

FWR PRE-POST WRITING ASSESSMENT OCTOBER 2009

In summer 2008, UVA's Office of Institutional Assessment and Studies (IAS) began coordinating the assessment of undergraduate writing competence University-wide. Recognizing the decentralized nature of curriculum and instruction at the University, individual schools and some programs were invited to design assessments of student writing that would address their own purposes and goals. The ENWR program proposed an assessment of students' writing to investigate strengths and weaknesses both at the beginning and end of the ENWR writing course—for most students, a one-semester course but for some a two-semester sequence¹. Student papers were assessed on learning outcomes developed by ENWR faculty. A descriptive scoring rubric was designed to assess student performance on the learning outcomes, and ENWR faculty and graduate student instructors used the rubric to evaluate the papers in a workshop facilitated by IAS. The results were tabulated by IAS and this report presents those results, as well as a detailed description of the methodology. The rubric and details about inter-rater reliability follow in two appendices.

Methodology

In September and December 2008, writing assignments were collected from a stratified random sample of ENWR students in ENWR 110 and ENWR 210. From these, 50 students' papers were randomly selected from the beginning-of-course group and matched to their papers at the end-of-course. The papers were assessed using a rubric that outlined the following sixteen learning outcomes (full descriptions of the criteria for each learning outcome can be found in the copy of the rubric, Appendix A):

1. Motivation – Is there a canonical problem statement? (Status Quo, Destabilizing Moment, Costs & Consequences)
2. Motivation – If not, does the introduction state a question that motivates the readers to read on?
3. Motivation – Point (claim) first or point last?
4. Core Elements of Argument – Does the paper have a clear claim that responds to the question?
5. Core Elements of Argument – Are the reasons easily identifiable?
6. Core Elements of Argument – Do the reasons support the claim?
7. Core Elements of Argument – Is the evidence sufficient?
8. Core Elements of Argument – Is the evidence appropriate?
9. Core Elements of Argument – Is the evidence reliable?
10. Core Elements of Argument – Is the evidence properly cited?
11. Interacting with Readers – Does the text acknowledge other points of view in Common Ground?
12. Interacting with Readers – Does the text acknowledge other points of view in Acknowledgement and Response?

¹ 996 students were enrolled in ENWR in fall 2008, 132 of those were enrolled in ENWR 105/106. Seven student papers from ENWR 105/106 were sampled but not assessed. Because of the small percentage of students who take this sequence, we do not feel that the results would be significantly affected.

13. Interacting with Readers – Does the text approach readers with a dialogic or combative stance?
14. Style – Does the paper use appropriately academic language?
15. Style – Are sentences clear and direct?
16. Style – Does the paper flow?

The assessment was conducted in January 2009 with one ENWR faculty rater and six ENWR graduate student instructor raters. Two papers were read and evaluated during a “norming” session in an effort to ensure that all raters were applying similar standards on all learning outcomes. Seven learning outcomes were rated on a scale of one to four, with a four representing the highest achievement and a one representing the lowest. Each performance level from one to four was defined with specific performance criteria. Nine learning outcomes were rated dichotomously with a zero representing the absence of the skill and a one representing the presence of the skill.

All student papers were de-identified to protect student confidentiality. Each paper was scored by two different raters and final scores were the average of the two ratings.

Rater bias was controlled by randomly assigning papers to raters and de-identifying all student papers. Raters were also blind to whether they were rating an end-of-course or beginning-of-course paper. The research design is a true pre-post design which allows a look at students’ writing abilities at the beginning of the semester and at the end while controlling for individual variations in abilities.

Inter-rater Reliability

Inter-rater reliability is a measure of how much consensus there is in the ratings made by different evaluators. The intra-class coefficient (ICC) was used to measure the reliability of the raters in this assessment because the ICC takes into account the differences in ratings for individual segments along with the overall correlation between raters. The ICC ranges from zero to one, with zero indicating little or no agreement and one indicating perfect agreement between raters. Overall, the inter-rater reliability ranged from .01 to 0.62, indicating that raters did not often mark each individual paper with the *exact* same score for each learning outcome. The reliability fluctuated based on the learning outcomes, with some learning outcomes being rated more consistently than others; inter-rater reliability is generally lower with dichotomous scales (for a complete listing of reliabilities, see Appendix B). There was also a difference in rating style among the raters; some raters were more critical than others. Other reasons for lower reliability include the high number of raters to papers (7 raters for 100 papers) and the fact that this was a first-time assessment. The advantage to having more raters is that it increases buy-in for, and experience with, assessment.

The raw agreement among raters presents a more easily interpreted view of the raters’ agreement. On average, for the learning outcomes rated zero or one, approximately 69% of the ratings were agreements between the two raters. On average, for the learning outcomes rated on a 1-4 scale, approximately 42% of the ratings were exact matches between rater 1 and rater 2, 47% of ratings differed by only one point, and only 11% of ratings differed by more than one point. In order to correct for the ratings that differed by a point or more, all final scores on each learning outcome are the average score of both raters. Thus rater differences were reduced. Nevertheless, future assessment should include a more extended norming session, with more than two papers and perhaps an additional “mini” norming session midway through the process.

Results

The comparison of mean scores for beginning-of-course papers to end-of course papers are presented in Table 1. The percentage of papers rated 0-1 or 1-4 for each learning outcome are presented in Tables 2 and 3.

Table 1. Beginning-of-Course (Pre) vs. End-of-Course (Post)

		Pre	Post	
[Motivation] Is there a canonical problem statement? (Status Quo, Destabilizing Moment, Costs & Consequences)	YES	8%	38%	
	YES/NO	38%	30%	
	NO	54%	32%	
	Mean	0.27	0.53	**
[Motivation] If not, does the introduction state a question that motivates readers to read on?	YES	54%	78%	
	YES/NO	34%	22%	
	NO	12%	0%	
	Mean	0.71	0.89	**
[Motivation] Point (claim) first or point last?	FIRST	82%	82%	
	FIRST/LAST	16%	16%	
	LAST	2%	2%	
[Core Elements of Argument] Does the paper have a clear claim that responds to the question?	YES	40%	60%	
	YES/NO	42%	32%	
	NO	18%	8%	
	Mean	0.61	0.76	*
[Core Elements of Argument] Are the reasons easily identifiable?	YES	40%	46%	
	YES/NO	34%	40%	
	NO	26%	14%	
	Mean	0.57	0.66	
[Core Elements of Argument] Do the reasons support the claim?	YES	50%	46%	
	YES/NO	36%	38%	
	NO	14%	16%	
	Mean	0.68	0.65	
[Core Elements of Argument] Is the evidence sufficient?		2.21	2.68	**
[Core Elements of Argument] Is the evidence appropriate?		2.42	2.69	*
[Core Elements of Argument] Is the evidence reliable?		2.38	2.79	**
[Core Elements of Argument] Is the evidence properly cited?		2.30	2.76	**
[Interacting with Readers] Does the text acknowledge other points of view in Common Ground?	YES	34%	52%	
	YES/NO	36%	34%	
	NO	30%	14%	
	Mean	0.52	0.69	*

[Interacting with Readers] Does the text acknowledge other points of view in Acknowledgement and Response?	YES	34%	52%	
	YES/NO	36%	34%	
	NO	30%	14%	
	Mean	0.52	0.69	*
[Interacting with Readers] Does the text approach readers with a dialogic or combative stance?		2.45	2.74	*
[Style] Does the paper use appropriately academic language?	YES	70%	92%	
	YES/NO	30%	8%	
	NO	0%	0%	
	Mean	0.85	0.96	**
[Style] Are the sentences clear and direct? (Characters and Actions)		2.96	3.02	
[Style] Does the paper flow? (Old-to-New, Topic Strings)		2.58	2.77	

* $p < .05$, ** $p < .01$

Table 2. Percentage of Ratings by Score for Each Learning Outcome - Beginning-of-Course

	0.00	1.00	2.00	3.00	4.00
Motivation - Is there a canonical problem statement?	73%	27%			
Motivation - If not, does the introduction state a question that motivates the reader to read on?	29%	71%			
Motivation - Point (claim) first or point last?	10%	90%			
Core Elements of Argument - Does the paper have a clear claim that responds to the question?	39%	61%			
Core Elements of Argument - Are the reasons easily identifiable?	43%	57%			
Core Elements of Argument - Do the reasons support the claim?	32%	68%			
Core Elements of Argument - Is the evidence sufficient?		20%	44%	31%	5%
Core Elements of Argument - Is the evidence appropriate?		11%	45%	35%	9%
Core Elements of Argument - Is the evidence reliable?		17%	40%	31%	12%
Core Elements of Argument - Is the evidence properly cited?		26%	31%	30%	13%
Interacting with Readers - Does the text acknowledge other points of view in Common Ground?	48%	52%			
Interacting with Readers - Does the text acknowledge other points of view in Acknowledgement and Response?	48%	52%			
Interacting with Readers - Does the text approach readers with a dialogic or combative stance?		13%	37%	42%	8%
Style - Does the paper use appropriately academic language?	15%	85%			
Style - Are the sentences clear and direct? (Characters and Actions)		0%	21%	68%	11%
Style - Does the paper flow? (Old-to-New, Topic Strings)		2%	47%	47%	4%

Table 3. Percentage of Ratings by Score for Each Learning Outcome - End-of-Course

	0.00	1.00	2.00	3.00	4.00
Motivation - Is there a canonical problem statement?	47%	53%			
Motivation - If not, does the introduction state a question that motivates the reader to read on?	11%	89%			
Motivation - Point (claim) first or point last?	10%	90%			
Core Elements of Argument - Does the paper have a clear claim that responds to the question?	24%	76%			
Core Elements of Argument - Are the reasons easily identifiable?	34%	66%			
Core Elements of Argument - Do the reasons support the claim?	35%	65%			
Core Elements of Argument - Is the evidence sufficient?		6%	38%	38%	18%
Core Elements of Argument - Is the evidence appropriate?		5%	36%	44%	15%
Core Elements of Argument - Is the evidence reliable?		4%	32%	45%	19%
Core Elements of Argument - Is the evidence properly cited?		10%	26%	42%	22%
Interacting with Readers - Does the text acknowledge other points of view in Common Ground?	31%	69%			
Interacting with Readers - Does the text acknowledge other points of view in Acknowledgement and Response?	31%	69%			
Interacting with Readers - Does the text approach readers with a dialogic or combative stance?		4%	34%	46%	16%
Style - Does the paper use appropriately academic language?	4%	96%			
Style - Are the sentences clear and direct? (Characters and Actions)		0%	20%	60%	20%
Style - Does the paper flow? (Old-to-New, Topic Strings)		6%	31%	45%	18%

Appendix A

ENWR Writing Assessment Rubric - January 2009

1 [Motivation] Is there a canonical problem statement? (Status Quo, Destabilizing Moment, Costs & Consequences)

1 Yes (If this answer is "Yes," please automatically mark "Yes" for rubric item 2.)

0 No (If this answer is "No," please read and respond to rubric item 2.)

2 [Motivation] If not, does the introduction state a question that motivates the reader to read on?

1 Yes

0 No

3 [Motivation] Point (claim) first or point last?

1 First

0 Last

4 [Core Elements of Argument] Does the paper have a clear claim that responds to the question?

1 Yes

0 No

5 [Core Elements of Argument] Are the reasons easily identifiable?

1 Yes

0 No

6 [Core Elements of Argument] Do the reasons support the claim?

1 Yes

0 No

7 [Core Elements of Argument] Is the evidence sufficient?

4 Entirely sufficient

3 Mostly sufficient

2 Somewhat sufficient

1 Insufficient

8 [Core Elements of Argument] Is the evidence appropriate?

4 Entirely appropriate

3 Mostly appropriate

2 Somewhat appropriate

1 Inappropriate

9 [Core Elements of Argument] Is the evidence reliable?

4 Entirely reliable

3 Mostly reliable

2 Somewhat reliable

1 Unreliable

10 [Core Elements of Argument] Is the evidence properly cited?

- 4 All evidence properly cited
- 3 Most evidence properly cited
- 2 Some evidence properly cited
- 1 No evidence properly cited

11 [Interacting with Readers] Does the text acknowledge other points of view in Common Ground?

- 1 Yes
- 0 No

12 [Interacting with Readers] Does the text acknowledge other points of view in Acknowledgment and Response?

- 1 Yes
- 0 No

13 [Interacting with Readers] Does the text approach readers with a dialogic or combative stance?

- 4 Dialogic
- 3 Mostly dialogic
- 2 Mostly combative
- 1 Combative

14 [Style] Does the paper use appropriately academic language?

- 1 Yes
- 0 No

15 [Style] Are the sentences clear and direct? (Characters and Actions)

- 4 Sentences always clear and direct
- 3 Most sentences clear and direct
- 2 Sentences frequently unclear or indirect
- 1 Sentences pervasively unclear or indirect

16 [Style] Does the paper flow? (Old-to-New, Topic Strings)

- 4 Excellent information flow
- 3 Good information flow
- 2 Fair information flow
- 1 Poor information flow

Appendix B

Inter-Rater Reliability

	Beginning-of-Course	End-of-Course
Motivation - Is there a canonical problem statement?	0.09	0.57
Motivation - If not, does the introduction state a question that motivates the reader to read on?	0.36	0.01
Motivation - Point (claim) first or point last?	0.23	0.21
Core Elements of Argument - Does the paper have a clear claim that responds to the question?	0.22	0.21
Core Elements of Argument - Are the reasons easily identifiable?	0.49	0.23
Core Elements of Argument - Do the reasons support the claim?	0.35	0.29
Core Elements of Argument - Is the evidence sufficient?	0.01	0.25
Core Elements of Argument - Is the evidence appropriate?	0.41	0.54
Core Elements of Argument - Is the evidence reliable?	0.43	0.51
Core Elements of Argument - Is the evidence properly cited?	0.59	0.62
Interacting with Readers - Does the text acknowledge other points of view in Common Ground?	0.46	0.34
Interacting with Readers - Does the text acknowledge other points of view in Acknowledgement and Response?	0.46	0.34
Interacting with Readers - Does the text approach readers with a dialogic or combative stance?	0.17	0.45
Style - Does the paper use appropriately academic language?	0.01	0.01
Style - Are the sentences clear and direct? (Characters and Actions)	0.02	0.46
Style - Does the paper flow? (Old-to-New, Topic Strings)	0.12	0.38
Mean	0.28	0.34