



Office of Institutional Research

To: Scholarship Action Group
CC: Curriculum Committee & ESIMT
From: Darby Hiller
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Subject: Communications Artifact Analysis (Spring 2006)

Executive Summary

In May 2006, 22 faculty and staff scored 247 Communications artifacts over two days to measure performance on the Communications general education outcome.

Key findings:

- Strongest communications skills: identifying the main idea and demonstrating an awareness of audience
- Weakest communications skill: supporting main idea with relevant material and documented sources
- 75.2% of near-graduates performed at the sufficient level or above overall (a 13% increase over last year)

Methodology

To better measure NMC's primary goal that near-graduating students will perform at the sufficient level on the outcome, the artifacts scored were from a sample of specific students that had completed 52 or more college level credits by January 2006. There were about 1070 near-graduates in the population. The artifacts were scored so as to optimize inter-reader reliability. Two scorers read each piece of student work and assigned a score from zero (deficient) to three (proficient) for each of the five capabilities on the [rubric](#). If the sum of the capability scores from one reader differed by three or more points (on a 15-point scale) from the second reader, a third reader was required to score the artifact.

The inter-reader reliability rate was 95% ([reliability study](#)). Twelve of the artifact scores are not included in this analysis because the difference in readers' scores was outside the acceptable reliability limits. Therefore, only 235 artifacts are used in this analysis, giving a confidence interval of +/- 5.65%. The results are therefore generalizable to the population of near-graduates within that confidence interval.

Results

Overall, 76.2% of the near-graduates scored sufficient or better on the Communications rubric (Table 1, Valid Percent column). In spring 2005, of the 66 near-graduate artifacts scored, 62.2% scored sufficient or better, for a 13% increase this year over last year in the percentage of near-graduates scoring sufficient or above.

On average, near-graduates performed sufficiently on three of the five capabilities (Table 2). The means of c2 (uses coherent and mechanically-sound language) and c4 (supports main idea with relevant material and documented sources, if suitable) were 1.9 and 1.96, respectively. A sufficient level of performance is defined as a 2.0.

Table 1. Distribution of overall artifact scores		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Deficient	2	.8	.9	.9
	Developing	54	21.9	23.0	23.8
	Sufficient	96	38.9	40.9	64.7
	Proficient	83	33.6	35.3	100.0
	Total	235	95.1	100.0	
Missing	System	12	4.9		
Total		247	100.0		

Table 2. Capability Mean Scores	Min	Max	Spring 2006 Mean (N=235)	Std. Dev.	Spring 2005 Mean (N=66)
c1: Identifies main idea for intended purpose	.00	3.00	2.18	.72	2.28
c2: Uses coherent and mechanically-sound language	.00	3.00	1.90	.62	2.13
c3: Organizes ideas logically for intended purpose	.50	3.00	2.03	.70	2.10
c4: Supports main idea with relevant material and documented sources, if suitable	.00	3.00	1.96	.72	1.95
c5: Demonstrates an awareness of audience	.50	3.00	2.13	.63	2.23
Final Score	3.50	15.00	10.23	2.88	10.69

Table 3 shows that on average 29.5% of the near-graduates performed below sufficient. On c1, 29% were developing or deficient. On c2, 33.2% were developing or deficient. On c3, 32.3% were developing or deficient. On c4, 27.1% were developing or deficient, and on c5, 25.9% were developing or deficient.

Table 3. Near-Graduate Percentages: Communications	C1	C2	C3	C4	C5
Deficient (0-.5)	1.7	3.0	2.6	3.5	0.4
Developing (1.0-1.5)	27.3	30.2	29.7	23.6	25.5
Sufficient (2.0-2.5)	41.7	57.4	48.0	46.4	50.7
Proficient (3.0)	29.4	9.4	19.6	16.6	23.4

What this tells us

The methodology used to analyze progress on the Communications outcome in spring 2006 allowed us to directly measure the NMC goal that near-graduates will perform sufficient or better on the general education outcomes. The large sample of artifacts gives us greater confidence that the results reflect the skills of our students.

For the past two years the weakest Communications skills have been c2 - using correct grammar and mechanics and c4 - using relevant material and correctly documented sources, if necessary, to support the main idea. Faculty and Curriculum Committee identified various viable changes to the curriculum, mostly in the Communications Academic Area, to address our students' weaknesses and to improve all the capabilities in the Communications outcome. These changes were implemented in the fall 2005 semester, and include:

- 1) develop an English as a Second Language Program (tutoring and coursework)
- 2) establish a fundamentals of writing course, ENG97
- 3) enforce mandatory sequencing of ENG111 and ENG112
- 4) implement English Composition Capstone project assessment
- 5) establish a "Writing Across the Curriculum" program by developing guidelines and identifying writing intensive courses, and by adopting and using a multidisciplinary common writing guide and web resources

Overall the percentage of near-graduates that performed sufficiently or better on the Communications outcome increased by 13% from spring 2005 to spring 2006. However, it is not possible to attribute this improvement to the curricular changes that were implemented. More targeted assessments of those changes must be put in place to directly measure their effectiveness. The Scholarship Action Group will need to engage the Communications Academic Area to determine whether the above initiatives have been effective.

Improvements for the Selection of Artifacts

Of considerable benefit to the scoring of artifacts in spring 2006 was the introduction of the [Artifact Guidelines](#). Instructors from the courses in which the sample of near-graduates were enrolled submitted student work that followed the guidelines. This allowed for increased efficiency in the scoring process. In terms of sampling, there were 1070 near-graduates in the population. Keith Kelly designed a program using MS Access called artifactpicker, which allowed us to automate the cumbersome process of finding those near-graduates and the courses they were enrolled in so that artifacts could be selected from those courses that were most frequently enrolled. To achieve the requisite 283 artifacts, the artifactpicker selected a sample of 300 near-graduates enrolled in 25 diverse courses under the leadership of 29 different faculty members (Table 5).

Those instructors were notified early in the spring semester of the students for which they needed to provide artifacts. With attrition and other factors involved with students submitting assignments, only 247 artifacts were actually submitted to be scored. In the future, this attrition rate (17%) will be accounted for in the artifact selection process so that future samples are truly representative at the +/- 5% interval.

In the spring of 2007, the Scholarship Action Group will facilitate the artifact scoring process for the Critical Thinking outcome. The Communications outcome will be assessed again in 2008.

Address questions or comments about this analysis to the Office of Institutional Research.

Table 5. Courses in which near-graduates were most frequently enrolled		Frequency	Percent
Valid	BUS 150	5	2.0
	BUS 231	2	.8
	CHM 151	5	2.0
	COM 111	8	3.2
	ENG 210	10	4.0
	ENG 211	9	3.6
	ENG 241	7	2.8
	ENG 254	7	2.8
	ENG 261	8	3.2
	ENV 112L	5	2.0
	HNR 101	14	5.7
	HNR 242	21	8.5
	HST 102	21	8.5
	HST 111	5	2.0
	HST 112	4	1.6
	HST 213	5	2.0
	MGT 241	17	6.9
	MGT 251	7	2.8
	MKT 201	33	13.4
	PAR 103	9	3.6
	PHL 202	21	8.5
	PLS 211	5	2.0
	SOC 101	4	1.6
	SOC 113	4	1.6
	SOC 211	11	4.5
	Total	247	100.0