Formative Assessment

**Description**

Formative assessment is a critical component of a comprehensive assessment strategy as it supports student learning by providing timely, specific feedback to learners and instructors at meaningful points during the learning experience. According to the research, the benefits of formative assessment and the feedback it provides depend on its design and implementation (Bennett, 2011; Shute, 2007). Thus, the focus of this principle is what constitutes effective formative assessment and how this can be implemented within our products to best support student learning. Research-based recommendations focus on addressing the five strategies of effective formative assessment (Wiliam, 2007) and adhering to the standards for educational and psychological testing (AERA, APA, & NCME, 2014).

**Capabilities**

- Assessment: Open-ended assignments (single step)
- Instruction: Item level hints
- Management: Algorithmically variable assessments

**Sample Design Implementations**

- Robust Technology: Utilizing Intelligent Tutoring Systems (ITS) in association with formative assessment instruments
- Simple Technology: Opportunities and capabilities to support self- and peer-assessment
- Content Support: Providing specific, descriptive, and actionable feedback statements in association with assessment instruments

**Learner Impacts**

- Achievement
- Motivation
- Self-regulation
- Behavior
## SELF-ASSESSMENT INSTRUMENT

<table>
<thead>
<tr>
<th>Principle Criteria</th>
<th>Integration (4-5 points)</th>
<th>Exploration (2-3 points)</th>
<th>Consideration (1 point)</th>
<th>Not Applicable (0 Points)</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Strong integration of formative assessment into a comprehensive assessment system</td>
<td>Some integration of formative assessment into a comprehensive assessment system</td>
<td>Poor integration of formative assessment into a comprehensive assessment system</td>
<td>Does NOT use effectively or is not a related activity</td>
<td>= _____</td>
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<tr>
<td></td>
<td>Strong use of timely, specific feedback to support students and instructors throughout the learning experience</td>
<td>Some use of timely, specific feedback to support students and instructors throughout the learning experience</td>
<td>Poor use of timely, specific feedback to support students and instructors throughout the learning experience</td>
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<tr>
<td><strong>Establishing where learners are</strong></td>
<td>Strong use of activities that elicit evidence of learning</td>
<td>Some use of activities that elicit evidence of learning</td>
<td>Poor use of activities that elicit evidence of learning</td>
<td></td>
<td>= _____</td>
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<tr>
<td></td>
<td>Strong assessment of prior knowledge</td>
<td>Some assessment of prior knowledge</td>
<td>Poor assessment of prior knowledge</td>
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<tr>
<td></td>
<td>Strong use of pre-training as needed to ensure prerequisites are met</td>
<td>Some use of pre-training as needed to ensure prerequisites are met</td>
<td>Poor use of pre-training as needed to ensure prerequisites are met</td>
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<tr>
<td><strong>Establishing where learners are going</strong></td>
<td>Strong use of criteria to clarify the conditions for success</td>
<td>Some use of criteria to clarify the conditions for success</td>
<td>Poor use of criteria to clarify the conditions for success</td>
<td>Does NOT use effectively or is not a related activity</td>
<td>= _____</td>
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<td></td>
<td>Strong use of continual peer and instructor communication to support progress</td>
<td>Some use of continual peer and instructor communication to support progress</td>
<td>Poor use of continual peer and instructor communication to support progress</td>
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<tr>
<td></td>
<td>Strong use of hints, tips, instructions, or related measures to facilitate the discussion of course standards</td>
<td>Some use of hints, tips, instructions, or related measures to facilitate the discussion of course standards</td>
<td>Poor use of hints, tips, instructions, or related measures to facilitate the discussion of course standards</td>
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<tr>
<td><strong>Establishing how learners are going to get there</strong></td>
<td>Strong use of feedback to propel learners towards the objectives</td>
<td>Some use of feedback to propel learners towards the objectives</td>
<td>Poor use of feedback to propel learners towards the objectives</td>
<td>Does NOT use effectively or is not a related activity</td>
<td>= _____</td>
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<tr>
<td></td>
<td>Strong use of peers and collaboration to work towards goals</td>
<td>Some use of peers and collaboration to work towards goals</td>
<td>Poor use of peers and collaboration to work towards goals</td>
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<td></td>
<td>Strong use of self-regulated learning (SRL) strategies to work towards goals</td>
<td>Some use of SRL strategies to work towards goals</td>
<td>Poor use of SRL strategies to work towards goals</td>
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</tbody>
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