 0 pts	Needs Improvement 4 pts	Adequate 6 pts	Quality 8 pts	Exemplary 10 pts
Content 10 pts	No Answer Did not answer question.	Needs Improvement Answers are partial or incomplete. Key points are not clear. Question not adequately answered.	Adequate Answers are not comprehensive or completely stated. Key points are addressed, but not well supported.	Quality Answers are accurate and complete. Key points are stated and supported.	Exemplary Answers are comprehensive, accurate and complete. Key ideas are clearly stated, explained, and well supported.
Organization 10 pts (Answers are clearly thought out and articulated.)	No Answer Did not answer question.	Needs Improvement Organization and structure detract from the answer.	Adequate Inadequate organization or development. Structure of the answer is not easy to follow.	Quality Organization is mostly clear and easy to follow.	Exemplary Well organized, coherently developed, and easy to follow.
Writing Conventions 10 pts (Spelling, punctuation, grammar, and complete sentences.)	No Answer Did not answer question.	Needs Improvement Displays over five errors in spelling, punctuation, grammar, and sentence structure.	Adequate Displays three to five errors in spelling, punctuation, grammar, and sentence structure.	Quality Displays one to three errors in spelling, punctuation, grammar, and sentence structure.	Exemplary Displays no errors in spelling, punctuation, grammar, and sentence structure.

Item Structure Rubrics - quantitative

Grade	Descriptor
A	Able to interpret and identify the underlying logic of the problem, solve the various elements of the problem, bring the various elements together to form a coherent solution to the problem, and to express that solution logically and comprehensively
B	Able to identify all appropriate expression for the solution of the problem and be able to apply all to solve each element of a problem
C	Able to identify all or most appropriate expressions for the solution of the problem, but unable to apply all to solve each element
D	Able to solve a simple problem involving one aspect of a problem only
F	Unable to solve simple problems

Item Structure Marking Rubric - quantitative

apply
4. (a) Find the equation of the tangent plane to the surface $xy + yz + zx = 5$ at the point $(1, 2, 1)$. D

[6 marks]

(b) Consider the function $f(x, y, z) = 4x - y^2 e^{3xz}$.

max point
(i) In which direction does f have its maximum rate of change at the point $(3, -1, 0)$? What is the maximum rate of change in this direction? B C

(ii) Find the directional derivative of f at the point $(3, -1, 0)$ in the direction $\vec{v} = (-1, 4, 2)$. D

[6 marks]

(c) (i) The equation $x^3 + 2x^2yz + \sin z - 1 = 0$ defines z implicitly as a function of x and y , i.e., $z = z(x, y)$. Find $\frac{\partial z}{\partial x}$ and $\frac{\partial z}{\partial y}$. C/B'

complex problem
(ii) Consider now the function $z = z(x, y)$ in part (i) above, and assume in addition that the variables x and y are functions of two other variables u and v : B/A

$$x = \frac{u^2 - v^2}{2}, \quad y = uv.$$

Find $\frac{\partial z}{\partial u}$. *Explain your reasoning. Show your reasoning.* [8 marks]

Item Structure Rubric - quantitative

Assessment part	Total Marks Allocated	Student A: Good response (Grade A)	Student B: Poor response (Grade D)
4(a)	6	5	4
4(b)	6	5	3
4(c)	8	7	1
Totals	20	17 (85%)	8 (40%)

Total marks assigned	Grade Equivalent
0-8	D
9-11	C
12-14	B
15-20	A

An example of short questions that can be marked with item structure rubric

- 1) List the key elements of Criterion-Referenced Assessment (CRA)
- 2) Compare and contrast CRA with Norm-referenced assessment
- 3) Identify key problems with the use of CRA and how they can be addressed



Take a few minutes to think about which type(s) of rubrics you would want to use for assessing the learning of your students and why

Aligning marking rubric with institutional subject grade descriptors

Why should we do this?

DRAFT POLYU INSTITUTIONAL SUBJECT GRADING DESCRIPTORS (TO BE REFINED)

Subject grade	Short description	Elaboration on subject grading description
A	Excellent	Demonstrates excellent achievement of intended subject learning outcomes by being able to skillfully use concepts and solve complex problems. Shows evidence of innovative and critical thinking in unfamiliar situations, and is able to express the synthesis or application of ideas in a logical and comprehensive manner.
B	Good	Demonstrates good achievement of intended subject learning outcomes by being able to use appropriate concepts, and solve problems. Shows the ability to analyze issues critically and make well-grounded judgements in familiar or standard situations, and is able to express the synthesis or application of ideas in a logical and comprehensive manner.
C	Satisfactory	Demonstrates satisfactory achievement of intended subject learning outcomes by being able to solve relatively simple problems. Shows some capacity for analysis and making judgements in a variety of familiar and standard situations, and is able to express the synthesis or application of ideas in a manner that is generally logical but fragmented.
D	Pass	Demonstrates marginal achievement of intended subject learning outcomes by being able to solve relatively simple problems. Can make basic comparisons, connections and judgments and express the ideas learnt in the subject, though there are frequent breakdowns in logic and clarity.
F	Fail	Demonstrates inadequate achievement of intended learning outcomes through a lack of knowledge and/or understanding of the subject matter. Evidence of analysis is often irrelevant or incomplete.

Note 1: Marking rubrics aligned with these grade descriptors need not include all aspects of the grade descriptor

Note 2: Marking rubrics aligned with these grade descriptors may include other aspects aligned with particular subject matter or field of study requirements but are not included in the grade descriptor

Marking rubrics aligned with these Grade Descriptors may take one of three suggested forms:

1. Holistic marking rubrics
2. Analytic marking rubrics
3. Item structure marking rubric

The holistic and analytic rubrics may be appropriate to assessment items asking for open ended responses such as essays, research reports, oral presentations, capstone reports, etc. – qualitative responses

The item structure rubric may be appropriate to assessment items composed of parts of increasing complexity such as more quantitative items, with each part aligned with the marking rubric descriptor - quantitative responses

Resources

- Examples of Grade Descriptors @ HKU
https://ar.cetl.hku.hk/grade_example.htm
- AACU's VALUE Rubrics (16 Assessment Rubrics)
<http://www.aacu.org/value/rubrics/index.cfm>
- More examples of rubrics
<http://ias.virginia.edu/assessment/outcomes/tools/rubrics>