



Welcome

Grab a name tag & find your seat!
(And try not to sit with close colleagues!)

Rubric Assessment of Information Literacy Skills

Spring 2011



The Institute of Museum and Library Services is the primary source of federal support for the nation's 123,000 libraries and 17,500 museums. The Institute's mission is to create strong libraries and museums that connect people to information and ideas.



School of Information Studies
SYRACUSE UNIVERSITY



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...

- 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?
- How can rubric assessment be used to improve IL instruction and services?
- How can rubric assessment increase student learning of IL skills?



The Need

- Librarians and disciplinary faculty need to be able to determine whether students acquire, use, and transfer information literacy skills.
 - May need to change/improve learning opportunities
 - May need to demonstrate instructional effectiveness
 - May want to celebrate successful learning
- What is information literacy?



The information literate student...

- **Determines** the nature and extent of **information needed**.
- **Accesses** needed information effectively and efficiently.
- **Evaluates** information and its sources critically.
- **Uses** information effectively to accomplish a specific purpose.
- Accesses and uses information **ethically and legally**.



Other Information Literacy Assessment Approaches

- Tests
 - SAILS (Standardized Assessment of Information Literacy Skills)
 - iCritical Thinking
- Performance Assessments
 - Without rubrics, often lack interrater reliability. Without reliability, open to validity problems too.



What's a Rubric?

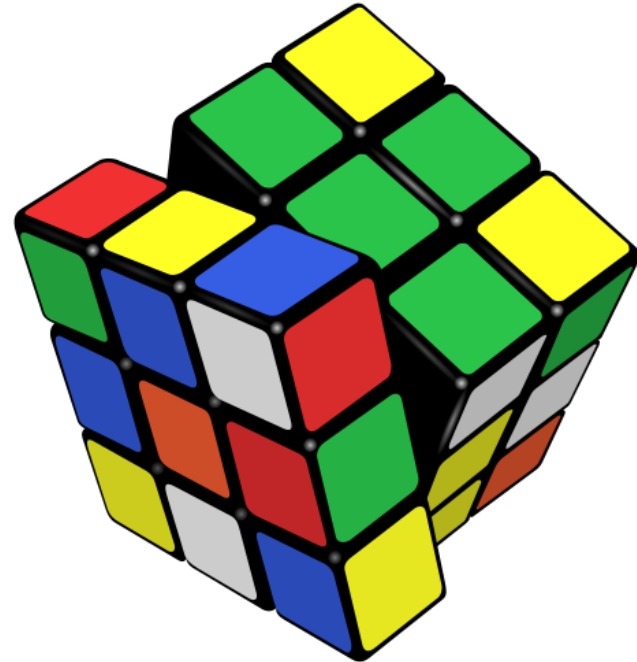
Rubrics...

- describe student learning in 2 dimensions
 1. parts, indicators, or *criteria* and
 2. *levels of performance*
- formatted on a grid or table
- employed to judge quality
- used to translate difficult, unwieldy data into a form that can be used for decision-making



Rubric Types

- Checklists
- Likert scales
- Full-model rubrics



Checklists

CHECKLIST

CRITERIA ONLY

	Observed	Not Observed
Eye Contact	√	
Gestures		√

Likert Scales

	0	1	2
Eye Contact	√		
Gestures		√	

	Novice	Proficient	Professional
Eye Contact	√		
Gestures		√	

LIKERT SCALE

CRITERIA

&

*PERFORMANCE
LEVELS*

*(numbers or
descriptive terms)*



Scoring Guides

	Exemplary	Comments
Eye Contact	Maintains sustained eye contact with the audience.	
Gestures	Gestures are used to emphasize talking points.	



**SCORING
GUIDE**
*CRITERIA,
TOP PERFORMANCE
LEVEL,
&
TOP PERFORMANCE
DESCRIPTION*



Full-Model Rubrics

	Beginning	Developing	Exemplary
Eye Contact	Does not make eye contact with the audience.	Makes intermittent eye contact with the audience.	Maintains sustained eye contact with the audience.
Gestures	Gestures are not used.	Gestures are used, but do not emphasize talking points.	Gestures are used to emphasize talking points.

FULL-MODEL RUBRIC

*CRITERIA,
PERFORMANCE
LEVELS,*

&

*PERFORMANCE
DESCRIPTIONS*



Fiction Writing (Analytic) Rubric

B, M, E

Details

Punctuation

Capitals

Spelling

Title



has beginning
has middle
has end

has lots of
details

All sentences
have punctuation.

have capitals:
-beg. of sentence
-I
-names

all the words
on the word wall
are spelled right

goes with
the story



has 1 or 2 parts,
but is missing
B, M, E

some details

some punctuation
marks

Some capitals

some spelling
is right

has a title
that doesn't
go with story



no beginning
no middle
no end

no details

no
punctuation

no capitals

nothing is
spelled right

no title

Criteria

1. “the conditions a [student] must meet to be successful” (Wiggins)
2. “the set of indicators, markers, guides, or a list of measures or qualities that will help [a scorer] know when a [student] has met an outcome” (Bresciani, Zelna and Anderson)
3. what to look for in [student] performance “to determine progress...or determine when mastery has occurred” (Arter)



Performance Levels

mastery, progressing, emerging,
satisfactory, marginal, proficient,
high, middle, beginning, advanced,
novice, intermediate, sophisticated,
competent, professional,
exemplary, needs work, adequate,
developing, accomplished,
distinguished



Performance Levels

If you want to force evaluative decisions, choose an even number of levels (usually 4).

If you want to have a middle ground, choose an odd number of levels (usually 3 or 5).

Choose a number that you can justify based on developmental service stages.



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



AAC&U's VALUE Rubric for Information Literacy



Purposes of VALUE Rubrics

- Integrate assessment & learning
- Assess student learning in context, authentically, focusing on performance of outcomes
- Prefer expert judgments of student learning over tests
- Provide basis for discussion and comparison over time or across programs



VALUE Info Lit Rubric

- Strengths
 - ACRL Standards
 - Basis for conversation
 - Demonstrates need for “in progress” assessments
- Weaknesses
 - Formatting
 - Performance level labels
 - Inconsistent wording
 - Lack of mutually exclusive categories
 - Lack of specific details needed for scoring student work (more holistic than analytic)



Adapting for Specific Classes & Assignments

	1	2	3	4
Describe the scope of information needed	Identify the scope of the research question to focus. Differentiate the scope. Types of information sources selected broadly relate to concept or research question.	Define the scope of the research question in broad categories. Use different but related types of information sources related to the concept or research question.	Define the scope of the research question in broad categories (such as relating concepts to broad to narrow) and use different but related types of information sources related to the concept or research question.	The ability defining the scope of the question to focus. The different categories concept. Types of information sources selected do not relate to concept or research question.
Access the needed information	Access information using effective, well-designed search strategies and search approaches. Information sources.	Access information using search of search strategies and search approaches. Information sources. Demonstrate ability to refine search.	Access information using search of search strategies and search approaches. Information sources. Demonstrate ability to refine search.	Access information carefully, actively and creatively. Use to relevant and quality information sources.
Evaluate information and its sources critically	Recognize (consciously and reflexively) and/or use and other assumptions and methods necessary for relevance of content when assessing a source.	Identify own and other assumptions and search relevant content when assessing a source.	Question own assumptions. Identify several relevant content when assessing a source. May be more aware of other assumptions that they use in their work.	Shows an ongoing awareness of general assumptions. Question their own and others' assumptions. Pages or clearly state content assumptions. Information sources.
Use information effectively to accomplish a specific purpose	Communicate, organize and synthesize information from sources to fully address a specific purpose, with depth and clarity.	Communicate, organize and synthesize information from sources. Selected purpose is addressed.	Communicate and organize information from sources. The information is not as polished, or is somewhat polished, as in the student's previous work fully addressed.	Communicate information from sources. The information is organized and is used appropriately throughout, often not all content is correctly paraphrased, etc., in the student's previous work.
Access and use information ethically and legally	Understand and control all of the following information use strategies: use of citation and references, direct or paraphrasing, summary or writing, using information to state that an idea is original or credit, distinguishing between common knowledge and ideas requiring attribution and demonstrating a full understanding of the ethical and legal practices in the use of published, copyrighted and/or proprietary information.	Understand and control most of the following information use strategies: use of citation and references, direct or paraphrasing, summary or writing, using information to state that an idea is original or credit, distinguishing between common knowledge and ideas requiring attribution and demonstrating a full understanding of the ethical and legal practices in the use of published, copyrighted and/or proprietary information.	Understand and control most of the following information use strategies: use of citation and references, direct or paraphrasing, summary or writing, using information to state that an idea is original or credit, distinguishing between common knowledge and ideas requiring attribution and demonstrating a full understanding of the ethical and legal practices in the use of published, copyrighted and/or proprietary information.	Understand and control use of the following information use strategies: use of citation and references, direct or paraphrasing, summary or writing, using information to state that an idea is original or credit, distinguishing between common knowledge and ideas requiring attribution and demonstrating a full understanding of the ethical and legal practices in the use of published, copyrighted and/or proprietary information.

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

Assignment on Your Campus

DIRECTIONS ONLY!

- Describe the assignment(s) that generated student artifacts, how the assignment was selected, why it was selected, etc.
- Identify the learning standards (ACRL, AAC&U, etc.) that apply to the rubric.
- Explain how students were made aware of the rubric, if they were.



Keep in mind...

- The rubric does not score discipline content; it scores information literacy skills.
- You can only score what you can see.



Rubric for Your Campus

REPLACE THIS CONTENT!!

- Add rubric.
- Use this version to do an initial explanation.
 - Criteria (rows)
 - Performance levels (columns)
 - Performance descriptors (what's in the cells)



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.



Think Aloud Process

DIRECTIONS ONLY, DELETE THIS SLIDE!

- Let raters read artifact silently. Wait.
- Articulate why you rated the artifact the way you did.
- Go row by row (criterion by criterion).
 - “I gave this artifact a “2” or “developing” on the first criterion because of X, Y, and Z.”
 - “I was tempted to give it a “1”, but then I realized that the student stated X, Y, and Z.”
- Be methodical and descriptive.
- Field questions from raters.



Thinking Aloud

What are appropriate scores for these examples?



Independent Scoring

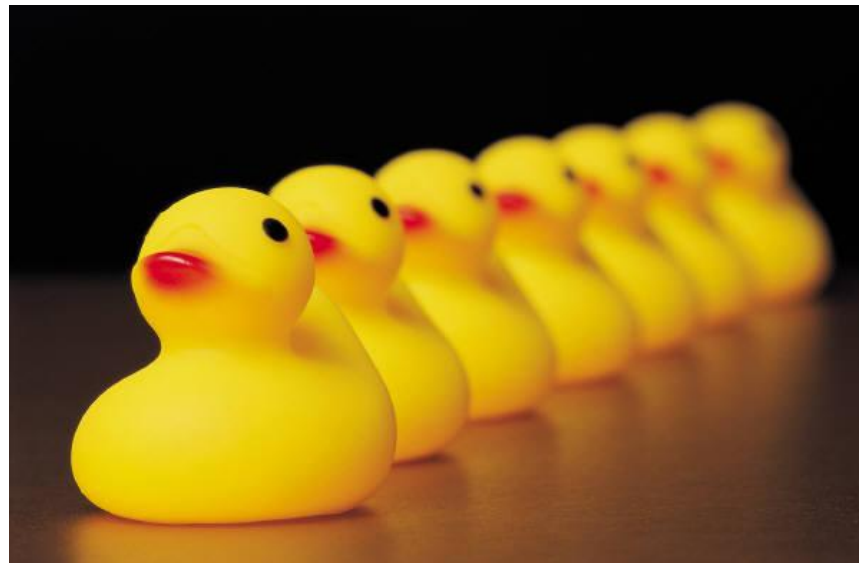
What scores would you assign to these examples?



Reconciling Differences

Where do we disagree?

*Can we come to
consensus?*





Extra Slides

Scoring Guides

	Exemplary	Comments
Eye Contact	Maintains sustained eye contact with the audience.	
Gestures	Gestures are used to emphasize talking points.	



**SCORING
GUIDE**
*CRITERIA,
TOP PERFORMANCE
LEVEL,
&
TOP PERFORMANCE
DESCRIPTION*

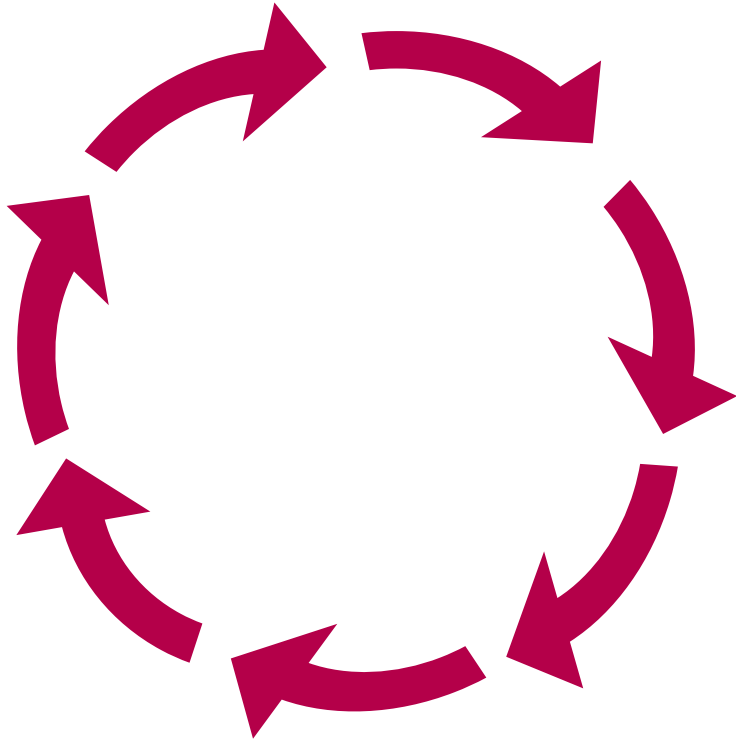


Weighting & Grading

- 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!



Reporting Assessment Results

- Internally
 - Improvements to instruction
 - Improvements to future assessments
- Professionally!
 - Conferences
 - Publications



Selected Readings

- 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.
- Oakleaf, Megan. "The Information Literacy Instruction Assessment Cycle: A Guide for Increasing Student Learning and Improving Librarian Instructional Skills." *Journal of Documentation*. 65.4. 2009.
- 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.
- Oakleaf, Megan and Lisa Hinchliffe. "Assessment Cycle or Circular File: Do Academic Librarians Use Information Literacy Assessment Data?" *Proceedings of the Library Assessment Conference*. Seattle, WA: Association of Research Libraries, 2008.