Designing Assessments for Quality Learning

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What is assessment of student learning?

the systematic collection of information about student learning, using the time, knowledge, expertise, and resources available, in order to inform decisions about how to improve learning

(Barbara Walvoord, Assessment Clear and Simple)
Assessment’s core questions

• What do you want students to know/do/value as a result of completing your program?
• How do you know whether your students know/do/value these things?
• If they know/do/value these things…you’ve got something to report!
• If NOT, you have useful information to guide changes to improve learning.

Adapted from: St. Cloud State University. (2008). Assessment Peer consultant training. Patricia Aceves, Ackerman, Bjorklund, Foss, Johnson, Kolodzne,, & Jim Sheroehman
ASSESSMENT – LOOP

Changes to Enhance Student Learning

Student Learning Outcomes

Strategies to Accomplish Outcomes

Areas and Methods of Assessment

Data Collection and Interpretation

Adapted from: St. Cloud State University. (2008). Assessment Peer consultant training. Patricia Aceves, Ackerman, Bjorklund, Foss, Johnson, Kolodzne,, & Jim Sherohman
Types Of Assessments Used In General Education

Which of the following do you use to assess student learning outcomes in general education?

- Rubrics applied to examples of student work (40%)
- Culminating or capstone projects (37%)
- Surveys and self-reports (35%)
- Locally developed common assignments in some courses (27%)
- Standardized national tests of general skills, such as critical thinking (26%)
- Locally developed examinations (23%)
- Standardized national tests of general knowledge, such as science or humanities (16%)
- Student essays/writing portfolios (1%)
- My institution doesn’t assess outcomes in general education (48%)
In other words…

- We identify learning outcomes
- We design ways to measure the learning
- We provide learning opportunities
- We gather, analyze, and interpret evidence to determine how well learning matches our expectations
- We use the results to understand and improve student learning

Course grades versus assessment

Course grades are based on iterations of direct measurement; however, course grades are an indirect measurement because:

- They represent a combination of course learning outcomes that are averaged out in a final grade
- They frequently involve student behaviors not related to learning outcomes and may reflect complex, subjective and irrelevant variables such as neatness, attendance, extra credit, tardiness, etc
- Course grades tell students how they did in the class relative to other students
- May tell something about the standards of the teacher
You can use the grading process to measure learning

- Ensure that the activity, exam or assignment actually measures the learning goal(s)
  - Make sure the assessment is valid: The extent to which a test measures what it is supposed to measure. State explicitly in writing the criteria for evaluating student work in sufficient detail to identify students’ strengths and weaknesses
  - Use rubrics
Grades not Actionable

Grade Report

- George  91
- Steve   100
- Jean    92
- Mark    84
- . . . . . . .

Average  78
(N = 24)

Performance Outcome: Actionable Data

Communication Strategy Analysis
N = 30

<table>
<thead>
<tr>
<th>Performance Element</th>
<th>Scoring Satisfactory or Better</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>29</td>
<td>97%</td>
</tr>
<tr>
<td>Audience</td>
<td>19</td>
<td>63%</td>
</tr>
<tr>
<td>Information</td>
<td>25</td>
<td>83%</td>
</tr>
<tr>
<td>Benefits</td>
<td>27</td>
<td>90%</td>
</tr>
<tr>
<td>Objections</td>
<td>26</td>
<td>87%</td>
</tr>
<tr>
<td>Context</td>
<td>16</td>
<td>53%</td>
</tr>
</tbody>
</table>

Don’t Have Time?

Communication Strategy Analysis

<table>
<thead>
<tr>
<th>Element</th>
<th>Unsatisfactory</th>
<th>Satisfactory</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Benefits</td>
<td></td>
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<td>Objections</td>
<td></td>
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</tr>
<tr>
<td>Context</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Walvoord’s Three Steps of Assessment

1. Articulate your goals for student learning

“When they complete our program, students will be able to . . .”

(Barbara Walvoord, Assessment Clear and Simple)
Review

Identify your student learning outcomes

Students will <<action verb>> <<something>>
Possible Outcomes

- Students will appreciate....
- Students will be exposed to....
- Students will demonstrate knowledge of the history, theories and applications of...
- Students will attend....
- Faculty will provide students with opportunities to....

Adapted from: St. Cloud State University. (2008). Assessment Peer consultant training. Patricia Aceves, Ackerman, Bjorklund, Foss, Johnson, Kolodzne,, & Jim Sherohman
Possible Outcomes

• Students will appreciate…
• Students will be exposed to…
• Students will demonstrate knowledge of the history, theories and applications of…
• Students will attend…
• Faculty will provide students with opportunities to…

Adapted from: St. Cloud State University. (2008). Assessment Peer consultant training. Patricia Aceves, Ackerman, Bjorklund, Foss, Johnson, Kolodzne, & Jim Sherohman
2. Gather evidence about how well students are meeting the goals.

- *Direct measures*
- *Indirect measures*

“Evidence includes qualitative as well as quantitative information.”

(Barbara Walvoord, *Assessment Clear and Simple*)
Direct and Indirect Assessment of Learning

- *Direct* evidence of student learning is tangible, visible, and compelling evidence of exactly what students have and have not learned.

- *Indirect* evidence consists of proxy signs that students are probably learning. Indirect evidence is less clear and convincing.

Examples of Evidence: Direct or Indirect?

For each of the following examples, indicate whether you think this is direct or indirect measurement:
Student Reflections Evaluated by your Assessment Committee
Student exams, papers, projects, computer programs,
Observations of student interactions with a client during internship
Student musical performance
Survey that Asks Students to Report their Learning for Particular Concepts
Asking students or alumni how well they thought they learned
Tracking graduate school or job placement rates
Retention and Graduation Rates for Students in a Particular Program
Teaching Evaluations
Site Supervisor Ratings of Student Performance during an Internship
Survey that Asks Students to Respond to a Scenario using Content Learned in Class
Course Grades
Challenges in Gathering Evidence

- Recognize appropriate measures to use
- Interpreting, reporting, and using data for decision making from multiple courses and instructors
- Relate assignments and activities to outcomes
- Finding Time for Trained Professionals to Evaluate
  • Especially in small units/departments
- Motivation to Participate in the Assessment

Limited Faculty/Staff Time

Bring Faculty/Staff into the Process
- All faculty/staff participate from the beginning (determining what questions you have about student learning) to the end (dissemination of report; discussion of results).

Captive Audience

Team Up
- Find other departments/units interested in the same questions to potentially share the workload
  - Richer sense of what students are learning
  - Application of classroom learning

Plan Ahead!

Laying the Foundation

- Decide what you want students to learn from the experience.
- Determine how the learning aligns with your learning outcomes.
- Develop a meaningful task or problem related to identified learning outcome(s).
- Determine the methods you will use to measure (scoring guide, rubric, reflection, etc.) students’ learning.

Embedded Questions

Individual questions on exams can be embedded in numerous classes to provide departmental, program, or institutional assessment information. An additional benefit to embedded assessment is immediate feedback on the pedagogy and student needs.
Embedded Questions

• **Authentic assessment.** Assessment that evaluates the student’s ability to use their knowledge and to perform tasks that are approximate those found in the work place or other venues outside of the classroom setting.
Exam

Student Learning Outcome #1

% Students Answering Correctly

Question 3
87%

Question 9
64%

Question 15
70%

Question 19
82%

Question 30
30%

67%

## Embedded Outcomes: Actionable Data

Students will be able to know, comprehend, and apply the following four principles of effective communication:

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
<th>Number of Exam Questions</th>
<th>% Students with Correct Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Building Goodwill</td>
<td>5</td>
<td>67%</td>
</tr>
<tr>
<td>2. Adapting Message to Audience</td>
<td>7</td>
<td>91%</td>
</tr>
<tr>
<td>3. Making Writing Easier to Read</td>
<td>8</td>
<td>58%</td>
</tr>
<tr>
<td>4. Using a Process to Plan Compose and Revise</td>
<td>5</td>
<td>84%</td>
</tr>
</tbody>
</table>

Prompt Example

Program Learning Outcome:
Students will be able to identify and describe options for post-graduate study/work and understand the implications for each.

Prompt:
Please consider the options you’ve learned about to continue your education after you receive your bachelor’s degree. Select one you think might be a good fit for you and briefly discuss:

- Master’s Degree
- Joint Master’s/PhD program
- Professional School
- Trade School

Work with your group – what do you think of this prompt? Do you see any problems with this prompt? Can you create a better prompt?

Discussion
Did you Identify any Problems?

Ideas for a Better Prompt?
Discussion

A Few Problems:
- First part of the outcome is not directly addressed because options have been given.
- Data from this prompt indicated students did not understand the implications for post-graduate study options because, by in large, students did not identify any implications. Follow-up with a focus group, however, revealed the students actually did have good knowledge of the implications and were able to discuss them in meaningful ways.

Example of a Better Prompt
Throughout this program, we’ve discussed different options for continuing your education after you complete your bachelor’s degree. Select two or three you feel might be a good fit for you and discuss the implications of each option based on your future goals and aspirations.

Math Prompt

Evaluate $f'(1)$ for $f(x) = e^{2x+1}$ and verify your work using a different representation. Explain why you chose the method of verification.


Holistic Rubric

WRITING GROUP RUBRIC

0  Does not address task, unresponsive, unrelated or inappropriate. Nothing correct.

1  Addresses item but only partially correct; something correct relates to the question.

2  Answer deals correctly with more than one aspect of the question, but a significant portion is incorrect, missing, or unclear. Answer may deal with all aspects but have major error(s).

3  Answer deals correctly with aspects of the question, but something is missing. Answer may deal with all aspects but have minor errors. Answer may use a specific example without giving a general description.

4  All parts of the question are answered accurately and completely. All directions are followed.
Better???

0  The work evidenced
   a) only recopying of the original information;
   b) only a wrong answer; or
   c) no meaningful work.

1  A meaningful attempt was made to solve the problem beyond simply copying it, but the work stopped far short of a solution – or – an inappropriate strategy led to a wrong answer.

2  Some understanding of the problem was demonstrated, but
   a) an appropriate strategy was presented without an answer;
   b) an appropriate strategy was incorrectly implemented;
   c) an apparently suitable strategy was selected, but some condition of the problem was ignored or misunderstood, leading to an incorrect solution; or
   d) a leap was made from the appropriate strategy to the correct answer without a clear explanation.

3  A suitable strategy was chosen and implemented. Any errors were of a minor nature- for example, simple computation.

4  A suitable strategy was chosen and implemented. Answers were complete and accurate.
Development of Rubrics
The advantages of using rubrics...

- Allow assessment to be more outcomes focused and consistent
- Focus the teacher to clarify his/her criteria in specific terms
- Clearly show the student how their work will be evaluated and what is expected
- Promote fair and consistent grading
- Promote student awareness of about the criteria to use in assessing peer performance
- Provide useful feedback regarding the effectiveness of the instruction and help identify areas for improvement
- Provide benchmarks against which to measure and document progress
Scoring Guides and Rubrics

As the name implies, scoring guides generally provide a structure and definition of how student performance will be judged.

A Scoring guide should be tied directly to the student learning outcome it is measuring.

Examples of Common Scoring Guides:

- Rubrics
- Structured Observation Guides
4 Elements of a Rubric

- **A task description** = the outcome being assessed

- **Criteria for Evaluation of Students’ Performances (traits)** = Rows

- **Defined Levels of Performance (columns)** = advanced, intermediate high, intermediate low, novice, or other descriptions (1, 2, 3, 4, etc.) (Aim for an even number)

- **Description of each Level** - detailed information regarding the qualities that should be or should not be present in a product/performance to receive a rating at each level

- **Some free online tools:** Rubistar [rubistar/4teachers.org/](http://rubistar/4teachers.org/) and Rcampus [http://www.rcampus.com/indexrubric.cfm](http://www.rcampus.com/indexrubric.cfm)

<table>
<thead>
<tr>
<th>Scoring rubric for tennis serve</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Excellent (2 points)</th>
<th>Acceptable (1 point)</th>
<th>Poor (0 points)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accuracy</strong></td>
<td>Hits target area at least 80% of the time</td>
<td>Hits target area about 50%-80% of the time</td>
<td>Hits target area less than 50% of the time</td>
</tr>
<tr>
<td><strong>Effort</strong></td>
<td>Puts forth good effort and tries to serve correctly</td>
<td>Shows moderate interest in learning how to serve</td>
<td>Shows little or no interest in learning the correct way of serving</td>
</tr>
</tbody>
</table>

## Class participation rubric

<table>
<thead>
<tr>
<th>Activity</th>
<th>3 - Almost Always</th>
<th>2 - Occasionally</th>
<th>1 - Almost Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participates in class discussions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asks relevant questions in class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participates in online discussion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offers questions or comments via e-mail</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attends class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrives on time/stays for entire class</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Minimal Rubric for Senior History Seminar Papers

<table>
<thead>
<tr>
<th>Title</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Argumentation</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Historical significance of project</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Organization</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Citation of Sources</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Performance Rubric

Performance Characteristics

<table>
<thead>
<tr>
<th>Traits</th>
<th>Does not meet Expectations</th>
<th>Meets Expectations</th>
<th>Exceeds Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Descriptions of Unacceptable, Acceptable, or Excellent Performance
Performance Rubric
Business Management

Team’s Customer Satisfaction Skills

Punctuality
- Does not meet Expectations
  - Some team members missed appointments or did not return phone calls.
- Meets Expectations
  - All team members arrived on time for appointments and returned all phone calls promptly.
- Exceeds Expectations
  - All team members were always early.

Courtesy
- Does not meet Expectations
  - Some team members were not respectful of firm employees.
- Meets Expectations
  - All team members were always courteous and respectful of all firm employees.
- Exceeds Expectations
  - All employees felt that the team members were very courteous and respectful and fully elicited their ideas.

Communication
- Does not meet Expectations
  - Some team members did not communicate clearly during meetings and phone calls.
- Meets Expectations
  - The team members always communicated clearly during meetings and phone calls.
- Exceeds Expectations
  - The team members always made an extra effort to make sure that they understood us and that we understood them.
Main Types of Rubrics

1. Holistic Rubrics
2. Analytic Trait Rubrics
3. Developmental Rubrics
4. General Rubrics

Holistic Rubrics

A holistic rubric gives one score for an entire work or product. The rubric combines all important components of the student’s performance to arrive at a single judgment of the quality of the final product.

**Advantages**
- Emphasis on what the learner is able to demonstrate, rather than what s/he cannot do.
- Saves time by minimizing the number of decisions raters make.
- Can be applied consistently by trained raters increasing reliability.

**Disadvantages**
- Does not provide specific feedback for improvement.
- When student work is at varying levels spanning the criteria points it can be difficult to select the single best description.
- Criteria cannot be weighted.


Office for Teaching, Learning, & Assessment (n.d.). *Types of rubrics*. DePaul University Office for Teaching Learning and Assessment. Retrieved February 13, 2013, from [http://condor.depaul.edu/tla/Assessment/TypesRubrics.html](http://condor.depaul.edu/tla/Assessment/TypesRubrics.html)
Example of Holistic Rubric

Articulating thoughts through written communication—final paper/project.

**Above Average (4):** The audience is able to easily identify the focus of the work and is engaged by its clear focus and relevant details. Information is presented logically and naturally. There are no more than two mechanical errors or misspelled words to distract the reader.

**Sufficient (3):** The audience is easily able to identify the focus of the student work which is supported by relevant ideas and supporting details. Information is presented in a logical manner that is easily followed. There is minimal interruption to the work due to misspellings and/or mechanical errors.

**Developing (2):** The audience can identify the central purpose of the student work with little difficulty and supporting ideas are present and clear. The information is presented in an orderly fashion that can be followed with little difficulty. There are some misspellings and/or mechanical errors, but they do not seriously distract from the work.

**Needs Improvement (1):** The audience cannot clearly or easily identify the central ideas or purpose of the student work. Information is presented in a disorganized fashion causing the audience to have difficulty following the author’s ideas. There are many misspellings and/or mechanical errors that negatively affect the audience’s ability to read the work.

Analytic Trait Rubrics

An Analytic Trait Rubric divides the product or performance into important components or traits, then evaluates each one separately.

**Advantages**
- Can provide useful feedback on areas of strength and weakness.
- Criteria can be weighted to reflect the relative importance of each dimension.
- Can give specific feedback on each important dimension.

**Disadvantages**
- Takes more time to create and use than a holistic rubric.
- Unless each point for each criterion is well-defined raters may not arrive at the same score.


# Example of Analytic Trait Rubric

Articulating thoughts through written communication—final paper/project.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Needs Improvement (1)</th>
<th>Developing (2)</th>
<th>Sufficient (3)</th>
<th>Above Average (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarity (Thesis supported by relevant information and ideas.)</td>
<td>The purpose of the student work is not well-defined. Central ideas are not focused to support the thesis. Thoughts appear disconnected.</td>
<td>The central purpose of the student work is identified. Ideas are generally focused in a way that supports the thesis.</td>
<td>The central purpose of the student work is clear and ideas are almost always focused in a way that supports the thesis. Relevant details illustrate the author’s ideas.</td>
<td>The central purpose of the student work is clear and supporting ideas are always well-focused. Details are relevant, enrich the work</td>
</tr>
<tr>
<td>Organization (Sequencing of Elements/Ideas)</td>
<td>Information and ideas are poorly sequenced (the author jumps around). The audience has difficulty following the thread of thought.</td>
<td>Information and ideas are presented in an order that the audience can follow with minimum difficulty.</td>
<td>Information and ideas are presented in a logical sequence which is followed by the reader with little or no difficulty.</td>
<td>Information and ideas are presented in a logical sequence which flows naturally and is engaging to the audience.</td>
</tr>
<tr>
<td>Mechanics (Correctness of grammar and spelling)</td>
<td>There are five or more misspellings and/or systematic grammatical errors per page or 8 or more in the entire document. The readability of the work is seriously hampered by errors.</td>
<td>There are no more than four misspellings and/or systematic grammatical errors per page or six or more in the entire document. Errors distract from the work.</td>
<td>There are no more than three misspellings and/or grammatical errors per page and no more than five in the entire document. The readability of the work is minimally interrupted by errors.</td>
<td>There are no more than two misspelled words or grammatical errors in the document.</td>
</tr>
</tbody>
</table>

# Sample Analytic Rubric

## Oral Communications

<table>
<thead>
<tr>
<th>Organization</th>
<th>Below Expectation</th>
<th>Satisfactory</th>
<th>Exemplary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- No apparent organization</td>
<td>- Presentation has a focus</td>
<td>- Presentation is carefully organized.</td>
</tr>
<tr>
<td></td>
<td>- Evidence not used to support assertions</td>
<td>- Student provides evidence that supports conclusions</td>
<td>- Speaker provides convincing evidence to support conclusions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content</td>
<td>- Content is inaccurate or overly general</td>
<td>- Content is generally accurate, but incomplete</td>
<td>- Content is accurate and complete</td>
</tr>
<tr>
<td></td>
<td>- Listeners are unlikely to learn or may be misled</td>
<td>- Listeners may learn isolated facts but are unlikely to gain new insights about topic</td>
<td>- Listeners are likely to gain new insights about the topic.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery</td>
<td>- Speaker appears anxious and uncomfortable</td>
<td>- Speaker is fairly relaxed and comfortable</td>
<td>- Speaker is relaxed and comfortable</td>
</tr>
<tr>
<td></td>
<td>- Speaker reads notes rather than speaking</td>
<td>- Speaker too often relies on notes</td>
<td>- Speaker speaks without undue reliance on notes</td>
</tr>
<tr>
<td></td>
<td>- Listeners are largely ignored</td>
<td>- Listeners are sometimes ignored or misunderstood.</td>
<td>- Speaker interacts effectively with listeners.</td>
</tr>
</tbody>
</table>
Structured Observation Guides

A more qualitative type of scoring guide.

**Advantages**

- May allow for a richer description of student performance or work.
- May be useful for assessment of qualities that are difficult to operationally define, like attitudes or values

**Disadvantages**

- This is a more subjective approach to scoring.
- More difficult to analyze results.

Example of a Structured Observation Guide

Structured Observation Guide for a Presentation

<table>
<thead>
<tr>
<th>Effectiveness of Presenter in:</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicating the Purpose of the Presentation</td>
<td></td>
</tr>
<tr>
<td>Organizing the Presentation</td>
<td></td>
</tr>
<tr>
<td>Demonstrating Good Knowledge of the Topic(s)</td>
<td></td>
</tr>
<tr>
<td>Speaking with Clarity</td>
<td></td>
</tr>
<tr>
<td>Responding Appropriately to Participants’ Questions</td>
<td></td>
</tr>
<tr>
<td>Adhering to Time Constraints</td>
<td></td>
</tr>
<tr>
<td>Accomplishing the Stated Objective</td>
<td></td>
</tr>
</tbody>
</table>

VALUE rubrics

- [http://www.aacu.org/value/rubrics](http://www.aacu.org/value/rubrics)
- A set of general rubrics to assess a range of student learning outcomes, including written and oral communication, civic engagement, information literacy, global understanding, and lifelong learning.
- Best used as templates to guide discussion and as a basis for locally-developed rubrics.
# Critical Thinking Value Rubric

**Definition**

Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

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>Capstone</th>
<th>Milestones</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation of issues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.</td>
<td>Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.</td>
<td>Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.</td>
</tr>
</tbody>
</table>

| **Evidence** | | |
| **Selecting and using information to investigate a point of view or conclusion** | | |
| Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly. | Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning. | Information is taken from source(s) with some interpretation/evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning. | Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question. |

| **Influence of context and assumptions** | | |
| | | |
| Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position. | Identifies own and others' assumptions and several relevant contexts when presenting a position. | Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa). | Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position. |

| **Student's position (perspective, thesis/hypothesis)** | | |
| | | |
| Specific position (perspective, thesis/hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/hypothesis). | Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis). | Specific position (perspective, thesis/hypothesis) acknowledges different sides of an issue. | Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious. |

| **Conclusions and related outcomes (implications and consequences)** | | |
| | | |
| Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order. | Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly. | Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly. | Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified. |
## Critical Thinking Value Rubric Model Deconstructed

<table>
<thead>
<tr>
<th>CTVR</th>
<th>CTVR Capstone</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation of Issues</strong></td>
<td><strong>Problem</strong> to be considered critically?? Stated clearly and described comprehensively, delivering all relevant information for full understanding.</td>
</tr>
<tr>
<td><strong>Evidence (Selecting and using Information)</strong></td>
<td><strong>Information</strong> taken from sources with enough evaluation to develop comprehensive analysis. Views of experts are questioned thoroughly.</td>
</tr>
<tr>
<td><strong>Influence context/assumptions</strong></td>
<td>Thoroughly (systematically and methodically) analyzes own and others’ assumptions and evaluates relevance of contexts</td>
</tr>
<tr>
<td><strong>Student’s position (perspective, thesis /hypothesis)</strong></td>
<td>Position (hypothesis/thesis) is imaginative???, takes into account complexities. Others’ POV synthesized.</td>
</tr>
<tr>
<td><strong>Conclusions, Implications/ Consequences</strong></td>
<td>Conclusions (consequences and implications) and logical and reflect informed evaluation. Prioritizes evidence and perspectives.</td>
</tr>
</tbody>
</table>
LEAP Value Rubric Critical Thinking Involves…

- Understanding the Question or Issue.
- The use of Information (Evidence)
- Making Assumptions and identifying Contexts
- Understanding Point(s) of view
- Determining Implications and Consequences
- Forming Inferences and Judgments (thesis/hypothesis)

Standards (mainly implied within Value Rubric)
- Clarity
- Precision
- Relevance
- Fairness
- Depth
- Breadth
- Logic
- Significance
Value Rubric Critical Thinking: Filling in the Gaps (Red)

Understanding the Question or Issue.

Determining Implications and Consequences

Forming Inferences and Judgments (thesis/hypothesis)

Understanding Point(s) of view

Understanding the Purpose

The use of Information (Evidence)

Making Assumptions and identifying Contexts

Uses Concepts and Theories

Standards

Clarity

Accuracy

Precision

Relevance

Fairness

Depth

Breadth

Logic

Significance
• Develop Tools that Simplify CT Assessment
<table>
<thead>
<tr>
<th>Does the element apply?</th>
<th>Element of Reasoning</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Purpose and key question:</strong> The level of understanding of the problem</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Point of view:</strong> The level of examination and assessment of claims, arguments, and statements (frame of reference)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Information:</strong> The quality of interpretations of statements, logic, data, facts, questions, graphs, theories, assertions, descriptions, etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Essential concepts:</strong> The level of understanding of related theories, principles, or representations</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Assumptions:</strong> The quality of the explanation of reasons and assumptions and the level identification and justification of key and results</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Implications, consequences, interpretations, and inferences:</strong> The quality of the reasoning toward conclusions, ability to infer significant relationships, and appreciation of the depth and breadth of the problem</td>
<td></td>
</tr>
<tr>
<td>Score each applicable standard (1-4)</td>
<td>Writing Standard</td>
<td>Questions</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Clear: understandable, precise</td>
<td>Do you know exactly what the writer means?</td>
</tr>
<tr>
<td></td>
<td>Accurate: free of errors or distortions</td>
<td>Does the content conform to fact?</td>
</tr>
<tr>
<td></td>
<td>Precise: specific, exact to the necessary level of detail</td>
<td>Does the writer need to add details or be more exact?</td>
</tr>
<tr>
<td></td>
<td>Relevant: clearly connected to the matter at hand</td>
<td>Is there anything here that doesn’t belong?</td>
</tr>
<tr>
<td></td>
<td>Deep: intellectually complex</td>
<td>Has the writer addressed the complexities of the topic?</td>
</tr>
<tr>
<td></td>
<td>Broad: open to multiple relevant viewpoints</td>
<td>Has the writer examined all the relevant issues?</td>
</tr>
<tr>
<td></td>
<td>Logical: free of contradictions &amp; blatant fallacies</td>
<td>Are there gaps in reasoning? Obvious fallacies?</td>
</tr>
<tr>
<td></td>
<td>Significant: focused on the most important info</td>
<td>Are the most important points considered?</td>
</tr>
<tr>
<td></td>
<td>Fair: not merely self-serving or one-sided</td>
<td>Does the writer fairly present others’ views?</td>
</tr>
<tr>
<td></td>
<td>Correct: free from grammar, punctuation, spelling, &amp; usage errors; guidelines followed</td>
<td>Are grammar, punctuation, spelling, usage correct? Appropriate to audience?</td>
</tr>
</tbody>
</table>

*Exemplary = 4 = All applicable standards met (overall score); writing is excellent/skilled
Satisfactory = 3 = Most applicable standards met; writing is competent/effective
Below Satisfactory = 2 = Some applicable standards met; writing is inconsistent/ineffective
Unsatisfactory = 1 = Few/No applicable standards met; writing is unskilled*
A few steps in building a Rubric

Primary Trait Analysis
Steps for Creating a PTA Rubric

1. Choose an assignment.

2. Identify the criteria or “traits” that will count in the evaluation of the assignment (vertical axis)
   – Use nouns or noun phrases

3. Create a Scale for each trait (horizontal axis)
   – Construct a three- to four-point scale with descriptive statements about each trait.
Does your rubric work?

- Try evaluating a student assignment
- Ask a colleague to review your rubric
- Does the rubric reflect the purpose of the assignment? If not, do the rubric criteria need revision?
- Does the rubric connect to the course/program learning outcomes or goals? If not, does the assignment need to be tweaked OR do the course learning outcomes need revision?
- Does the rubric reflect any of the mid-point learning goals? If not, check the course learning outcomes for connection to the mid-point learning goals.
Walvoord’s Three Steps of Assessment

3. Use the information for improvement

**Pitfall:** Gathering data that no one will use

“It is not enough to gather data about student strengths and weaknesses; you need information and hypotheses about the causes of student weaknesses.” (Barbara Walvoord, Assessment Clear and Simple)
The Final Challenge

Close the loop
✓ Use data – develop hypotheses
✓ Review assessment methods
✓ Change curriculum and/or instruction

Possible consulting issues?
Thinking Outside the Loop

More Pitfalls:

• Mere compliance with external demands
• Triggering resistance and hostility of faculty
• Letting administrators do it
• Making the process too complicated

(Barbara Walvoord, Assessment Clear and Simple)