Using Rubrics in Project Work

Terry Rhodes
Paula Quinn

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Who are we?
Why are we here?
What is a rubric?

• Document that articulates expectations for a project
• Creates circumstances for dependable judgments about the quality of work to be made
## Components of a Rubric

### Integrative Learning VALUE Rubric

**Definition**

Integrative learning is an understanding and a disposition that a student builds across the curriculum and co-curriculum, from making simple connections among ideas and experiences to synthesizing and transforming ideas in new, complex situations within and beyond the campus.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Capstone 4</th>
<th>Milestones 3</th>
<th>Benchmark 1</th>
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</thead>
<tbody>
<tr>
<td><strong>Connections to Experience</strong>&lt;br&gt;Connects relevant experience and academic knowledge</td>
<td>Meaningfully synthesizes connections among experiences outside of the formal classroom (including life experiences and academic experiences such as internships and travel abroad) to deepen understanding of fields of study and to broaden own points of view.</td>
<td>Effectively selects and develops examples of life experiences, drawn from a variety of contexts (e.g., family life, artistic participation, civic involvement, work experiences), to illuminate concepts/theories/frameworks of fields of study.</td>
<td>Compares life experiences and academic knowledge to infer differences, as well as similarities, and acknowledge perspectives other than one’s own.</td>
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<tr>
<td><strong>Connections to Discipline</strong>&lt;br&gt;Create (make) connections across disciplines, perspectives</td>
<td>Independently creates wholes out of multiple parts (synthesizes) or draws conclusions by combining examples, facts, or theories from more than one field of study or perspective.</td>
<td>Independently connects examples, facts, or theories from more than one field of study or perspective.</td>
<td>Identifies connections between life experiences and those academic texts and ideas perceived as similar and related to own interests.</td>
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<tr>
<td><strong>Transfer</strong>&lt;br&gt;Adapts and applies skills, abilities, theories, or methodologies gained in one situation to new situations</td>
<td>Adapts and applies independently, skills, abilities, theories, or methodologies gained in one situation to new situations to solve problems or explore outcomes in original ways.</td>
<td>Adapts and applies skills, abilities, theories, or methodologies gained in one situation to new situations to solve problems or explore outcomes in original ways.</td>
<td>Uses skills, abilities, theories, or methodologies gained in one situation to new situations to contribute to understanding of problems or issues.</td>
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<tr>
<td><strong>Integrated Communication</strong>&lt;br&gt;</td>
<td>Fulfills the assignment(s) by choosing the content and form, demonstrating awareness of purpose and audience.</td>
<td>Fulfills the assignment(s) by choosing the content and form, demonstrating awareness of purpose and audience.</td>
<td>Uses, in a basic way, skills, abilities, theories, or methodologies gained in one situation to new situations in a new situation.</td>
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<td><strong>Reflection</strong>&lt;br&gt;</td>
<td>Demonstrates a developing sense of self as a learner, building on prior experiences to respond to new and challenging contexts (may be evident in self-assessment, reflection, or creative work)</td>
<td>Evaluates changes in own learning over time, recognizing complex contextual factors (e.g., works with ambiguity and risk, deals with frustration, considers ethical frameworks).</td>
<td>Articulates strengths and challenges (within specific performances or events) to increase effectiveness in different contexts (through increased self-awareness).</td>
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**Worcester Polytechnic Institute**
# Assignment Variables Purpose

<table>
<thead>
<tr>
<th>Assignment Purpose</th>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td><strong>INTRODUCE</strong></td>
<td>Benchmark</td>
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<td>Assignment designed to introduce the outcome</td>
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<td><strong>PRACTICE</strong></td>
<td>Milestone 1</td>
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<td>Assignment designed to afford student practice with the outcome</td>
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<td><strong>REINFORCE</strong></td>
<td>Milestone 2</td>
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<td>Assignment designed to reinforce previously practiced outcome</td>
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<tr>
<td><strong>MASTERY</strong></td>
<td>Capstone</td>
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<tr>
<td>Assignment designed for students to demonstrate level of mastery of the outcome</td>
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Assignment Variables

• Faculty intentionality per rubric dimension
• % of final course grade that the submitted assignment represents
• Assignment “difficulty”
Assignments Matter: Implications

- Assignment design critical
- Question is not “Is it a good assignment?”
- Question is “Does it align?”
Why use rubrics?
Some reasons to use rubrics...

• Create shared understanding
  — Convey quality standards to students
  — Convey learning outcomes to sponsors

• Assess student work

• Support student self- and peer-assessment

• Proactively create a basis for having rational discussions on grade disputes

• Evaluate programs

• Support intentionality → Enhance integrity
Essential Project Design Elements

Key Knowledge, Understanding, and Success Skills - both discipline-specific and transferrable

Challenging Problem or Question - engaging; appropriately challenging

Sustained Inquiry - an extended process of asking questions, finding resources, and applying information

Authenticity - real-world context, tasks and tools, quality standards, or impact

Student Voice & Choice - students make decisions, including how they work and what they create

Reflection - students reflect on learning, the effectiveness of their inquiry, the quality of their work, and obstacles

Critique & Revision - students receive and use feedback to improve their process and products

Public Product - students make their project work public by explaining, displaying and/or presenting it beyond the classroom
What are the costs and benefits of using rubrics for your students’ project work?
Examples of Rubrics
Contact

Paula Quinn: pquinn@wpi.edu
Terry Rhodes: Rhodes@aacu.org

WPI Center for Project-Based Learning
http://wp.wpi.edu/projectbasedlearning/