

**OHIO NORTHERN UNIVERSITY**  
**2006 ANNUAL REPORT ON THE ASSESSMENT OF STUDENT LEARNING**

Academic Program: University General Learning Objectives

Submitted by/Date: Christy Cole; May 15, 2007

**I. ASSESSMENT PROGRAM COMPONENTS**

**A. Learning Objectives**

As a result of their general education experience, Ohio Northern University students will be able to:

1. Think and express themselves clearly
2. Solve problems analytically and creatively

As a result of their overall educational experience, Ohio Northern University students will graduate from the University being able to:

3. Demonstrate knowledge, skills and values for a program of study or career

In addition, Ohio Northern University students will graduate from the University prepared to:

4. Know and rely on themselves
5. Listen, understand, and work with others
6. Demonstrate technological knowledge and skills
7. Contribute to the good of humankind
8. Practice truthful and ethical behavior
9. Demonstrate cultural understanding and an appreciation for diversity

**B. Measurements**

1. Collegiate Learning Assessment (CLA)-direct measure
2. National Survey of Student Engagement (NSSE)/Law School Survey of Student Engagement-indirect measure
3. College Senior Survey (CSS)-indirect measure
4. Alumni Survey-indirect measure
5. Employer Survey-indirect measure
6. Graduate Record Exam (GRE)-direct measure
7. Discipline-specific Comprehensive Examinations-direct measure
8. Placement Rates-indirect measure

The table on the following page indicates the methods by which each learning objective is assessed.

	CLA (Direct)	NSSE/LSSE (Indirect)	CSS (Indirect)	Alumni Survey (Indirect)	Employer Survey (Indirect)	GRE (Direct)	Discipline-specific Comprehensive Exams (Direct)	Placement Rates (Indirect)
1. Think and express themselves clearly	X	X	X	X	X	X		
2. Solve problems analytically and creatively	X	X	X	X	X	X		
3. Knowledge, skills, and values for specific program		X	X				X	X
4. Know and rely on themselves		X		X	X			
5. Listen, understand, and work with others		X	X	X	X			
6. Demonstrate technological knowledge and skills		X	X	X	X			
7. Contribute to the good of humankind		X		X	X			
8. Practice truthful and ethical behavior		X						
9. Demonstrate cultural understanding and an appreciation for diversity		X	X	X	X			

## II. ASSESSMENT ACTIVITIES FOR 2005-06 (ACADEMIC YEAR)

### A. Describe the *measures* used to collect the data.

1. Collegiate Learning Assessment (CLA): The Collegiate Learning Assessment (CLA) is a national effort that provides colleges and universities with information about performance on tasks that require students to think critically, reason analytically, solve realistic problems, and write clearly. The CLA uses various types of tasks, all of which require students to construct written responses to open-ended questions. Each Performance Task requires students to use critical thinking, analytic reasoning, problem solving, and written communication skills to answer several open-ended questions about a hypothetical but realistic situation. The Analytic Writing Task requires students to respond to two types of essay prompts: a “Make-an-Argument” question that asks them to support or reject a position on some issue; and a “Critique-an-Argument” question that asks them to evaluate the validity of an argument made by someone else.

CLA uses a national database of participating schools to examine whether the students at Ohio Northern University performed (as a group) better or worse than expected. An “expected” CLA

score is based on two factors: the mean SAT/ACT score for students at the institution and the typical relationship between a institution's average SAT/ACT score and its average CLA score. Based on those results, CLA designates five performance levels for an institution: *well below expected*, *below expected*, *at expected*, *above expected*, and *well above expected*.

In the spring of 2006, 109 seniors/P4s participated in the electronic administration of the CLA. Please note that the inclusion of P4s rather than P6s in the CLA study should be considered when interpreting results.

2. National Survey of Student Engagement (NSSE) and Law School Survey of Student Engagement (LSSSE): NSSE and LSSSE were designed to assess the extent to which students are engaged in empirically derived good educational practices. In one section of the survey, students indicate the extent to which their experience at Ohio Northern contributed to their knowledge, skills, and personal development in several areas that correspond with the University's general learning objectives.

First-year (n=867) and senior/P4 (n=577) students received the survey electronically in the spring of 2006. The overall response rate for the survey was 58%. All law students received the survey electronically (n=308). The response rate for LSSSE was 63%. Please note that the inclusion of P4s rather than P6s in NSSE should be considered when interpreting results.

3. College Senior Survey (CSS): The CSS, developed by the Higher Education Research Institute, was designed to help institutions respond to the need for assessment and accountability data by providing information on a broad range of student outcomes. Outcomes include a section of questions where students indicate whether or not their abilities in several areas (related to the University's general learning objectives) are stronger compared to when they first started at Ohio Northern.

The CSS was administered electronically to 416 ONU students (Arts and Sciences, Business, Engineering, and Pharmacy) graduating in the spring of 2005. One-hundred and eighty graduating students responded (response rate of 43.2%).

4. Alumni Survey: The alumni survey was developed locally to determine the degree to which various learning outcomes associated with the University's general learning objectives are obtained. Graduates indicate to what extent they consider the importance of each outcome to their development and the extent to which their experience at Ohio Northern has contributed to their development for each outcome.

In the spring of 2005, alumni surveys were mailed to students graduating from the four undergraduate colleges from fall 1999 through summer 2002. Of the 1,244 alumni surveys mailed, 405 responded for a response rate of 32.6%.

5. Employer Survey: The employer survey was developed to coincide with the alumni survey and asks employers of graduates to indicate the importance of outcomes related to the University's general learning objectives and the extent to which the Ohio Northern graduate in their employ demonstrates each of the outcomes.

In the spring of 2005, alumni surveys were mailed to students graduating from the four undergraduate colleges from fall 1999 through summer 2002. Respondents to the alumni survey were asked to provide contact information for their employers. Of the 405 alumni respondents, 224 provided contact information for employers (55.3%). Employer surveys and signed alumni consent forms were mailed to employers and of the 224 sent. The Office of Institutional Research received 142 responses (63.4%).

6. Graduate Record Exam (GRE). Most students planning on attending graduate school take the Graduate Record Exam. The General Test measures verbal, quantitative, and writing skills. Results presented in this report only include those students choosing to report their scores back to Ohio Northern University. Normally, only half of the students estimated to have taken the exam report their scores to ONU. During the 2005-06 academic year, 49 Ohio Northern students or graduates reported their GRE scores to the university.

7. Discipline-specific Comprehensive Examinations. Several academic programs require students to pass national or state comprehensive examinations before they are able to practice in their discipline. These programs include athletic training, clinical laboratory science, education, engineering, law, pharmacy. Additionally students from the business college and students majoring in a biology discipline take ETS<sup>®</sup> Major Field Tests to indicate their proficiency in a given subject area. Specific details of testing and results are located in each major/program assessment report.

8. Placement Rates: The Office of Career Services collects placement information on the majority of graduates each year. For the purposes of this report, placement status 12 months after commencement are provided.

**B. Present the *results* of the data collection and analysis for each measure listed above.**

In most cases, the desired standard of performance is a rating of 3.0 or above (on a 4-point scale). For the CLA, the minimum standard of performance is *at the expected level*. Additionally, the minimum standard of performance is to be at or above the national or state comparison data. While there was a small degree of disagreement between measures for some items, some generalizations can be advanced in terms of the overall findings for the assessment of the University's general learning objectives.

Overall, the results indicate the following items as being above the minimum standards of performance (with the corresponding learning objective is in parentheses).

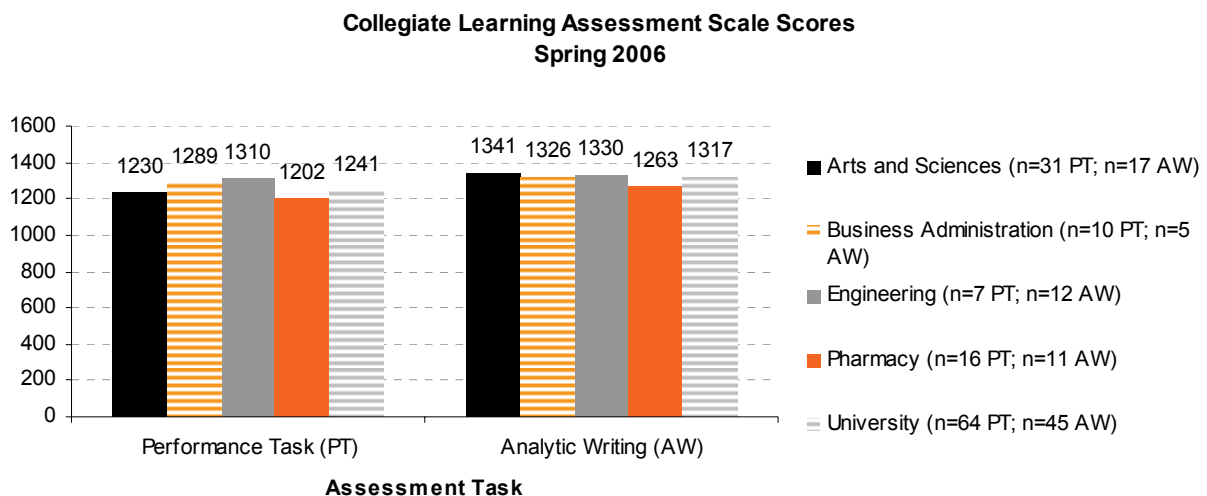
- Thinking critically and analytically (Objective 2)
- Analyzing quantitative problems (Objective 2)
- Knowledge of a particular field or discipline (Objective 3)
- Job or work-related knowledge and skills (Objective 3)
- Learning and working independently (Objective 4)
- Intellectual self-confidence (Objective 4)
- Working with others (Objective 5)

- Interpersonal skills (Objective 5)
- Computing and information technology (Objective 6)

Likewise, the following items were found to be below the minimum standards of performance:

- Writing abilities (Objective 1)
- Speaking abilities (Objective 1)
- Solving real-world problems (Objective 2)
- Understanding of self (Objective 4)
- Contributing to the welfare of the community (Objective 7)
- Developing a personal code of values and ethics (Objective 8)
- Understanding of people from other racial and ethnic backgrounds (Objective 9)
- Knowledge of people from other racial and ethnic backgrounds (Objective 9)
- Ability to get along with people of difference races and cultures (Objective 9)
- Understanding of global issues (Objective 9)
- Appreciation for different points of view (Objective 9)

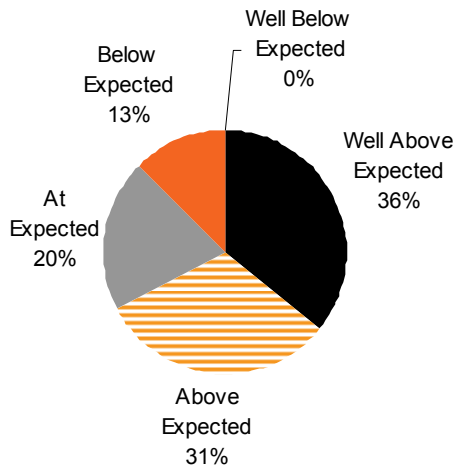
1. Think and express themselves clearly. Six of the eight measures demonstrate student learning in terms of this objective. Results from each assessment measure follow.



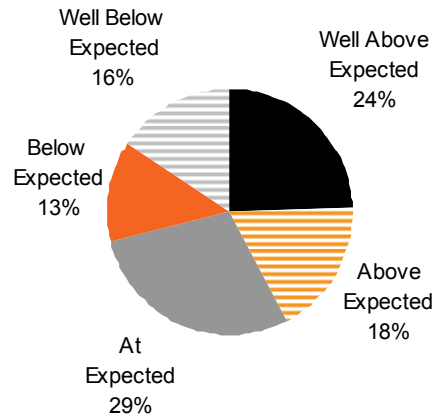
The following table presents the results from the seniors/P4s participating in the Collegiate Learning Assessment (spring 2006).

Further analysis indicates that the overall performance of the Ohio Northern University senior sample was *at the expected* performance level for both tasks. The percentage of students performing at each expected performance level follows.

**Expected Performance Levels;  
Performance Task (n=64)**



**Expected Performance Levels;  
Analytic Writing Task (n=45)**



Results from the National Survey of Student Engagement (spring 2006) indicate that Ohio Northern senior/P4 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Writing clearly and effectively	Sig.	Speaking clearly and effectively	Sig.
Ohio Northern Seniors/P4s (n=291)	2.86		2.93	
Arts and Sciences (n=133)	3.00		3.03	
Business (n=36)	2.94		3.14	
Engineering (n=52)	2.67		2.75	
Pharmacy (n=70)	2.71		2.74	
Selected Peers	3.16	***	3.06	
Carnegie Peers	3.14	***	3.07	
NSSE 2006	3.07	***	2.96	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the Law School Survey of Student Engagement (spring 2006) indicate that Ohio Northern L3 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Writing clearly and effectively	Sig.	Speaking clearly and effectively	Sig.
Ohio Northern L3s (n=48)	2.85		2.72	
Selected Peers	3.26	***	2.94	
Less than 500	2.97		2.82	
Private-Religious	3.07		2.83	
LSSSE 2006	2.94		2.76	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the College Senior Survey (spring 2005) indicate the percentage of Ohio Northern graduating student respondents report “much stronger” abilities compared to when they first started college in the following areas:

	Writing skills	Public speaking ability
Ohio Northern Graduating Students (n=177)	27.2%	37.2%
Arts and Sciences (n=101)	32.7%	40.6%
Business (n=27)	18.5%	29.6%
Engineering (n=19)	10.5%	31.6%
Pharmacy (n=30)	30.0%	40.0%
Selected Peers	33.1%	30.6%
All Private 4-Year Colleges	32.6%	30.3%

Results from the alumni survey (spring 2005) indicate the extent to which alumni respondents (from 1999-2002) consider their experience at Ohio Northern contributed to their development for the following areas.

	Written communication skills	Speaking and presentation skills
Ohio Northern Graduates (n=399)	3.08	3.14
Arts and Sciences (n=178)	3.16	3.20
Business (n=46)	3.02	3.35
Engineering (n=59)	2.81	3.00
Pharmacy (n=116)	3.10	3.04

4=very much; 3=quite a bit; 2=some; 1=very little

Results from the employer survey (spring 2005) indicate the extent to which employers of alumni respondents (from 1999-2002) consider the ONU graduate in their employ demonstrates the following:

	Written communication skills	Speaking and presentation skills
Employers of Ohio Northern Graduates (n=137)	3.43	3.38
Business-related (n=22)	3.23	3.32
Engineering-related (n=20)	3.15	3.05
Government (n=9)	3.75	3.78
Health-related (n=50)	3.46	3.41
Non-profit (n=10)	3.78	3.10
Education (n=26)	3.52	3.58

4=very much; 3=quite a bit; 2=some; 1=very little

Graduate Record Exam results for the 2005-06 year indicate that the average verbal score for ONU students (n=49) was 480 (out of 800) indicating an average performance compared to national test-takers at the 53<sup>rd</sup> percentile. Additionally the mean score for the analytic writing portion of the test was a 4.4 (out of 6) indicating performance at the 47<sup>th</sup> percentile.

In summary, results from the CLA indicate that seniors/P4s are performing *at the expected level* in terms of writing. NSSE ratings for writing are less than a 3.00 (2.86) and are significantly lower than all three comparison groups. LSSSE ratings are a 2.85 and significantly less than the peer comparison group. CSS results indicate that less than one-third (27.2%) of graduating students consider their writing skills to be “much stronger” compared to when they started, which is slightly lower than both comparison groups. Ratings pertaining to writing from the alumni survey are 3.08, while employers report graduates’ demonstration of written

communication skills at a 3.43. GRE scores indicate the performance of Ohio Northern students at the 53<sup>rd</sup> percentile for verbal skills and the 47<sup>th</sup> percentile for writing.

Lastly, NSSE and LSSSE ratings for speaking are below a 3.00 (2.93 for NSSE and 2.72 for LSSSE) and are comparable to the average ratings for all comparison groups. Over one-third (37.2%) of graduating students on the CSS rate their speaking abilities as “much stronger”, which is a slightly higher percentage than both comparison groups. Alumni rate their development in speaking and presentation skills at 3.14 while employers rate graduates’ demonstration of speaking at 3.38.

2. Solve problems analytically and creatively. Six of the eight measures demonstrate student learning in terms of this objective. Results from each assessment measure follow.

CLA results pertaining to solving problems analytically and creatively are located under the first learning objective.

Results from the National Survey of Student Engagement (spring 2006) indicate that Ohio Northern senior/P4 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Thinking critically and analytically	Sig.	Analyzing quantitative problems	Sig.	Solving complex real-world problems	Sig.
Ohio Northern Seniors/P4s (n=291)	3.38		3.17		2.69	
Arts and Sciences (n=133)	3.32		2.89		2.47	
Business (n=36)	3.28		3.11		2.81	
Engineering (n=52)	3.63		3.71		2.61	
Pharmacy (n=70)	3.34		3.27		2.67	
Selected Peers	3.44		3.07		2.77	
Carnegie Peers	3.34		3.04		2.72	
NSSE 2006	3.33		3.02		2.72	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the Law School Survey of Student Engagement (spring 2006) indicate that Ohio Northern L3 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Thinking critically and analytically	Sig.	Developing legal research skills	Sig.	Solving complex real-world problems	Sig.
Ohio Northern L3s (n=48)	3.11		3.09		2.33	
Selected Peers	3.34	***	3.30		2.55	
Less than 500	3.29		3.16		2.51	
Private-Religious	3.27		3.11		2.47	
LSSSE 2006	3.25		3.04		2.46	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the College Senior Survey (spring 2005) indicate the percentage of Ohio Northern graduating student respondents report “much stronger” abilities compared to when they first started college in the following areas:

	Analytic and problem-solving skills	Ability to think critically
Ohio Northern Graduating Students (n=177)	45.6%	43.3%
Arts and Sciences (n=101)	40.6%	38.6%
Business (n=27)	29.6%	37.0%
Engineering (n=19)	63.2%	47.4%
Pharmacy (n=30)	66.7%	63.3%
Selected Peers	39.2%	42.6%
All Private 4-Year Colleges	35.4%	40.2%

Results from the alumni survey (spring 2005) indicate the extent to which alumni respondents (from 1999-2002) consider their experience at Ohio Northern contributed to their development for the following areas.

	Thinking critically and analytically	Thinking creatively	Problem-solving skills
Ohio Northern Graduates (n=399)	3.28	2.75	3.15
Arts and Sciences (n=178)	3.19	2.84	3.02
Business (n=46)	3.02	2.54	3.04
Engineering (n=59)	3.42	2.62	3.51
Pharmacy (n=116)	3.43	2.75	3.23

4=very much; 3=quite a bit; 2=some; 1=very little

Results from the employer survey (spring 2005) indicate the extent to which employers of alumni respondents (from 1999-2002) consider the ONU graduate in their employ demonstrates the following:

	Thinking critically and analytically	Thinking creatively	Problem-solving skills
Employers of Ohio Northern Graduates (n=137)	3.51	3.23	3.34
Business-related (n=22)	3.46	3.18	3.27
Engineering-related (n=20)	3.40	2.85	3.05
Government (n=9)	3.89	3.63	3.71
Health-related (n=50)	3.61	3.31	3.46
Non-profit (n=10)	3.60	3.30	3.10
Education (n=26)	3.28	3.28	3.36

4=very much; 3=quite a bit; 2=some; 1=very little

Graduate Record Exam results for the 2005-06 year indicate that the average quantitative score for ONU students (n=49) was 621 (out of 800) indicating an average performance compared to national test-takers at the 50<sup>th</sup> percentile.

In summary, results from the CLA indicate that seniors/P4s are performing *at the expected level* for the performance task. NSSE ratings for thinking critically and analytically and analyzing quantitative problems are above a 3.00 and are generally comparable to the comparison ratings. LSSSE ratings for thinking critically and analytically and developing legal research skills are above a 3.00 and are generally comparable to the comparison ratings although the LSSSE ratings for thinking critically and analytically (3.11) are significantly lower than the peer comparison rating (3.34). NSSE and LSSSE ratings for solving real-world problems are less than a 3.00 (2.69 for NSSE and 2.33 for LSSSE) and are comparable to comparison group ratings. Over 40% of

graduating students on the CSS report their growth in analytic and problem-solving skills (45.6%) and the ability to think critically (43.3%), which in the case of analytic and problem-solving skills is slightly higher than the comparison groups. Alumni rate thinking critically and analytically (3.28) and problem-solving skills (3.15) higher than a 3.00, however they rate thinking creatively lower at a 2.75. Employers rate graduates' demonstration higher than a 3.00 in all three areas. GRE scores indicate the performance of Ohio Northern students at the 50<sup>th</sup> percentile for quantitative skills

3. Demonstrate knowledge, skills, and values for a program of study or career. Four of the eight measures demonstrate student learning in terms of this objective. Results from each assessment measure follow. Additionally, each academic program is required to maintain and report assessment results. Please refer to individual program assessment reports for further discussion on results pertaining to this learning objective.

Three hundred twelve Ohio Northern University students or graduates took a comprehensive exam in 2005-06. Of the 312 students taking a comprehensive examination, 281 (or 90%) passed. Results from individual comprehensive exams for 2005-06 are as follows:

	ONU Pass Rate	Ohio Pass Rate	National Pass Rate
Athletic Training Board	40%	n/a	26%
Clinical Laboratory Science Board	100%	n/a	80%
Education Praxis II	98%	95%	n/a
Education Praxis III	100%	99%	n/a
Engineering Fundamentals	84%	n/a	75%
Law Bar	81%	81%	n/a
Pharmacy Board	94%	95%	n/a

The mean overall student score for business students on the ETS<sup>®</sup> Major Field Test in Business indicated performance at the 90<sup>th</sup> percentile nationally. Ninety-eight percent of biology students taking the ETS<sup>®</sup> Major Field Test in Biology scored at or above the department's benchmark of 140 or better.

The placement rates (percentage of graduates employed or enrolled in graduate programs 12 months after commencement) by college for the class of 2005 are as follows:

	Graduate Study	Employed	Total Placement
Arts and Sciences	26%	63%	89%
Business Administration	14%	71%	85%
Engineering	23%	71%	94%
Law*	5%	81%	86%
Pharmacy	4%	96%	100%

\* collected 9 months after commencement

Results from the National Survey of Student Engagement (spring 2006) indicate that Ohio Northern senior/P4 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Acquiring job or work-related knowledge and skills	Sig.
Ohio Northern Seniors/P4s (n=291)	3.12	
Arts and Sciences (n=133)	3.02	
Business (n=36)	2.92	

Engineering (n=52)	3.19	
Pharmacy (n=70)	3.37	
Selected Peers	3.12	
Carnegie Peers	3.13	
NSSE 2006	3.02	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the Law School Survey of Student Engagement (spring 2006) indicate that Ohio Northern L3 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Acquiring job or work-related knowledge and skills	Sig.
Ohio Northern L3s (n=48)	2.37	
Selected Peers	2.76	**
Less than 500	2.71	*
Private-Religious	2.62	
LSSSE 2006	2.66	*

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the College Senior Survey (spring 2005) indicate the percentage of Ohio Northern graduating student respondents report “much stronger” abilities compared to when they first started college in the following areas:

	Knowledge of a particular field or discipline
Ohio Northern Graduating Students (n=177)	70.6%
Arts and Sciences (n=101)	68.3%
Business (n=27)	59.3%
Engineering (n=19)	73.7%
Pharmacy (n=30)	86.7%
Selected Peers	67.2%
All Private 4-Year Colleges	61.0%

In summary, discipline-specific comprehensive examination results demonstrate high levels of proficiency in knowledge and skills related to specific programs. Placement results indicate overall placement rates of 85% or higher in all colleges. NSSE ratings are over a 3.00 for acquiring job-related knowledge and skills (3.12), which is comparable to the comparison ratings. LSSSE ratings (2.37) are below a 3.00 and are significantly lower than three of the four comparison ratings. Seven out of ten (70.6%) CSS respondents indicate their knowledge of a particular field or discipline as “much stronger”, which is slightly higher than the comparison groups.

4. Know and rely on themselves. Three of the eight measures demonstrate student learning in terms of this objective. Results from each assessment measure follow.

Results from the National Survey of Student Engagement (spring 2006) indicate that Ohio Northern senior/P4 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Learning on your own	Sig.	Understanding yourself	Sig.
Ohio Northern Seniors/P4s (n=291)	3.04		2.66	
Arts and Sciences (n=133)	2.98		2.72	
Business (n=36)	2.97		2.94	
Engineering (n=52)	3.15		2.53	
Pharmacy (n=70)	3.09		2.66	
Selected Peers	3.04		2.95	**
Carnegie Peers	3.01		2.80	
NSSE 2006	3.00		2.78	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the Law School Survey of Student Engagement (spring 2006) indicate that Ohio Northern L3 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Learning on your own	Sig.	Understanding yourself	Sig.
Ohio Northern L3s (n=48)	3.26		2.46	
Selected Peers	3.18		2.67	
Less than 500	3.17		2.67	
Private-Religious	3.15		2.65	
LSSSE 2006	3.14		2.62	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the alumni survey (spring 2005) indicate the extent to which alumni respondents (from 1999-2002) consider their experience at Ohio Northern contributed to their development for the following areas.

	Intellectual self-confidence	Self-understanding	Learning on your own	Working independently
Ohio Northern Graduates (n=399)	3.01	2.62	3.14	3.09
Arts and Sciences (n=178)	3.03	2.70	3.14	3.12
Business (n=46)	2.98	2.57	2.85	2.83
Engineering (n=59)	2.75	2.33	3.00	2.77
Pharmacy (n=116)	3.14	2.65	3.33	3.32

4=very much; 3=quite a bit; 2=some; 1=very little

Results from the employer survey (spring 2005) indicate the extent to which employers of alumni respondents (from 1999-2002) consider the ONU graduate in their employ demonstrates the following:

	Intellectual self-confidence	Self-understanding	Learning on your own	Working independently
Employers of Ohio Northern Graduates (n=137)	3.31	3.13	3.52	3.57
Business-related (n=22)	3.36	3.10	3.45	3.50
Engineering-related (n=20)	3.22	2.82	3.35	3.40
Government (n=9)	3.56	3.40	3.67	3.75
Health-related (n=50)	3.33	3.23	3.59	3.62
Non-profit (n=10)	3.22	3.00	3.60	3.70
Education (n=26)	3.23	3.17	3.50	3.58

4=very much; 3=quite a bit; 2=some; 1=very little

In summary, NSSE and LSSSE ratings for learning on your own are above a 3.00 and are comparable to the comparison ratings. NSSE and LSSSE ratings for understanding yourself (2.66 for NSSE and 2.46 for LSSSE) are lower than a 3.00 and NSSE ratings are significantly lower than the peer comparison rating (2.95). Alumni rate intellectual self-confidence, learning on your own, and working independently above a 3.00, however they rate their self-understanding below a 3.00 (2.62). Employers rate graduates' demonstration of skills higher than a 3.00 in all four areas.

5. Listen, understand, and work with others. Four of the eight measures demonstrate student learning in terms of this objective. Results from each assessment measure follow. Results from the National Survey of Student Engagement (spring 2006) indicate that Ohio Northern senior/P4 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Working with others	Sig.
Ohio Northern Seniors/P4s (n=291)	3.29	
Arts and Sciences (n=133)	3.21	
Business (n=36)	3.39	
Engineering (n=52)	3.52	
Pharmacy (n=70)	3.23	
Selected Peers	3.26	
Carnegie Peers	3.18	
NSSE 2006	3.14	*

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the Law School Survey of Student Engagement (spring 2006) indicate that Ohio Northern L3 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Working with others	Sig.
Ohio Northern L3s (n=48)	2.52	
Selected Peers	2.56	
Less than 500	2.46	
Private-Religious	2.45	
LSSSE 2006	2.40	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the College Senior Survey (spring 2005) indicate the percentage of Ohio Northern graduating student respondents report "much stronger" abilities compared to when they first started college in the following areas:

	Interpersonal skills
Ohio Northern Graduating Students (n=177)	38.4%
Arts and Sciences (n=101)	35.6%
Business (n=27)	33.3%
Engineering (n=19)	42.1%
Pharmacy (n=30)	50.0%
Selected Peers	35.1%
All Private 4-Year Colleges	33.1%

Results from the alumni survey (spring 2005) indicate the extent to which alumni respondents (from 1999-2002) consider their experience at Ohio Northern contributed to their development for the following areas.

	Social self-confidence	Listening skills	Working with others
Ohio Northern Graduates (n=399)	2.95	2.95	3.32
Arts and Sciences (n=178)	3.04	2.99	3.27
Business (n=46)	2.83	2.76	3.41
Engineering (n=59)	2.73	2.70	3.43
Pharmacy (n=116)	2.96	3.09	3.31

4=very much; 3=quite a bit; 2=some; 1=very little

Results from the employer survey (spring 2005) indicate the extent to which employers of alumni respondents (from 1999-2002) consider the ONU graduate in their employ demonstrates the following:

	Social self-confidence	Listening skills	Working with others
Employers of Ohio Northern Graduates (n=137)	3.26	3.40	3.60
Business-related (n=22)	3.36	3.36	3.64
Engineering-related (n=20)	3.11	3.20	3.50
Government (n=9)	3.67	3.67	3.67
Health-related (n=50)	3.30	3.38	3.62
Non-profit (n=10)	2.78	3.50	3.60
Education (n=26)	3.23	3.50	3.58

4=very much; 3=quite a bit; 2=some; 1=very little

In summary, the NSSE rating for working with others (3.29) is above a 3.00 and is significantly higher than the NSSE 2006 comparison group. The LSSSE rating for working with others (2.52) is lower than a 3.00 and comparable to the comparison ratings. Over one-third of CSS respondents (38.4%) indicate their interpersonal skills as “much stronger”, which is slightly higher than the comparison groups. Alumni rate their working with others above a 3.00 (3.32) and rate social self-confidence (2.95) and listening skills (2.95) below a 3.00. Employers rate graduates’ demonstration of skills higher than a 3.00 in all three areas.

6. Demonstrate technological knowledge and skills. Four of the eight measures demonstrate student learning in terms of this objective. Results from each assessment measure follow.

Results from the National Survey of Student Engagement (spring 2006) indicate that Ohio Northern senior/P4 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Using computing and information technology	Sig.
Ohio Northern Seniors/P4s (n=291)	3.21	
Arts and Sciences (n=133)	3.17	
Business (n=36)	3.42	
Engineering (n=52)	3.44	
Pharmacy (n=70)	2.97	
Selected Peers	3.16	
Carnegie Peers	3.24	

NSSE 2006	3.21	
-----------	------	--

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the Law School Survey of Student Engagement (spring 2006) indicate that Ohio Northern L3 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Using computing and information technology	Sig.
Ohio Northern L3s (n=48)	2.72	
Selected Peers	2.78	
Less than 500	2.61	
Private-Religious	2.52	
LSSSE 2006	2.48	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the College Senior Survey (spring 2005) indicate the percentage of Ohio Northern graduating student respondents report “much stronger” abilities compared to when they first started college in the following areas:

	Computer skills
Ohio Northern Graduating Students (n=177)	34.5%
Arts and Sciences (n=101)	31.7%
Business (n=27)	22.2%
Engineering (n=19)	52.6%
Pharmacy (n=30)	43.3%
Selected Peers	26.5%
All Private 4-Year Colleges	26.7%

Results from the alumni survey (spring 2005) indicate the extent to which alumni respondents (from 1999-2002) consider their experience at Ohio Northern contributed to their development for the following areas.

	Technological skills	Computer skills	Information literacy
Ohio Northern Graduates (n=399)	2.73	2.87	2.90
Arts and Sciences (n=178)	2.57	2.72	2.75
Business (n=46)	3.00	3.17	2.71
Engineering (n=59)	3.07	3.12	2.81
Pharmacy (n=116)	2.71	2.83	3.23

4=very much; 3=quite a bit; 2=some; 1=very little

Results from the employer survey (spring 2005) indicate the extent to which employers of alumni respondents (from 1999-2002) consider the ONU graduate in their employ demonstrates the following:

	Technological skills	Computer skills	Information literacy
Employers of Ohio Northern Graduates (n=137)	3.28	3.41	3.32
Business-related (n=22)	3.40	3.71	3.26
Engineering-related (n=20)	3.25	3.40	2.88
Government (n=9)	3.33	3.56	3.43

Health-related (n=50)	3.39	3.39	3.49
Non-profit (n=10)	3.11	3.33	3.44
Education (n=26)	3.04	3.17	3.27

4=very much; 3=quite a bit; 2=some; 1=very little

In summary, the NSSE rating for using computing and information technology (3.21) is above a 3.00. The LSSSE rating for using computing and information technology (2.72) is lower than a 3.00 and comparable to the comparison ratings. Over one-third of CSS respondents (34.5%) indicate their computer skills as “much stronger”, which is slightly higher than the comparison groups. Alumni rate their technological skills (2.73), computer skills (2.87), and information literacy (2.90) below a 3.00. Employers rate graduates’ demonstration of skills higher than a 3.00 in all three areas.

7. Contribute to the good of humankind. Three of the eight measures demonstrate student learning in terms of this objective. Results from each assessment measure follow.

Results from the National Survey of Student Engagement (spring 2006) indicate that Ohio Northern senior/P4 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Contributing to the welfare of your community	Sig.
Ohio Northern Seniors/P4s (n=291)	2.40	
Arts and Sciences (n=133)	2.33	
Business (n=36)	2.50	
Engineering (n=52)	2.33	
Pharmacy (n=70)	2.56	
Selected Peers	2.68	**
Carnegie Peers	2.45	
NSSE 2006	2.42	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the Law School Survey of Student Engagement (spring 2006) indicate that Ohio Northern L3 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Contributing to the welfare of your community	Sig.
Ohio Northern L3s (n=48)	2.07	
Selected Peers	2.49	**
Less than 500	2.32	
Private-Religious	2.41	**
LSSSE 2006	2.25	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the alumni survey (spring 2005) indicate the extent to which alumni respondents (from 1999-2002) consider their experience at Ohio Northern contributed to their development for the following areas.

	Desire to contribute to the welfare of your community
Ohio Northern Graduates (n=399)	2.52
Arts and Sciences (n=178)	2.59
Business (n=46)	3.33
Engineering (n=59)	2.25
Pharmacy (n=116)	2.63

4=very much; 3=quite a bit; 2=some; 1=very little

Results from the employer survey (spring 2005) indicate the extent to which employers of alumni respondents (from 1999-2002) consider the ONU graduate in their employ demonstrates the following:

	Desire to contribute to the welfare of your community
Employers of Ohio Northern Graduates (n=137)	3.02
Business-related (n=22)	2.95
Engineering-related (n=20)	2.22
Government (n=9)	3.43
Health-related (n=50)	3.11
Non-profit (n=10)	3.63
Education (n=26)	3.16

4=very much; 3=quite a bit; 2=some; 1=very little

In summary, NSSE and LSSSE ratings for contributing to the welfare of your community (2.40 for NSSE and 2.07 for LSSSE) are below a 3.00 and both are significantly below peer comparison ratings. The LSSSE rating is significantly below the average rating for private-religious institutions. Alumni rate their desire to contribute to the welfare of the community (2.52) below a 3.00. Employers rate graduates' demonstration of contributing to the welfare of the community at a 3.02.

8. Practice truthful and ethical behavior. One of the eight measures demonstrate student learning in terms of this objective. Results from each assessment measure follow.

Results from the National Survey of Student Engagement (spring 2006) indicate that Ohio Northern senior/P4 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Developing a personal code of values and ethics	Sig.
Ohio Northern Seniors/P4s (n=291)	2.56	
Arts and Sciences (n=133)	2.55	
Business (n=36)	2.61	
Engineering (n=52)	2.50	
Pharmacy (n=70)	2.56	
Selected Peers	2.92	***
Carnegie Peers	2.71	
NSSE 2006	2.65	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the Law School Survey of Student Engagement (spring 2006) indicate that Ohio Northern L3 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Developing a personal code of values and ethics	Sig.
Ohio Northern L3s (n=48)	2.24	
Selected Peers	2.53	
Less than 500	2.46	
Private-Religious	2.45	
LSSSE 2006	2.37	

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

In summary, NSSE and LSSSE ratings for developing a personal code of values and ethics (2.56 for NSSE and 2.24 for LSSSE) are below a 3.00 and the NSSE rating is significantly below the peer comparison rating.

9. Demonstrate cultural understanding and an appreciation for diversity. Four of the eight measures demonstrate student learning in terms of this objective. Results from each assessment measure follow.

Results from the National Survey of Student Engagement (spring 2006) indicate that Ohio Northern senior/P4 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Understanding people of other racial and ethnic backgrounds	Sig.
Ohio Northern Seniors/P4s (n=291)	1.96	
Arts and Sciences (n=133)	2.00	
Business (n=36)	2.19	
Engineering (n=52)	1.93	
Pharmacy (n=70)	1.95	
Selected Peers	2.46	***
Carnegie Peers	2.57	***
NSSE 2006	2.57	***

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the Law School Survey of Student Engagement (spring 2006) indicate that Ohio Northern L3 respondents rate the extent to which ONU contributed to their growth and development as follows:

	Understanding people of other racial and ethnic backgrounds	Sig.
Ohio Northern L3s (n=48)	1.80	
Selected Peers	2.09	*
Less than 500	2.11	*
Private-Religious	2.09	*
LSSSE 2006	2.08	*

4=very much; 3=quite a bit; 2=some; 1=very little

\*p<.05 \*\*p<.01 \*\*\*p<.001 indicates that the overall University average was significantly different from comparison groups

Results from the College Senior Survey (spring 2005) indicate the percentage of Ohio Northern graduating student respondents report “much stronger” abilities compared to when they first started college in the following areas:

	Knowledge of people of different races/cultures	Ability to get along with people of different races/cultures	Understanding of global issues
Ohio Northern Graduating Students (n=177)	13.3%	12.8%	16.8%
Arts and Sciences (n=101)	15.8%	14.9%	19.0%
Business (n=27)	14.8%	14.8%	18.5%
Engineering (n=19)	0.0%	0.0%	10.5%
Pharmacy (n=30)	10.0%	13.3%	13.3%
Selected Peers	20.0%	19.8%	28.3%
All Private 4-Year Colleges	21.8%	21.8%	26.4%

Results from the alumni survey (spring 2005) indicate the extent to which alumni respondents (from 1999-2002) consider their experience at Ohio Northern contributed to their development for the following areas.

	Understanding of global issues	Appreciation for different points of view	Working with persons from diverse backgrounds	Knowledge of people from different cultures and backgrounds
Ohio Northern Graduates (n=399)	2.21	2.69	2.38	2.28
Arts and Sciences (n=178)	2.26	2.80	2.39	2.32
Business (n=46)	2.74	2.78	2.50	2.54
Engineering (n=59)	1.82	2.43	2.10	1.87
Pharmacy (n=116)	2.12	2.62	2.45	2.32

4=very much; 3=quite a bit; 2=some; 1=very little

Results from the employer survey (spring 2005) indicate the extent to which employers of alumni respondents (from 1999-2002) consider the ONU graduate in their employ demonstrates the following:

	Understanding of global issues	Appreciation for different points of view	Working with persons from diverse backgrounds	Knowledge of people from different cultures and backgrounds
Employers of Ohio Northern Graduates (n=137)	2.78	3.18	3.25	2.97
Business-related (n=22)	2.86	3.29	3.18	2.95
Engineering-related (n=20)	2.06	2.74	2.84	2.26
Government (n=9)	3.17	3.00	3.78	3.14
Health-related (n=50)	2.91	3.20	3.29	3.04
Non-profit (n=10)	3.00	3.40	3.20	3.25
Education (n=26)	2.82	3.33	3.40	3.26

4=very much; 3=quite a bit; 2=some; 1=very little

In summary, NSSE and LSSSE ratings for understanding people of other racial and ethnic backgrounds (1.96 for NSSE and 1.80 for LSSSE) are well below a 3.00 and are significantly lower than the ratings for the comparison groups. Less than 20% of CSS respondents indicate

their knowledge of people of different races/cultures (13.3%), ability to get along with people of different races/cultures (12.8%), and understanding of global issues (16.8%) as “much stronger”, which is lower than the comparison groups. Alumni rate their understanding of global issues (2.21), appreciation for different points of view (2.69), working with persons from diverse backgrounds (2.38), and knowledge of people from different cultures and backgrounds (2.28) below a 3.00. Employers rate graduates’ demonstration of skills lower than a 3.00 for understanding of global issues (2.78) and knowledge of people from different cultures and backgrounds (2.97). Employers rate graduates’ demonstration of skills higher than a 3.00 for appreciation for different points of view (3.18) and working with persons from diverse backgrounds (3.25).

### **III. PROGRAMMATIC /OPERATIONAL ADJUSTMENTS**

#### **A. Propose *adjustments*, if any, to the program or the program’s operations in order to narrow the gaps identified between learning objectives and actual outcomes.**

As summarized on page 5, the following items were found to be below the minimum standards of performance:

- Writing abilities (Objective 1)
- Speaking abilities (Objective 1)
- Solving real-world problems (Objective 2)
- Understanding of self (Objective 4)
- Contributing to the welfare of the community (Objective 7)
- Developing a personal code of values and ethics (Objective 8)
- Understanding of people from other racial and ethnic backgrounds (Objective 9)
- Knowledge of people from other racial and ethnic backgrounds (Objective 9)
- Ability to get along with people of difference races and cultures (Objective 9)
- Understanding of global issues (Objective 9)
- Appreciation for different points of view (Objective 9)

Based on the gaps between expected performance and actual results, the University Assessment Committee makes the following recommendations:

1. Each of the five colleges are requested to prioritize two of the first three items (writing abilities, speaking abilities, or solving real-world problems) and one of the remaining eight items. The Committee asks the colleges to examine its curricular (major and general education) and co-curricular programs in terms of the prioritized items and develop ways in which the college will address the gaps in learning. A report from each college detailing its plans is due to the University Assessment Committee (via the Office of Institutional Research) by December 1, 2007.
2. The Office of Student Affairs is requested to prioritize at least two of the following items: understanding of self; contributing to the welfare of the community; developing a personal code of values and ethics; understanding of people from other racial and ethnic backgrounds; knowledge of people from other racial and ethnic backgrounds; ability to

get along with people of difference races and cultures; understanding of global issues; and appreciation for different points of view . The Committee asks the division to examine its programs in terms of the prioritized items and develop ways in which Student Affairs will address the gaps in learning. A report detailing the division's plans is due to the University Assessment Committee (via the Office of Institutional Research) by December 1, 2007.

3. The newly appointed General Education Steering Committee is requested to consider all of the items (the gaps identified in addition to the items found to be at or above the minimum standards of performance) in its review of and recommendations for general education at Ohio Northern University. It is expected that the Committee will address the items in its interim report due to the Office of Academic Affairs on December 1, 2007.

Specifically, the Committee encourages each the above-mentioned parties to consider educational practices known to be promote the desired learning objectives such as writing across the curriculum, increased writing requirements, service-learning requirements (especially reflection activities), multi- or cross-cultural requirements, and first-year experiences.

### **B. Describe the *changes* that need to be made to the assessment plan and practices for the future?**

(Have questions been raised about the effectiveness of the assessment plan? If so, what changes are needed? Are different objectives, measures, analysis, etc. needed? )

In addition to its ongoing assessment practices, the University Assessment Committee plans to continue to develop assessment measures ensuring that each learning objectives is measured both directly and indirectly. Currently, direct measures are needed to assess learning for objectives 4-8:

- Know and rely on themselves
- Listen, understand, and work with others
- Demonstrate technological knowledge and skills
- Contribute to the good of humankind
- Practice truthful and ethical behavior
- Demonstrate cultural understanding and an appreciation for diversity

During the 2007-08 academic year, the Committee will prioritize two of the six learning objectives listed above and administer at least one direct measure designed to assess learning in the prioritized areas.

In addition, the Committee will consider the adoption of an assessment study, similar to the one implemented at the University of Washington, which is designed to assess multiple objectives through a comprehensive, longitudinal, and mixed-method approach.

Lastly, the Committee will query peer and other institutions to determine ways in which these institutions are contributing to the growth of their students in areas that have been identified as being below the minimum standard of performance for Ohio Northern University.