UNIVERSITY OF

Redlands

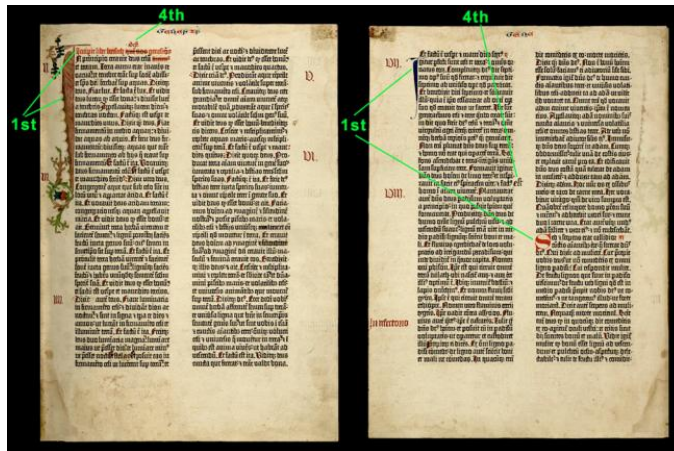EDUC 608: Class Session 3

Rubrics

Rod Goodyear

Origin of term "rubric"

Middle English *rubrike* red ocher, heading in red letters of part of a book, from Anglo-French, from Latin *rubrica,* from*rubr-, ruber* red First Known Use: 14th century

Rubrics: the handwritten titles, chapter headings, and instructions that are not part of the original text but are added to aid the reader in identifying these elements. Rubrications often appear in red to be easily distinguished from the text.

Rubric definition

"At its most basic, a rubric is a scoring tool that lays out the specific expectations for an assignment.

Rubrics divide an assignment into its component parts and provide a detailed description of what constitutes acceptable or unacceptable levels of performance for each of those parts."
(Stevens & Levi, 2005, p. 3)
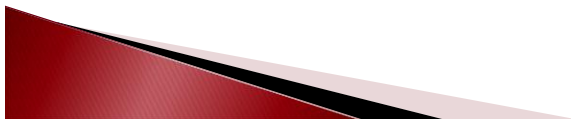
Benefits

- ◦ Improve students' end products and increase learning

- ◦ Assists with clearly communicating assignment expectations to students and teaching assistants

- ◦ focus the teacher to clarify his/her criteria in specific terms

- ◦ Improve consistency of grading (inter-rater reliability)

- ◦ Speed up grading

- ◦ Once a quality rubric is created it can be adapted to new situations or assignments

- ◦ provide benchmarks against which to measure and document progress

Take two cookies (A & B) and rate each

▸ First task – on a scale of 1 – 16

◦ 1 = awful   16 == terrific

How would you rate this cookie?

Now let's create a rubric to assess the cookies in a more reliable manner:

What dimensions do we use to evaluate the quality of chocolate chip cookies?

The rubric we developed as our class exercise may have looked different, but here is one example of a chocolate chip cookie-assessment rubric

	Delicious 4	Tasty 3	Edible 2	Not yet edible 1
# chips	Chips in every bite	75% chips	50% chips	Less than 50% chips
texture	Consistentlychewy	Chewy middle, crispy edges	Crunchy	Like a dog biscuit
color	Even golden brown	Brown with pale center	All brown Or all pale	Burned
richness	Buttery, high fat	Medium fat	Low-fat flavor	Nonfat flavor

RUBRIC COMPONENTS

- Task description

- Dimensions of activity or product

- Scale of measure with different levels

- Descriptions of different levels of performance

- Grid

– Stevens, D. & Levi, A. (2005). *Introduction to Rubrics*. Sterling, VA: Stylus Publishing

Rubric Components

TASK DESCRIPTION

Each student will write an essay either for or against the following statement: Medical marijuana should be legalized.

SCALE LEVELS

		Meets Criterion Fully (4)	Meets Criterion Minimally (2)	Does not Meet Criterion (0)
D I M E N S I O N S	Perspective	Explicitly acknowledges and develops other perspectives	Acknowledges the fact that there are different perspectives	Response is ignorant of other perspectives
	Analysis	Explicitly "connects the dots"	Sees that there are dots, but no coherency	No dots; no connection
	Vocabulary	Recognizes and explains relevant concepts	Recognizes relevant concepts, but does not clearly explain them	No articulation of relevant concepts
	Judgment	States conclusion with supporting evidence	States conclusion, but evidence not fully developed	Does not really come to a final conclusion

-- Adapted from Dr. Gerald Mozur, Lewis and Clark College.

RUBRIC CONSTRUCTION

▸ <u>Four-Stage Model:</u>
▸ Stage 1 – Reflecting

▸ Stage 2 – Listing

▸ Stage 3 – Grouping and Labeling

▸ Stage 4 – Application

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STAGE 1: Reflection

- Why did you create the assignment?

- Have you given this assignment before?

- How does the assignment relate to the rest of the course?

- What skills will students need to have or develop to succeed?

- What is the task assigned?

- What evidence can students provide to show they have accomplished what was expected of them?

- What would be the highest expectations for student performance...what does an exemplary product look like?

- What does the worst possible product look like (other than not turning in the assignment)?

STAGE 2: Listing

- At this stage the professor focuses on the details of the assignment and specific learning objectives.
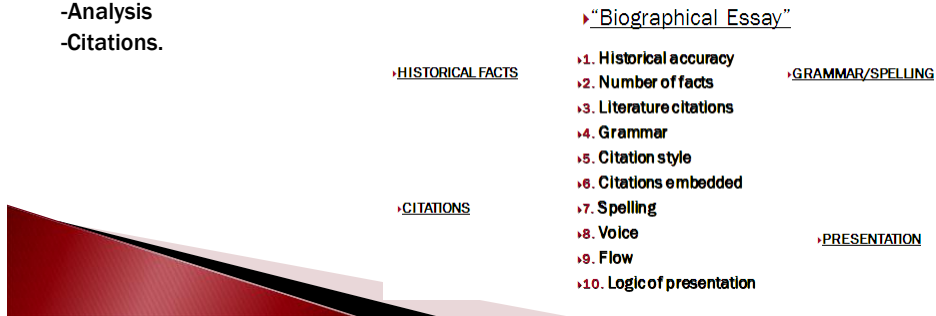
An example:

▸"Biographical Essay"

▸1. Historical accuracy	▸--- all facts accurate
▸2. Number of facts	▸--- 8 or more
▸3. Literature citations	▸--- 5 or more
▸4. Grammar	▸--- 3 or fewer errors
▸5. Citation style	▸--- APA
▸6. Citations embedded	▸--- All embedded
▸7. Spelling	▸--- No Misspellings
▸8. Voice	▸--- Always active
▸9. Flow	▸-- Easy to read
▸10. Logic of presentation	▸--- Order makes sense

STAGE 3: Grouping and Labeling

The professor groups similar expectations from stage 1 and 2. These will become your dimensions.

- Group together those expectations that are similar.
- Figure out what is common across each group and label it.
- The labels will become dimensions on the rubric.
- Make sure they are clear and neutral.
- Limit the length of these labels to one or just a few words such as:
  -Organization
  -Analysis
  -Citations.

▸"Biographical Essay"

▸HISTORICAL FACTS

▸1. Historical accuracy
▸2. Number of facts
▸3. Literature citations
▸4. Grammar
▸5. Citation style
▸6. Citations embedded
▸7. Spelling
▸8. Voice
▸9. Flow
▸10. Logic of presentation

▸GRAMMAR/SPELLING

▸CITATIONS

▸PRESENTATION

STAGE 4: Application

- At this final stage the professor applies the dimensions and descriptions from Stage 3 to the final form of the rubric.
- Use a grid format.
- The left column of the rubric grid will contain the labels for the groupings of performance expectations (dimensions).

Rubric for Biographical Essay

▸ Each student will write an essay on a famous person in American History.

	Meets Criterion Fully (4)	Meets Criterion Minimally (2)	Does not Meet Criterion (0)
Historical Facts	Eight or more facts are presented; all facts are accurate.		
Citations	Citations follow APA style; embedded in narrative; 5 or more.		
Grammar Spelling	No misspellings; 3 or fewer grammatical mistakes.		
Presentation	Always uses active voice; paragraphs flow smoothly; logical order of presentation.		

Rubric for Biographical Essay

▸ Each student will write an essay on a famous person in American History.

	Meets Criterion Fully (4)	Meets Criterion Minimally (2)	Does not Meet Criterion (0)
Historical Facts	Eight or more facts are presented; all facts are accurate.		Four or fewer facts presented; more than one is inaccurate.
Citations	Citations follow APA style; embedded in narrative; 5 or more.		Citations not APA style; not embedded in the narrative; 1 or fewer.
Grammar Spelling	No misspellings; 3 or fewer grammatical mistakes.		More than 5 misspellings; 7 or more grammatical mistakes.
Presentation	Always uses active voice; paragraphs flow smoothly; logical order of presentation.		Always uses passive voice; difficult to read; no logic to the order of presentation.

Rubric for Biographical Essay

▸ Each student will write an essay on a famous person in American History.

	Meets Criterion Fully (4)	Meets Criterion Minimally (2)	Does not Meet Criterion (0)
Historical Facts	Eight or more facts are presented; all facts are accurate.	Five to 7 facts presented; only one inaccuracy.	Four or fewer facts presented; more than one is inaccurate.
Citations	Citations follow APA style; embedded in narrative; 5 or more.	Most citations in APA style; most embedded in narrative; 2-4 citations.	Citations not APA style; not embedded in the narrative; 1 or fewer.
Grammar Spelling	No misspellings; 3 or fewer grammatical mistakes.	One to 4 misspellings; 4-6 grammatical mistakes.	More than 5 misspellings; 7 or more grammatical mistakes.
Presentation	Always uses active voice; paragraphs flow smoothly; logical order of presentation.	Mostly active voice; flow is usually good; logic of presentation usually understood.	Always uses passive voice; difficult to read; no logic to the order of presentation.

Two Basic Types of Rubric

Holistic rubric
Provides a single overall score for the assignment

Analytic rubric
Provides separate scores for specific components to be measured.

Holistic Rubric

...does not list separate levels of performance for each criterion. Instead, a holistic rubric assigns a level of performance by assessing performance across multiple criteria as a whole.

Research Rubric

3 - Excellent Researcher

- included 10-12 sources
- no apparent historical inaccuracies
- can easily tell which sources information was drawn from
- all relevant information is included

2 - Good Researcher

- included 5-9 sources
- few historical inaccuracies
- can tell with difficulty where information came from
- bibliography contains most relevant information

1 - Poor Researcher

- included 1-4 sources
- lots of historical inaccuracies
- cannot tell from which source information came
- bibliography contains very little information

From: http://jfmueller.faculty.noctrl.edu/toolbox/rubrics.htm

Analytic Rubric

... articulates levels of performance for *each* criterion so the teacher can assess student performance on each criterion.

Research Rubric

Criteria		1	2	3
Number of Sources	×1	1-4	5-9	10-12
Historical Accuracy	×3	Lots of historical inaccuracies	Few inaccuracies	No apparent inaccuracies
Organization	×1	Can not tell from which source information came	Can tell with difficulty where information came from	Can easily tell which sources info was drawn from
Bibliography	×1	Bibiliography contains very little information	Bibliography contains most relevant information	All relevant information is included

From: http://jfmueller.faculty.noctrl.edu/toolbox/rubrics.htm

Research Rubric

3 - Excellent Researcher
- included 10-12 sources
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- included 1-4 sources
- lots of historical inaccuracies
- cannot tell from which source information came
- bibliography contains very little information

Holistic Rubric: When to Use
- quick judgments that carry little weight in evaluation
- evaluated performance criteria cannot be easily separated

Analytic Rubric: When to use:
- when there are many dimensions to consider
- when dimensions are weighted differently

Research Rubric

Criteria		1	2	3
Number of Sources	x1	1-4	5-9	10-12
Historical Accuracy	x3	Lots of historical inaccuracies	Few inaccuracies	No apparent inaccuracies
Organization	x1	Can not tell from which source information came	Can tell with difficulty where information came from	Can easily tell which sources info was drawn from
Bibliography	x1	Bibliography contains very little information	Bibliography contains most relevant information	All relevant information is included

When measurement people talk about reliability, what do they mean?

Consistency

Consistency across time: When a person takes a "test" of some sort at two different points in time, how consistent are the results? (most useful for relatively stable traits like intelligence or personality; less so for achievement)

Consistency across raters: When two or more people rate the same thing (test, etc), how consistent are their scores?

Birth of the modern rubric

Stemmed from work at the Educational Testing Service (ETS) by Deiderich et al (see citation below)

"53 distinguished readers, representing six different fields [including] college English teachers, social scientists, natural scientists, writers and editors, lawyers, and business executives" graded 300 papers, being asked to use "whatever hunches, intuitions, or preferences you normally use in deciding that one paper is better than another"

They sorted the papers into 9 piles in order of "general merit"

❑94% of the papers received either seven, eight, or nine of the nine possible grades;

❑no paper received less than five different grades;

❑the median correlation across raters was .31

Deiderich, P., J. French and S.T. Carlton. 1961. Factors in the judgment of writing quality. Princeton: Educational Testing Service.

Rubrics should increase inter-rater reliability: Do they?

Example for our doctoral program: Each qualifying exam was graded blindly – using a rubric with 20 points possible – by three raters. These are data from 2010:

Student qualifying examination scores by faculty reader: 2010

	Faculty Member								
	1	2	3	4	5	6	7	**M**	**SD**
Student 1		14		11			15	13.33	2.08
Student 2		13			15		14	14.00	1.00
Student 3	12		11.5			10.5		11.33	0.76
Student 4			18.5		16		11	15.17	3.82
Student 5		12		20			15	15.67	4.04
Student 6	13.5		14.3		17.5			15.10	2.12
Student 7	14.5		14			16.5		15.00	1.32
Student 8	14			17		16.5		15.83	1.61
Student 9		14		17		15		15.33	1.53
Student 10		15		20			16	17.00	2.65
Student 11	18			20		18.5		18.83	1.04
Student 12		14		19		15		16.00	2.65
Student 13	19		17			17.5		17.83	1.04
Student 14	13		16.5		18			15.83	2.57
Student 15		17			15		17	16.33	1.15
Student 16		12			9		12	11.00	1.73
Mean	14.86	13.88	15.30	17.71	15.08	15.64	14.29	15.23	
SD	2.63	1.64	2.52	3.25	3.23	2.59	2.14		2.70