

A Multi-Institution Study of Rubric Assessment: Lessons Lived and Learned

Rubric Assessment of Information Literacy Skills

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Rubrics

Rubrics are powerful tools for assessment. The RAILS project is intended to help librarians create and use rubrics for information literacy assessment.

To this end, RAILS can serve as clearinghouse for information literacy rubrics. Existing RAILS rubrics are grouped by topic and/or by creator and accessible using the navigation links on the right. Any of these rubrics can be modified and saved by librarians; librarians can also upload new rubrics.

To do so, librarians should click the "participant login" link at the top of this page for site approval. Once approved as a RAILS website participant, librarians are welcome to adapt the rubrics as needed. To modify an existing rubric, approved participants should use the "Make and Save my own Rubric" button. (Note, this process does NOT actually change the existing rubric. Instead it makes a new copy that can be modified as needed.) To upload a new rubric, begin with a blank rubric found in the "Uncategorized" category. Please be sure to change the title of your new rubric!

Questions? Please post them in the forum area of the RAILS website!

Rubric Categories

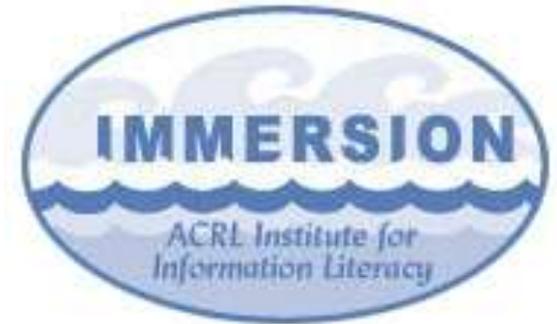
-  [General](#)
-  [Define Information Needs](#)
-  [Evaluate Information](#)
-  [Locate Information](#)
-  [Non-Instructional Library](#)
- [Services](#)
-  [RAILS Cohort 2010-2011](#)
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WAYPOINT
OUTCOMES

Project Purpose

- Investigate an analytic rubric approach to information literacy assessment in higher education
- Develop:
 - A suite of information literacy rubrics
 - A model of analyzing scores (reliability & validity)
 - Training materials for training/norming/scoring
 - Indicators of rater expertise
 - Website to disseminate assessment results & information about teaching/learning improvements as a consequence of rubric assessment



We want to learn...

- How can rubric assessment be used to improve IL instruction and services?
- Can librarians & disciplinary faculty use IL rubrics to provide valid & reliable scores of student learning?
- What skills/characteristics do librarians & faculty need to produce valid & reliable scores using IL rubrics?
- What training materials do librarians & faculty need to acquire these skills/characteristics?



Other Information Literacy Assessment Approaches

Surveys

Tests

Performance Assessments

Without rubrics, performance assessments sometimes lack interrater reliability.

Without reliability, open to validity problems too.



	Capstone 4	3	Milestones 2	Benchmark 1
Determine the Extent of Information Needed	Effectively defines the scope of the research question or thesis. Effectively determines key concepts. Types of information (sources) selected directly relate to concepts or answer research question.	Defines the scope of the research question or thesis completely. Can determine key concepts. Types of information (sources) selected relate to concepts or answer research question.	Defines the scope of the research question or thesis incompletely (parts are missing, remains too broad or too narrow, etc.). Can determine key concepts. Types of information (sources) selected partially relate to concepts or answer research question.	Has difficulty defining the scope of the research question or thesis. Has difficulty determining key concepts. Types of information (sources) selected do not relate to concepts or answer research question.
Access the Needed Information	Accesses information using effective, well-designed search strategies and most appropriate information sources.	Accesses information using variety of search strategies and some relevant information sources. Demonstrates ability to refine search.	Accesses information using simple search strategies, retrieves information from limited and similar sources.	Accesses information randomly, retrieves information that lacks relevance and quality.
Evaluate Information and its Sources Critically	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.
Use Information Effectively to Accomplish a Specific Purpose	Communicates, organizes and synthesizes information from sources to fully achieve a specific purpose, with clarity and depth	Communicates, organizes and synthesizes information from sources. Intended purpose is achieved.	Communicates and organizes information from sources. The information is not yet synthesized, so the intended purpose is not fully achieved.	Communicates information from sources. The information is fragmented and/or used inappropriately (misquoted, taken out of context, or incorrectly paraphrased, etc.), so the intended purpose is not achieved.
Access and Use Information Ethically and Legally	Students use correctly all of the following information use strategies (use of citations and references; choice of paraphrasing, summary, or quoting; using information in ways that are true to original context; distinguishing between common knowledge and ideas requiring attribution) and demonstrate a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.	Students use correctly three of the following information use strategies (use of citations and references; choice of paraphrasing, summary, or quoting; using information in ways that are true to original context; distinguishing between common knowledge and ideas requiring attribution) and demonstrates a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.	Students use correctly two of the following information use strategies (use of citations and references; choice of paraphrasing, summary, or quoting; using information in ways that are true to original context; distinguishing between common knowledge and ideas requiring attribution) and demonstrates a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.	Students use correctly one of the following information use strategies (use of citations and references; choice of paraphrasing, summary, or quoting; using information in ways that are true to original context; distinguishing between common knowledge and ideas requiring attribution) and demonstrates a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.

VALUE Info Lit Rubric

- **Strengths**
 - ACRL Standards
 - Basis for conversation
 - Demonstrates need for “in progress” assessments
- **Challenges** (when adapting to specific contexts)
 - Performance levels not mutually exclusive
 - Inconsistent wording across performance levels
 - Some adj/adv are open to broad interpretation
 - Specific details needed for scoring student work omitted



VALUE Rubric for Information Literacy	Capstone 4	Milestones		Benchmark 1
		3	2	
<p>Determine the Extent of Information Needed</p>	<p>Effectively defines the scope of the research question or thesis.</p> <p>Effectively determines key concepts.</p> <p>Types of information (sources) selected directly relate to concepts or answer research question.</p>	<p>Defines the scope of the research question or thesis completely.</p> <p>Can determine key concepts.</p> <p>Types of information (sources) selected relate to concepts or answer research question.</p>	<p>Defines the scope of the research question or thesis incompletely (parts are missing, remains too broad or too narrow, etc.).</p> <p>Can determine key concepts.</p> <p>Types of information (sources) selected partially relate to concepts or answer research question.</p>	<p>Has difficulty defining the scope of the research question or thesis.</p> <p>Has difficulty determining key concepts.</p> <p>Types of information (sources) selected do not relate to concepts or answer research question.</p>



Adapting for Specific Contexts

	Expertise	Mastery		Novice
Determine the extent of information needed	Identifies the range of the research question to be investigated (e.g., theoretical, descriptive, prescriptive). Types of information sources and search methods are selected in relation to research questions.	Identifies the range of the research question to be investigated (e.g., theoretical, descriptive, prescriptive). Types of information sources and search methods are selected in relation to research questions.	Identifies the range of the research question to be investigated (e.g., theoretical, descriptive, prescriptive). Types of information sources and search methods are selected in relation to research questions.	Identifies the range of the research question to be investigated (e.g., theoretical, descriptive, prescriptive). Types of information sources and search methods are selected in relation to research questions.
Search for needed information	Searches information using effective, well-planned search strategies and search engines. Information sources are selected in relation to research questions.	Searches information using effective, well-planned search strategies and search engines. Information sources are selected in relation to research questions.	Searches information using effective, well-planned search strategies and search engines. Information sources are selected in relation to research questions.	Searches information using effective, well-planned search strategies and search engines. Information sources are selected in relation to research questions.
Evaluate information and its sources critically	Identifies the strengths and weaknesses of information sources and other factors that affect the reliability of information. Information sources are selected in relation to research questions.	Identifies the strengths and weaknesses of information sources and other factors that affect the reliability of information. Information sources are selected in relation to research questions.	Identifies the strengths and weaknesses of information sources and other factors that affect the reliability of information. Information sources are selected in relation to research questions.	Identifies the strengths and weaknesses of information sources and other factors that affect the reliability of information. Information sources are selected in relation to research questions.
Use information effectively to accomplish a specific purpose	Communicates, organizes and synthesizes information from various information sources to accomplish a specific purpose. Information sources are selected in relation to research questions.	Communicates, organizes and synthesizes information from various information sources to accomplish a specific purpose. Information sources are selected in relation to research questions.	Communicates, organizes and synthesizes information from various information sources to accomplish a specific purpose. Information sources are selected in relation to research questions.	Communicates, organizes and synthesizes information from various information sources to accomplish a specific purpose. Information sources are selected in relation to research questions.
Extend and evaluate information already used	Identifies the strengths and weaknesses of information sources and other factors that affect the reliability of information. Information sources are selected in relation to research questions.	Identifies the strengths and weaknesses of information sources and other factors that affect the reliability of information. Information sources are selected in relation to research questions.	Identifies the strengths and weaknesses of information sources and other factors that affect the reliability of information. Information sources are selected in relation to research questions.	Identifies the strengths and weaknesses of information sources and other factors that affect the reliability of information. Information sources are selected in relation to research questions.

Determine the extent of information...

	Performance Level	Performance Level	Performance Level	Performance Level
Criteria	Description	Description	Description	Description
Criteria	Description	Description	Description	Description
Criteria	Description	Description	Description	Description

Use effective research strategy...

	Performance Level	Performance Level	Performance Level	Performance Level
Criteria	Description	Description	Description	Description
Criteria	Description	Description	Description	Description
Criteria	Description	Description	Description	Description

Identify relevant information sources...

	Performance Level	Performance Level	Performance Level	Performance Level
Criteria	Description	Description	Description	Description
Criteria	Description	Description	Description	Description
Criteria	Description	Description	Description	Description

Evaluate information effectively...

	Performance Level	Performance Level	Performance Level	Performance Level
Criteria	Description	Description	Description	Description
Criteria	Description	Description	Description	Description
Criteria	Description	Description	Description	Description

2010-2011

The 1st Five Institutions

- 5 “lead” librarians met for intensive rubric training and developed draft rubric customized for their institution.
- Lead librarians secured examples of student work ($100+ \times 5 = 500+$) and raters ($10 \times 5 = 50$).
- PI visited each campus to lead rubric revision, norming, scoring.
- Analysis completed.



Faculty/Librarian Collaborations

- Guest lectures
- Team teaching
- Assignment Co-design
- Annotated bibliographies
- Research papers
- Research logs
- Search histories
- Search worksheets
- Reflective writing
- Etc.



Successful Campus Collaborations

- Start with established partners, existing librarian/disciplinary faculty collaborations
- Evaluate a skill relevant to many campus partners (ex. use information legally and ethically)
- Include those who can help disseminate results and promote IL assessment efforts across campus
- Meet with stakeholders regularly to review and improve assignment and rubric



Collaboration Challenges

- Embedding IL instruction and a shared assignment across multiple sections
- Time constraints
- Building sustainable practices and cross-campus buy-in
- Norming the rubrics



Rubric Norming Process

1. Think aloud through scoring several examples.
2. Ask raters to independently score a set of examples that reflects the range of services libraries produce.
3. Bring raters together to review their scores to identify patterns of consistent and inconsistent scores.
4. Discuss and then reconcile inconsistent scores.
5. Repeat the process of independent scoring on a new set of examples.
6. Again, bring all raters together to review their scores to identify patterns of consistent and inconsistent scores.
7. Discuss and then reconcile inconsistent scores. This process is repeated until raters reach consensus about applying the scoring rubric. Ordinarily, two to three of these sessions calibrate raters' responses.



Consider...



- How might you revise this rubric?
- What do you think will work well?
- What do you think may **not** work well?

The Results



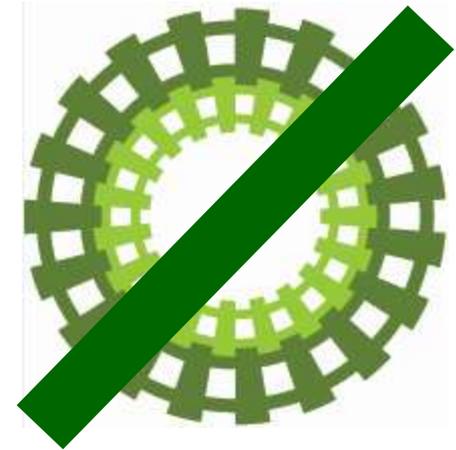
Statistically Speaking...

- Pearson correlation may be overinflated in these cases.
- Cohen's kappa may be more meaningful if you have a trustworthy gold standard rater.
- Krippendorff's alpha may be a good choice going forward.
- Note: Analysis & reflection are ongoing!



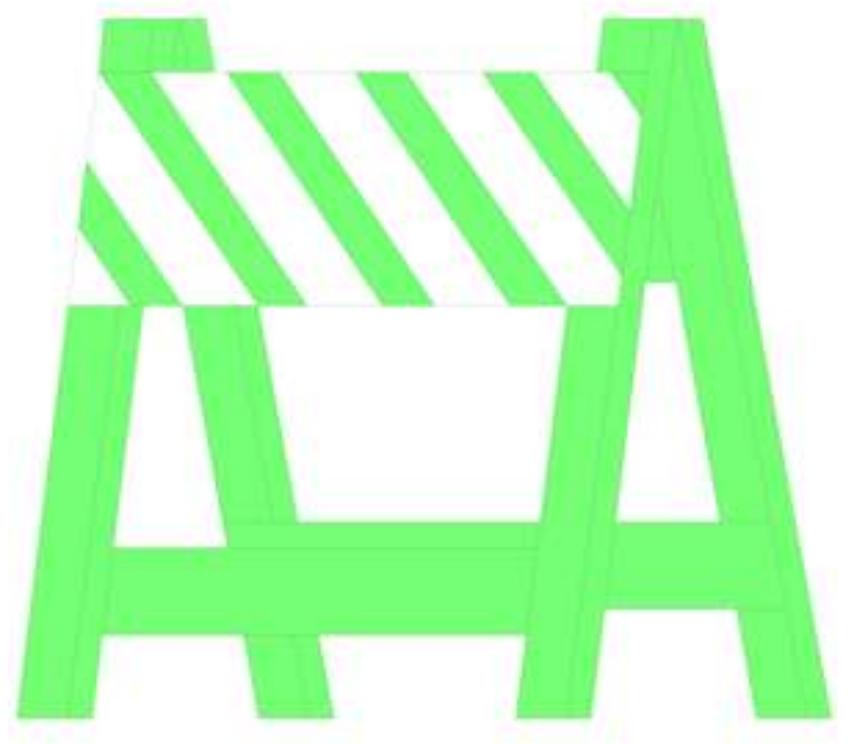
Barriers

- Top barriers cited:
 - Lack of time
 - Lack of coordinated structures for assessment
- Also of concern:
 - Insufficient financial resources
 - Lack of staff
 - Assessment role uncertainty
- For colleagues:
 - Lack of familiarity with rubric assessment in general
 - Lack of rewards for participating in assessment activities



Question?

- How do we overcome these barriers?
- How do we help our colleagues overcome them?



“Closing the Loop” Survey

RAILS - Closing the Loop

Exit this survey

1. Improvements Resulting from RAILS Participation

RAILS seeks to improve teaching, learning, and assessment. It may also result in increased collaboration, organizational change, or other positive impacts.

This form seeks to collect improvements that result from your participation in RAILS, large or small.

You may (and are encouraged) to return to this survey as often as you like.

***1. What improvements, impacts, or changes resulted from your RAILS participation?**

***2. Is this a change in:**

- Teaching Methods
- Student Learning
- Assessment Practice
- Collaboration
- Organizational Change

All institutions report
improved *teaching*.



- RAILS “changed the way I teach...[the teaching] session has more structure, and the students seemed much more engaged.” [I1]
- Student comment about changed instruction: “The day that we went as a class to the library...was probably one of the most beneficial days of my semester.” [I1]
- Faculty feedback: “My teaching in [course] improved and the students’ work improved also.” [I2]
- Librarians have been invited to work with faculty to “better identify and align...course outlines to other information literacy standards.” [I3]
- “I learned that grading the assignments in the RAILS project was an empowering act for me. It will strengthen my teaching the next time because I now understand what the students really are not getting. This rubric creation and rating experience has facilitated valuable reflection on my teaching practice and I hope to weave what I now understand into my teaching the next time around.” [I5]

All institutions report increased
assessment activity.



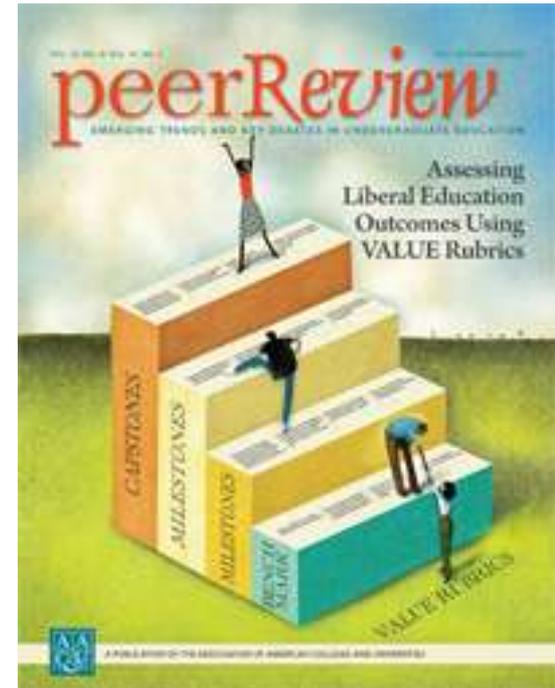
- “**Institutional implementation** of customized VALUE rubrics for IL and in other areas. Redesigning [course] IL rubrics and instructional materials.” [I2]
- “Project RAILS heightened the need for our college to purchase a software program...as a mechanism in which to consistently document feedback during artifact scoring sessions.” [I3]
- “All the librarians who participated in RAILS are ‘on board’ with the idea of assessment; however, not many of us were collecting final papers/artifacts. Seeing this final work helps us to build up a much richer picture of our teaching and of student learning, and **we are now planning to collect final papers routinely from targeted classes.**” [I4]

- “Participating in RAILS has enabled us to develop and pilot a process for collecting and assessing student work.... We were...able to work out how best to approach faculty to ask their permission to use class work and talk to their students, as well as how best to talk to students about why and how we would use their work. This was an unexpected opportunity to make more visible to students what is actually involved in doing research. In short, RAILS has enabled us to put systems and procedures in place that we will draw on for all subsequent assessment efforts!” [14]



And more...

- 5 of 5 are disseminating results via publications/presentations locally and nationally.
- 3 of 5 document more collaboration with institutional colleagues (faculty, staff, administration, co-curricular professionals).
- 2 of 5 are developing add-on research projects.



Lessons Learned

- “I know it when I see it” does **not** mean “I can articulate it.”
- There is **no magic-bullet** rater.
- If decisions about students lives are to be made, raters’ results should be analyzed thoroughly.
- The process of writing and rating with rubrics results in improvements in teaching, assessment, collaboration, etc.
- Almost everyone likes norming, and many people are surprised about how much they like it.



Logistics

- Organized deployment of rubric rating activities (including but not limited to norming) is a basic need for establishing inter-rater reliability.
- Large scale analysis of rubric assessment results is faster and more convenient when an appropriate assessment management system is a part of the process.
- Ergonomic issues are a concern.



Specificity Lessons

- **Analytical rubrics** appear to be more effective when assessing student artifacts than holistic rubrics.
- Specific, precise, explicit, detailed performance descriptions are crucial to achieve inter-rater reliability.
- Raters appear to be more confident about their ratings when student artifacts under analysis are **concrete, focused, and shorter in length.**



Norming Lessons

- **Norming is critical** for establishing shared understanding of the rubric and achieving greater inter-rater reliability.
- The best raters “believe in” outcomes, value constructed consensus (or “disagree and commit”), negotiate meaning across disciplines, develop shared vocabulary, etc.



2011-2012

- More training for lead librarians
- More norming practice for raters
- More precise rubrics & shorter artifacts
- Gold standard rater included (to run Cohen)
- Correlations between rater reliability and other attributes investigated
- Greater Waypoint Outcomes functionality



Questions?

for more information

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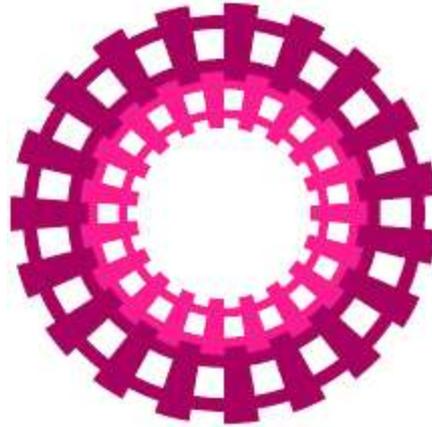


Selected Readings

www.meganoakleaf.info

- Oakleaf, Megan. "Are They Learning? Are We? Learning and the Academic Library." *Library Quarterly*. 81.1. 2011.
- Oakleaf, Megan. "Dangers and Opportunities: A Conceptual Map of Information Literacy Assessment Tools." *portal: Libraries and the Academy*. 8.3. 2008.
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- Oakleaf, Megan. "Using Rubrics to Assess Information Literacy: An Examination of Methodology and Interrater Reliability." *Journal of the American Society for Information Science and Technology*. 60.5. 2009.
- Oakleaf, Megan. "Using Rubrics to Collect Evidence for Decision-Making: What Do Librarians Need to Learn?" *Evidence Based Library and Information Practice*. 2.3. 2007.
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Extra Slides



Rubrics – Benefits, 1 of 2

Learning

- Articulate and communicate agreed upon learning goals
- Provide direct feedback to learners
- Facilitate self-evaluation
- Can focus on learning standards



Rubrics – Benefits, 2 of 2

Data

- Facilitate consistent, accurate, unbiased scoring
- Deliver data that is easy to understand, defend, and convey
- Offer detailed descriptions necessary for informed decision-making
- Can be used over time or across multiple programs

Other

- Are inexpensive (\$) to design & implement



Rubrics – Limitations

- May contain design flaws that impact data quality
- Require time for development

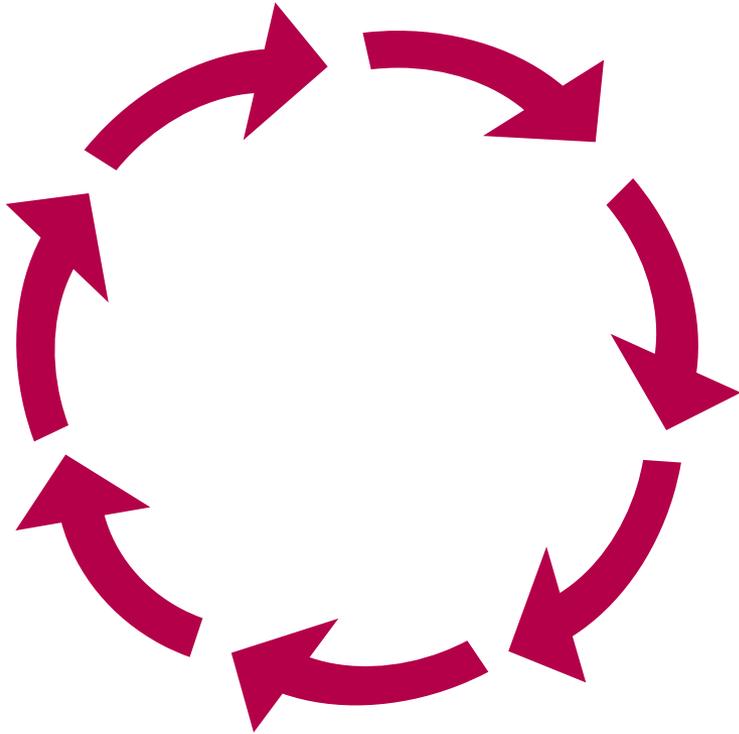


Weighting & Grading

- Can weight some criteria more than others
- Use zeros? Or not?
- Calculate grades logically, not mathematically
- Don't assess all outcomes or criteria at once



Using Your Assessment Results



Three choices:

- Change/improve the instruction
- Change/improve the assessment
- Celebrate!