

General Education Update

What We Have Learned So Far
11/04)

September 2004 (Revised

NMC established three general education outcomes in 2000: Communications, Critical Thinking, and Cultural Perspectives. Each outcome had between 5 and 7 associated capabilities organized into three levels. The capabilities were not meant, necessarily, to be sequential for the purposes of applying as broadly as possible across the curriculum. We have assessed how well our students perform on these three outcomes for four years using artifacts and rubrics, standardized tests, and a student retrospective survey. We have assessed the amount of exposure our graduates have to these outcomes, and we have assessed the pervasiveness of support for these outcomes across the curriculum. So, what have we learned so far?

Communications

From the artifact method of assessment, the data show that a majority of students are performing at the sufficient level, but there is no real trend of improvement from semester to semester (Table 1). Moreover, the Spring 2001 results are not reliable due to the low number of artifacts scored. The artifact data show that improvement is needed in all the capabilities.

Table 1. Percent Scoring at least Sufficient		Spring 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003
Level 1	Understands, organizes and expresses ideas using standard English	75%	65%	70%	67%	76%
Level 2	Use qualitative or quantitative info gathering methods; communicates with an awareness of audience and with a sense of purpose	58%	43%	60%	60%	73%
Level 3	Applies strategies and theories to communicate in one or more disciplines or professions		80%	45%	96%	83%

When we used the CAAP writing test (Spring 2003), results showed that generally our students performed between adequate and competent on the CAAP rubric (see Spring 2003 CAAP After Action Report, July 10, 2003). However, because of our inability to compare the CAAP results to our own rubric it was difficult to pinpoint specific capabilities for which we could recommend curricular

improvements. The CAAP writing test combines critical thinking skills with writing skills.

Our indirect method of assessment, the Student Perceptions Survey, showed that over time, students in courses that support Communications perceived that their ability on each of the communication skills had improved. The data show that students perceive greater gains in capabilities 2 and 4 than in capabilities 1 (ability to understand, organize and express ideas using correct English) and 3 (ability to communicate purpose to a specific audience). Somewhat disconcerting is the percentage of students that said the capability did not apply to their class.

Table 2. Student Perceptions Survey, Trends	Spring 03 (N=632)		Fall 03 (N=798)		Spring 04 (N=328)	
	Mean	% NA	Mean	% NA	Mean	% NA
1. My ability to understand, organize and express ideas using correct English has:	2.1	18%	2.1	NA	2.3	20%
2. My ability to collect information according to the ways of this academic area has:	2.4	4%	2.4	NA	2.5	7%
3. My ability to communicate my purpose to a specific audience has:	2.2	9%	2.2	NA	2.3	10%
4. My ability to use what I learned to communicate in this field of study has:	2.5	2%	2.5	NA	2.6	3%
1=Not Improved, 2=Slightly Improved, 3=Greatly Improved						

Of our transfer students (Transfer Survey 2004), 80% said that NMC contributed to their growth in improving their ability to express ideas in writing and 76% said that NMC contributed to improving their research skills.

Significant Findings. In summary, assessment results indicate that we need to work on facilitating the learning of all the Communication skills. Specifically we need to reinforce to students that it is important to us that they are able to understand, organize and express ideas using correct English, or as it has been reworded: *Expresses ideas appropriate to the task, academic area, and/or profession. Includes correct grammar, usage, and mechanics.* Our second priority is to increase our students' abilities on those skills identified under Level 2 in Table 1, above, or as they have been reworded:

1. *Gathers information from a wide variety of appropriate sources*
2. *Communicates with a sense of purpose for an intended audience*

Critical Thinking

From the artifact method of assessment of Critical Thinking skills, the data show no trend of improvement from semester to semester (Table 3). Our students

perform best at identifying issues and articulating a process to resolve them (Level 1), with 90% performing sufficiently in the latest artifact semester. Both the artifacts and repeated administrations of the CAAP Critical Thinking test show that our students need improvement on evaluating claims (Level 2).

Table 3. Percent Scoring at least Sufficient		Spring 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003
Level 1	Identify issues and articulate a process to resolve them	80-100%	90%	69%	57%	90%
Level 2	Construct arguments, evaluate claims, and develop conclusion using evidence and logic	57%	50%	63%	90%	69%
Level 3	Demonstrate the ability to resolve issues in one or more disciplines or profession		20%	80%	48%	69%

From the Student Perceptions Survey, we see that students perceive their greatest gains in their ability to solve problems using techniques from their academic area (skills associated with Level 3) (Table 4). They perceive the least improvement in their ability to identify parts of an argument (Level 1). And moreover, the greatest percentage of students reported that the ability to identify the parts of an argument was not applicable to their class, which supported critical thinking. So there is a slight discrepancy between the results from our direct measures and our indirect measure in identifying the skills that need improvement.

Table 4. Student Perceptions Survey, Trends	Spring 03 (N=701)		Fall 03 (N=798)		Spring 04 (N=432)	
	Mean	% NA	Mean	% NA	Mean	% NA
5. My ability to identify the parts of an argument has:	2.2	21%	2.1	NA	2.3	20%
6. My ability to use information relevant to the problem I am solving has:	2.3	7%	2.3	NA	2.4	5%
7. My ability to reason clearly and to draw conclusions based on information has:	2.3	6%	2.3	NA	2.4	3%
8. My ability to solve problems using techniques from this academic area has:	2.4	7%	2.4	NA	2.5	4%
1=Not Improved, 2=Slightly Improved, 3=Greatly Improved						

From the transfer survey, over 90% of our transfer students from 2004 believed that NMC had contributed to improving their skills to think critically and solve problems.

Significant Findings. In summary, an important lesson learned from the CAAP test results was that critical thinking skills are NOT mutually exclusive. Students tended to either do well on all the skills or on none of the skills. Thus, they should be considered a packaged skill set. However, our direct measures do consistently show that evaluating claims (or considering alternative solutions) (Level 2) should be our priority improvement area.

Cultural Perspectives

In assessing the cultural perspectives outcome, the artifact method shows that the percentage of students performing in the sufficient range is similar to the other two outcomes. However, again, there is no real improvement trend from semester to semester (Table 5).

Table 5. Percent Scoring at least Sufficient		Spring 2002	Fall 2002	Spring 2003	Fall 2003
Level 1	Demonstrates an awareness of diverse peoples and cultures	50%	50%	90%	74%
Level 2	Analyses the contributions and influences of diverse cultures upon peoples	31%	70%	57%	86%
Level 3	Evaluates the impact of diverse cultures in the context of one or mores disciplines or professions and importance in the global context	50%	47%	100%	74%

From the Student Perceptions Survey, students perceive the least amount of improvement in their ability to talk about the economic, historical, political, or social aspect of a culture (#11) (Table 6). Unlike the results for Communications and Critical Thinking, though, students in courses that support cultural perspectives are more likely to perceive that the capabilities do apply to their course. So, not only do they know cultural perspectives when they are exposed to it, they perceive gains in their abilities. From the 2004 Transfer Survey, 83% reported that NMC had contributed to developing their openness to opinions other than their own but only 65% said NMC helped to broaden their awareness of other cultural viewpoints.

Significant Findings. In summary, students believe NMC broadens their cultural perspectives, and students are performing as well on this outcome as they are on the other two. The main challenge with the cultural perspectives outcome is that only a few courses in the curriculum support it. Students have a low

probability of being exposed to cultural perspectives (see Graduate Exposure to General Education Outcomes (April 16, 2003) and Curriculum Commitment to the General Education Outcomes (May 13, 2003)).

Table 6. Student Perceptions Survey, Trends	Spring 03 (N=320)		Fall 03 (N=798)		Spring 04 (N=397)	
	Mean	% NA	Mean	% NA	Mean	% NA
9. My ability to see and recognize different cultural viewpoints has:	2.4	7%	2.5	NA	2.5	7%
10. My ability to understand the contributions and influences of different cultures and people has:	2.4	8%	2.5	NA	2.5	8%
11. My ability to talk about the economic, historical, political or social aspects of a culture has:	2.2	10%	2.3	NA	2.3	11%
12. My ability to evaluate how different cultures affect each other and the world has:	2.3	8%	2.4	NA	2.4	10%
1=Not Improved, 2=Slightly Improved, 3=Greatly Improved						

Pervasiveness and Exposure

Currently, support for the general education outcomes is self-identified by faculty members. In a study of general education outcome pervasiveness in the curriculum, we found that when broken into outcome levels (Table 7), the third level of an outcome is usually supported by the fewest courses.

Table 7. Fall 2003 Curriculum Commitment to Outcomes		
Outcome	Number of courses supporting each level	Percent of courses supporting (N=367)
COM1	137	37.3%
COM2	41	11.2%
COM3	29	7.9%
CT1	112	30.5%
CT2	51	13.9%
CT3	74	20.2%
CP1	51	13.9%
CP2	15	4.1%
CP3	7	1.9%

For instance, in a study of Fall 2003 courses, communications level 3 was supported by only 7.9% of the courses compared with 37.3% supporting level 1. Students could experience cultural perspectives level 3 from only seven courses that fall. Moreover, two of those seven were nursing courses restricted to nursing students. Another two of those courses were 200 level English courses that have a 100 level English prerequisite. Students do not have an equal likelihood of experiencing courses that support levels 2 and 3 as they do level 1 even though all the skills are meant to define the outcome.

In an effort to ascertain how often our graduates are exposed to NMC's general education outcomes, we analyzed the courses of our spring 2002 and fall 2002 graduates. Graduates were chosen because their coursework tends to represent an educational package offered by NMC. There were a total of 294 graduates from these two semesters. Graduates had an average of 19 courses that were linked to a general education outcome.

On the average, regardless of degree, our graduates were exposed to the communications and critical thinking outcome six times. They were exposed to the cultural perspectives outcome only two times on average. After separating graduates by degree type, those with the most exposure to the communications and critical thinking outcomes were ADNs (seven times each, respectively). Those graduating with an ASA had, on average, the most exposure to the cultural perspectives outcome (six times). The Graduate Exposure report showed that the minimum level of exposure in any outcome at any level was zero. In other words, it is possible that a graduate could get by without being exposed to one of our general education outcomes, though that percentage is small.

Significant Findings. Even though many courses support Level 1 of our general education outcomes, it is possible that a graduate could get by without being exposed to one of our general education outcomes.