

**Assessment Brief DRAFT**  
**Written Communication—AAC&U Values Rubric Findings**  
**Prepared for AOAC, Fall 2010**

**Part I: Executive Summary**

**A. General Education Outcome**

Students will be able to demonstrate effective written communication skills appropriate to any academic discipline. The focus of this brief will be on the written communication component of foundations for lifelong learning.

**B. Background**

The purpose is to seek information to share with faculty and administrators to enhance opportunities for student learning experiences. AOAC members found the American Association of Colleges and Universities (AAC&U) new “Values Rubrics” to be useful tools for assessing sample work.

In Spring 2010, over 140 student artifacts were collected from 12 different courses with permission from faculty and students. Thirty of the artifacts were randomly selected from the 140 submitted artifacts. Of the artifacts randomly selected, 4 were from 100-level courses, 9 were from 200-level courses, 10 were from 300-level courses, and 5 were from 400-level courses.

**C. Major Findings**

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- Intraclass correlation coefficient and Cronbach’s Alpha levels for the rubric for written communication were .66 and .91 respectively.

**D. Conclusions**

- A respectable level of interrater reliability and rater consistency were achieved, and in general, the rubric appears to be a sound method of assessment.

## Part II: Assessment Brief

### A. Introduction

#### 1. Background

One of the Objectives for General Education at Millersville University is to create and strengthen foundations for lifelong learning. One of the components of this objective is written communication skills in students, which is evidenced by “the ability to find appropriate sources of information,” “a clear presentation of ideas” in written form, and the “use of effective communication.”

In Spring 2010, the Faculty Senate Academic Outcomes Assessment Committee (AOAC) designed a process to assess general education competencies (also known as University Outcomes) as they aligned with general education objectives. This new process evolved after a review of the prior general education assessment strategies resulted in the need to enhance triangulation of evidence and to utilize more direct evidence of student learning such as student work from courses. The purpose is to seek information to share with faculty and administrators to enhance opportunities for student learning experiences. AOAC members found the American Association of Colleges and Universities (AAC&U) new “Values Rubrics” to be useful tools for assessing sample work.

This assessment project is approved by Millersville University’s Institutional Review Board (IRB).

#### 2. Problem Statement

AOAC members want to:

- i. explore the feasibility of the AAC&U Values Rubrics, specifically, written communication, and how it informs the respective student learning outcome; and
- ii. develop and better understanding of how well Millersville students demonstrate written communication in various course levels in their educational experience.

#### 3. Justification

AOAC with support of Planning, Assessment and Analysis has access to indirect evidence of students’ perceptions of their development of written communication skills (NSSE) and nationally-normed analytical writing instruments (CLA ). Little evidence has been collected of actual student work to inform our understanding of written communication. In addition, the nationally-normed instruments are expensive and difficult to gain reasonable student response rates. The use of direct evidence collected from purposive sampling of courses provides an opportunity to explore student learning experiences at Millersville and triangulate that information with other measures of the outcome.

**B. Information Source**

In order to test the Written Communication rubric, written papers were collected from sections of Biology, Business, Chemistry, Mathematics, Music, Psychology, and First Year Seminar classes in the spring semester of 2010. Papers of students who signed the consent forms were coded (n = 140).

**C. Major Findings**

**1. Data Summary**

Intraclass Correlation Coefficient and Cronbach’s Alpha levels for the rubric were tested on each of the five constructs for the written papers. The number of observed scores and the mean score are also included in the table below for each construct. The second table includes a comparison of means scores among construct and course level as identified by the course number from which the work was done. The third shows the changes of means scores for each increase of course level, examining if the constructs change over students’ progression through their program.

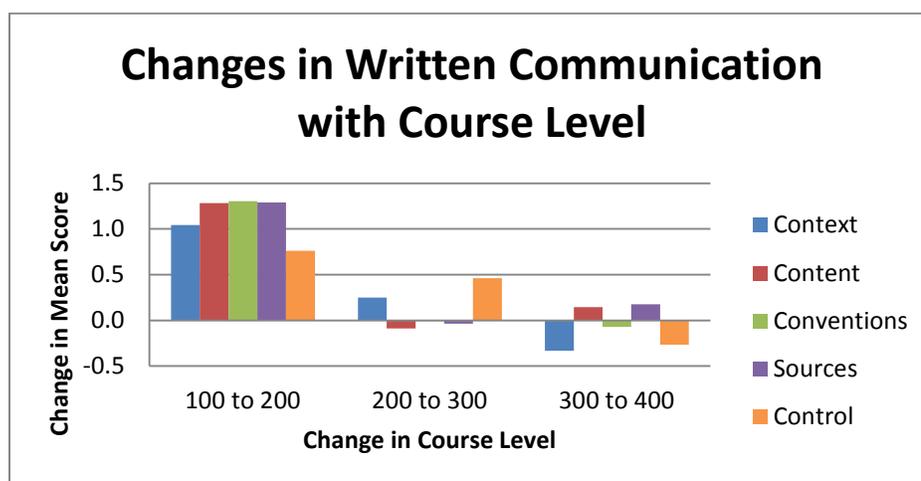
**Table 1: Written Communication Mean Scores and Reliability by Construct**

	<b>Number of Scores</b>	<b>Mean Score</b>	<b>Intraclass Correlation</b>	<b>Cronbach’s Alpha</b>
<b>Context of and Purpose for Writing</b>	150	2.4	.61	.89
<b>Content Development</b>	150	2.1	.65	.90
<b>Genre and Disciplinary Conventions</b>	150	2.2	.72	.93
<b>Sources and Evidence</b>	135	1.7	.67	.91
<b>Control of Syntax and Mechanics</b>	150	2.2	.62	.89
<b>Overall</b>	<b>735</b>	<b>2.1</b>	<b>.66</b>	<b>.91</b>

**Table 2: Written Communication Mean Scores by Course Level and Construct**

	Course Level			
	100	200	300	400
Context of and Purpose for Writing	1.4	2.4	2.7	2.4
Content Development	1.1	2.3	2.2	2.4
Genre and Disciplinary Conventions	1.1	2.4	2.4	2.3
Sources and Evidence	0.6	1.9	1.9	2.0
Control of Syntax and Mechanics	1.4	2.1	2.6	2.3
<b>Overall</b>	<b>1.1</b>	<b>2.2</b>	<b>2.3</b>	<b>2.3</b>

**Table 3: Changes in Written Communication Mean Scores with Increasing Course Level**



*\*Note that only one course was classified as a 100 level course*

## 2. Discussion

- A Cronbach’s Alpha reliability coefficient of .80 or higher is considered “good” in most social science research situations; this value is “used to rate the internal consistency (homogeneity) or the correlation of the items in a test.” The intraclass correlation coefficient is “used to measure inter-rater reliability for two or more raters,” and a value greater than .60 is considered “acceptable.” In using and testing this rubric, the five raters were able to achieve respectable levels of interrater reliability, and the rubric appears to be sound.

- There were no constructs that were notably weaker than the others in terms of reliability. If it is felt that intraclass correlation coefficients for “Context of and Purpose for Writing” and “Control of Syntax and Mechanisms” are too low, it might be helpful to revise these two sections of the rubric, providing greater clarity of what is being assessed and greater distinction between the levels of scoring.
- It was not the aim of this study to examine the current levels of written communication skills of students. However, if they were to be analyzed in the future, it is recommended that more than one course be used in each class level, since the largely picture-based assignment in the only 100 level course provided an unfairly low average score for that classification. It might also be noted that “Sources and Evidence” was the only construct to always increase as course level progressed.
- Three student artifacts were not rated on the construct “Sources and Evidence,” and these were each from a MATH 310 course which did not require the use of outside sources. If this rubric will be use for assessment in the classroom, it may have to be adjusted for certain departments, courses, or projects depending on the scope of the work.
- The mean scores which quantify the level of students’ written communication skills would be most helpful if there were goals and clearer meaning to the numeric result. If the rubric will be used for actual assessment in courses, it is recommended that the numerical scores be associated with levels of competence that have relevant meaning.

### **3. Conclusion**

- If this rubric is intended for usage in the university, it is suggested that certain constructs be clarified and that stronger connections be made between numeric scores and course-specific meaning.
- Once the final version of this rubric is complete, it should be available to interested faculty to be used for written communication assessment beyond the courses examined here, and faculty should be trained how to use the rubric.

## **Part III: Appendices**

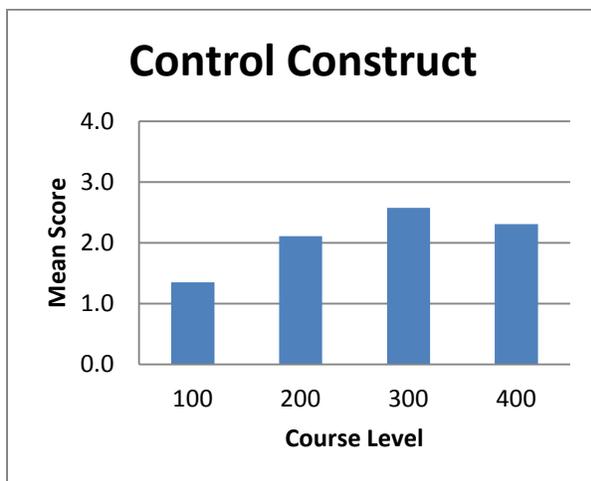
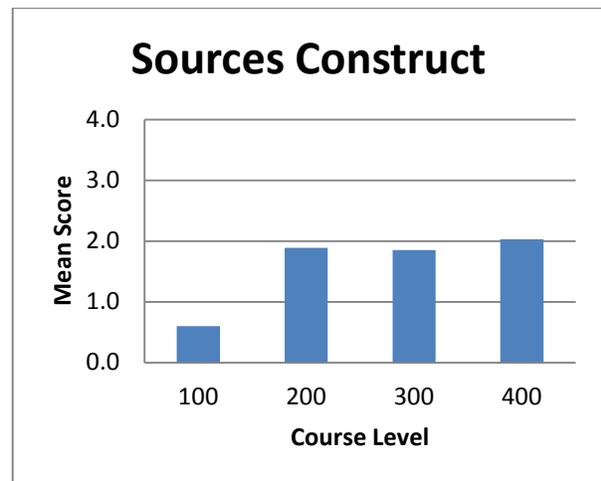
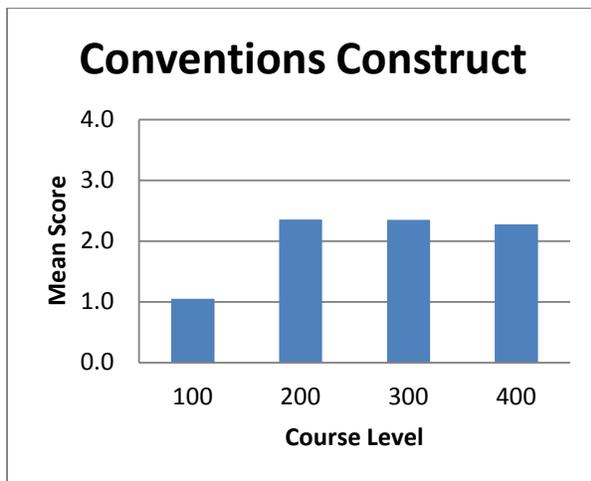
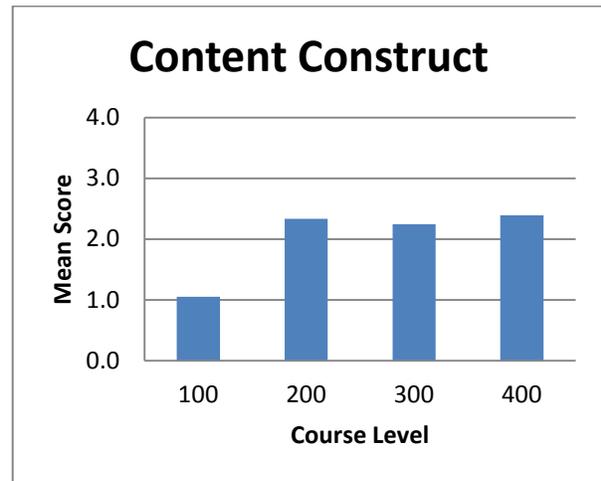
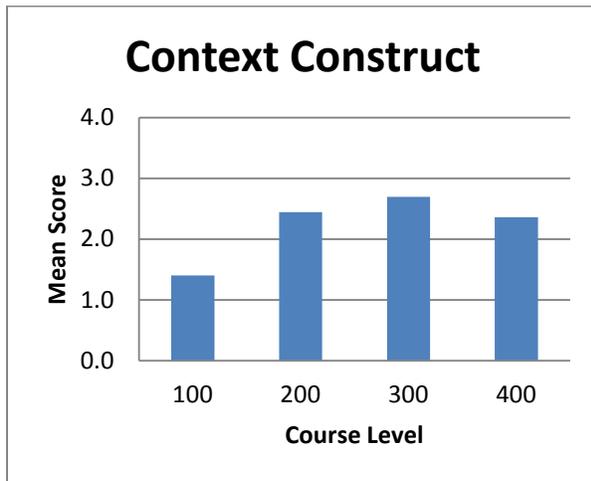
Page 6	Written Communication Assessment Rubric
Page 8-9	Additional Data, Figures, and Tables
Page 10	Glossary of Statistical Terms

# WRITTEN COMMUNICATION RUBRIC FOR ASSESSMENT OF STUDENT WORK (AAC&U VALUES RUBRIC)

	Capstone 4	Milestones		Benchmark 1
		3	2	
<b>Context of and Purpose for Writing</b> <i>Includes considerations of audience, purpose, and the circumstances surrounding the writing task(s).</i>	Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.	Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).	Demonstrates awareness of context, audience, purpose, and to the assigned tasks(s) (e.g., begins to show awareness of audience's perceptions and assumptions).	Demonstrates minimal attention to context, audience, purpose, and to the assigned tasks(s) (e.g., expectation of instructor or self as audience).
<b>Content Development</b>	Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding, and shaping the whole work.	Uses appropriate, relevant, and compelling content to explore ideas within the context of the discipline and shape the whole work.	Uses appropriate and relevant content to develop and explore ideas through most of the work.	Uses appropriate and relevant content to develop simple ideas in some parts of the work.
<b>Genre and Disciplinary Conventions</b> <i>Formal and informal rules inherent in the expectations for writing in particular forms and/or academic fields (please see glossary).</i>	Demonstrates detailed attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task (s) including organization, content, presentation, formatting, and stylistic choices	Demonstrates consistent use of important conventions particular to a specific discipline and/or writing task(s), including organization, content, presentation, and stylistic choices	Follows expectations appropriate to a specific discipline and/or writing task(s) for basic organization, content, and presentation	Attempts to use a consistent system for basic organization and presentation.
<b>Sources and Evidence</b>	Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing	Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.	Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.	Demonstrates an attempt to use sources to support ideas in the writing.
<b>Control of Syntax and Mechanics</b>	Uses graceful language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.	Uses straightforward language that generally conveys meaning to readers. The language in the portfolio has few errors.	Uses language that generally conveys meaning to readers with clarity, although writing may include some errors.	Uses language that sometimes impedes meaning because of errors in usage.



Figures 1-5: Scores for Written Communication Constructs by Course Level



*\*Note that only one course was classified as a 100 level course*

Table 4: Written Communication Score Statistics by Construct

	Context and Purpose	Content Development	Genre Conventions	Sources & Evidence	Control of Syntax & Mechanics	Overall
<b>Number of Scores</b>	150	150	150	135	150	<b>735</b>
<b>Mean Score</b>	2.4	2.1	2.2	1.7	2.2	<b>2.1</b>
<b>Standard Error of Mean</b>	0.06	0.06	0.06	0.06	0.06	<b>0.03</b>
<b>Standard Deviation</b>	0.73	0.77	0.79	0.75	0.75	<b>0.78</b>
<b>Intra-Class Correlation</b>	0.61	0.65	0.72	0.67	0.62	<b>0.66</b>
<b>Cronbach's Alpha</b>	0.89	0.90	0.93	0.91	0.89	<b>0.91</b>

## Glossary of Statistical Terms

**Mean** – the average score

**Variance** – a measurement of how much (far) the scores vary around the mean score

**Standard Deviation** – the square root of the variance

- Measures the same thing as variance: how far scores are from the mean score

**Standard Error of the Mean** – a measurement of how much the group mean scores vary around the total mean score (the standard deviation of the group means)

### **Interrater Reliability/Agreement**

- A measure of consistency and usefulness of the rubric
- The extent to which independent raters agree on a rubric score and to which rubric scores are consistent across raters
- In this assessment, measured by Intraclass Correlation Coefficient and Cronbach's Alpha

### **Intraclass Correlation Coefficient (ICC)**

- A measure of interrater reliability that describes how strongly scores from the same rater resemble each other. It is a value from 0 (no rater reliability) to 1 (complete rater reliability).
- Mathematically, it's the proportion of the total variance that's due to variability between raters
- Can also be interpreted as a measure of between group differences or within group similarity

### **Cronbach's Alpha**

- A specific type of ICC that is test of internal consistency (ranges on same scale as ICC)
- Measures how well a set of raters measure a single, latent (covert) construct
- Estimates how strongly the score obtained from the actual panel of the raters correlates with the score that would have been obtained from another random sample of raters