

6-8-2018

Designing rubrics for authentic assessment


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Recommended Citation

Richardson, Kathryn and Chase, Anne-Marie, "Designing rubrics for authentic assessment" (2018).
https://research.acer.edu.au/teacher_education/18

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Improving Learning

Australian Council *for* Educational Research



Designing rubrics for authentic assessment

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Issues and opportunities with developing rubrics for authentic assessment

Validity

- Construct relevance
- Accuracy in measuring the levels of student progress
- Accuracy of inferences about learning progress and alignment of learning goals
- Accuracy and usability of feedback and feedforward

(Menéndez-Varela & Gregori-Giralt, 2016; Novak, 1996)

Accountability

- Ethics
- Equity (Herman & Klein, 1996)
- Transparency
- Demonstration of mastery of concepts and skills/alignment of assessment with ULOs

Usability

- Flexibility – prescriptive vs. enabling creativity (Gough, 2006)
- Teaching and learning
- Feedback and feedforward – multiple assessments over time that feed into each other
- Self and peer assessment
- Analysis of the task validity and reliability
- Multiple entry and exit points to enable the full range of abilities
(Raposo-Rivas & Gallego-Arrufat, 2016)

Reliability

- Type of rubric – Analytic vs. Holistic
- Interrater reliability
(Büyükkidik & Anil, 2015).

Example

Subject/Unit: Using assessment evidence to inform teaching and learning

Assessment: Portfolio

Assessment Task 1: first artefact entry

Topic of artefact entry: *Using evidence to inform teaching and learning decisions*

Note: There are multiple assessments and rubrics over time designed to provide feedback and feedforward into the development of the final product.

Assessment Task 2 focuses on self- and peer-assessment, and formative feedback on the first artefact entry.

Relevant ULOs:

1. Students will develop knowledge of research related to the effective use of assessment information to inform teaching practice
4. Students will develop expertise in using evidence to inform teaching and learning decisions

AQF level 8 skills: Critical analysis, evaluation, transforming information, generate, transmit solutions to complex problems, transmit knowledge, skills and ideas to others.

Note: The **SAME** rubric is used for each of the different artefact entries later. (This way, you can analyse progress clearly and simplify expectations).

Task Description

Create the first artefact entry for your digital portfolio. It will be based on the following topic:

Using evidence to inform teaching and learning decisions

This artefact entry must relate to **your** work and it will be included in your final portfolio submission (see Assessment Task 3). The entry will comprise the following:

The artefact: (a representation of your work relating to *using evidence to inform teaching and learning* – this may relate to an individual student, a class, your school or workplace, etc. depending on your context)

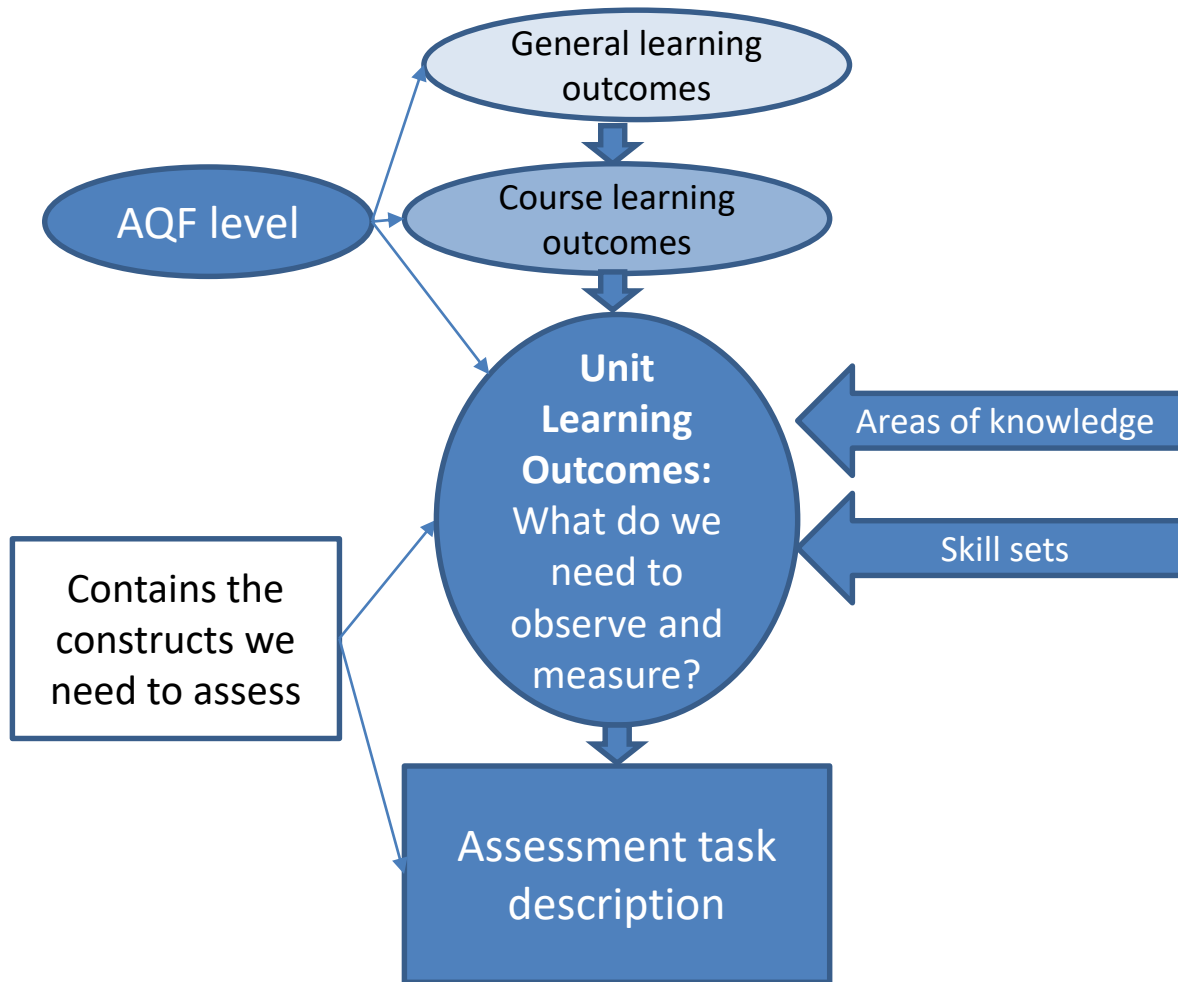
Commentary and critical reflection:

This element will need to:

- demonstrate how the artefact represents the topic,
- reflect your work context
- relate to relevant literature/theory. You will need to reference a range of professional readings from this course as well as demonstrate wider reading.
- provide critical analysis of your work, including how your reflections and critique of the literature will inform your future development in this area.

(850 words, not including the artefact itself)

Step 1: Determining the constructs that will be assessed



Example:

The main ideas that are assessed in this assignment are:

Communicating critical thinking

Knowledge and practice of using assessment to inform teaching and learning

Step 2: Breaking down the constructs into a set of broad capabilities that need to be observed



Example: The breakdown of the main ideas/constructs into component parts

What are the main elements or behaviours we need to observe to determine a student's proficiencies within this construct?

Capability 1

Capability 2

Capability 3

Knowledge and practice of
using assessment

1. The artefact as representation of the topic and context

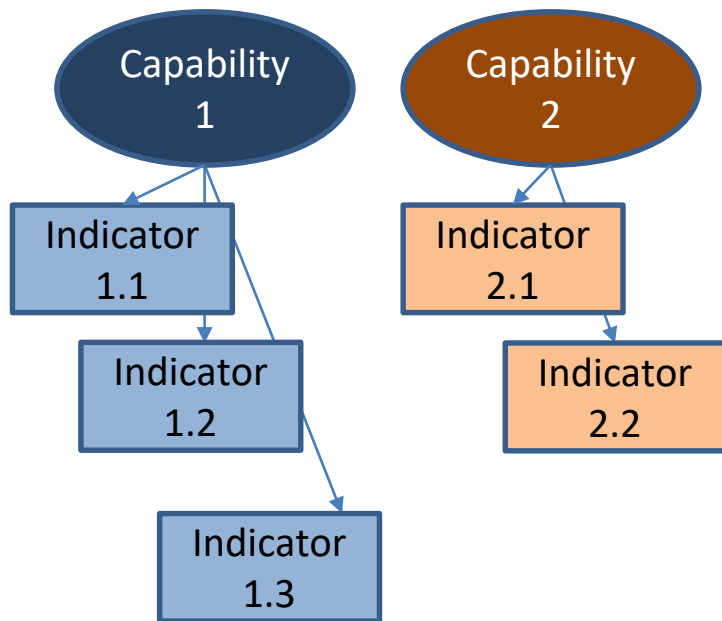
2. *Critique* of artefact

3. *Critical reflections* on practice and recommendations for change

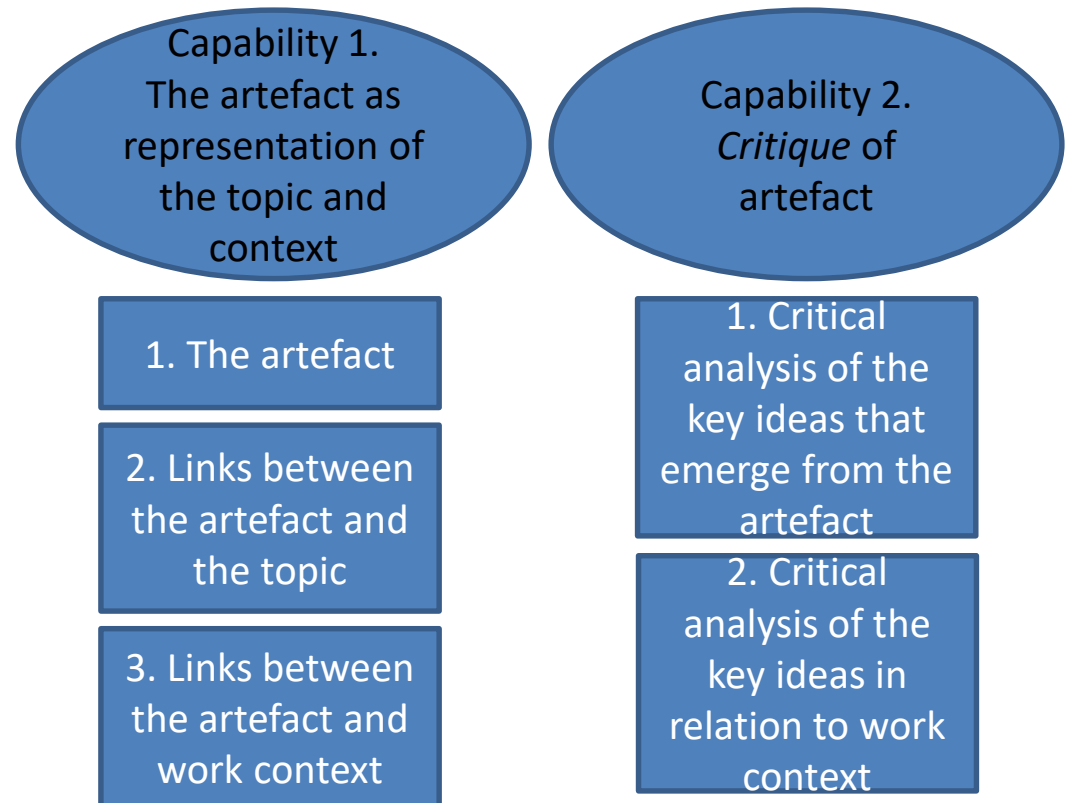
4. Academic Communication

Communicating critical
thinking

capabilities into indicative behaviours (indicators or criteria)



Example



Step 4: Determining the different levels of proficiency



| E.g. Revised Bloom's Taxonomy |
|-------------------------------|
| Create |
| Evaluate |
| Analyse |
| Apply |
| Understand |
| Remember |

(Krathwohl & Anderson, 2002)

| Developmental taxonomies | What are you trying to assess? |
|--------------------------------------|---|
| Bloom's Taxonomy | Cognitive skills – higher order thinking |
| Dreyfus' model of skills acquisition | Practical skills |
| SOLO taxonomy | Increasing complexity of thought or application |
| Krathwohl's Affective Domain | Attitudinal progress |

Step 4: Determining the different levels of proficiency

The scoring system is one-for-one (one mark per level of achievement) which enables clarity and analysability. In other words, the knowledge level is worth 1 mark, the Evaluate level is worth 4 marks

| | | Not demonstrated | Know & Understand | Apply | Analyse | Evaluate & create |
|---|---|---|--|---|--|---|
| Capability 2. Critique of artefact | 2.1 Critical analysis of the key ideas that emerge from the artefact | Key ideas that emerge from the artefact are not discussed | Ideas relating to the topic that emerge from the artefact are mentioned . | Ideas relating to the topic that emerge from the artefact are explained and linked with theory and literature. | Key ideas relating to the topic that emerge from the artefact are analysed using theory and literature. | Key ideas relating to the topic that emerge from the artefact are critiqued and evaluated using theory and literature. |

Note that topics for each artefact are given in the task description, and reflected in the ULOs

Notice the verbs describe the quality of performance that is achieved at this level. Also note that there are clear quality differences that are observable between each level

Paradox



There is a balance between:

- making the rubrics too prescriptive (and therefore inflexible and unable to allow for creativity or out-of-the-box thinking), and
- being too broad or general in the rubrics (therefore, not providing enough structure for students and teachers to gain common understanding of the requirements).

How do we mitigate these issues, particularly with very broad authentic forms of assessment?

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