Designing rubrics for authentic assessment

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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)

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)

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

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

- AQF level
- General learning outcomes
- Course learning outcomes
- Unit Learning Outcomes: What do we need to observe and measure?
  - Areas of knowledge
  - Skill sets
- Assessment task description

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

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

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

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
Step 3: Breaking down the capabilities into indicative behaviours (indicators or criteria)

- **Capability 1**
  - Indicator 1.1
  - Indicator 1.2
  - Indicator 1.3

- **Capability 2**
  - Indicator 2.1
  - Indicator 2.2

**Example**

- **Capability 1. The artefact as representation of the topic and context**
  1. The artefact
  2. Links between the artefact and the topic
  3. Links between the artefact and work context

- **Capability 2. Critique of artefact**
  1. Critical analysis of the key ideas that emerge from the artefact
  2. Critical analysis of the key ideas in relation to work context
Step 4: Determining the different levels of proficiency

Developmental taxonomies

| 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                     |

E.g. Revised Bloom’s Taxonomy

- Create
- Evaluate
- Analyse
- Apply
- Understand
- Remember

(Krathwohl & Anderson, 2002)
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.

<table>
<thead>
<tr>
<th>Capability 2. Critique of artefact</th>
<th>2.1 Critical analysis of the key ideas that emerge from the artefact</th>
<th>Not demonstrated</th>
<th>Know &amp; Understand</th>
<th>Apply</th>
<th>Analyse</th>
<th>Evaluate &amp; create</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key ideas that emerge from the artefact are not discussed.</td>
<td>Ideas relating to the topic that emerge from the artefact are mentioned.</td>
<td>Ideas relating to the topic that emerge from the artefact are explained and linked with theory and literature.</td>
<td>Key ideas relating to the topic that emerge from the artefact are analysed using theory and literature.</td>
<td>Key ideas relating to the topic that emerge from the artefact are critiqued and evaluated using theory and literature.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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?
References


