

April 2009

Lakehead University's Highlights from the 2008 National Survey of Student Engagement

The National Survey of Student Engagement (NSSE) is an annual survey of first year and senior year undergraduate students conducted at participating universities across Canada and the United States. Survey responses provide insight into students' backgrounds, current lifestyle and their satisfaction with their university experience. The survey also provides a measure of institutional quality based on students' self-reported educational and personal growth outcomes and based on the occurrence of educational practices that are known to be positively correlated with successful student outcomes.

Commencing in 2006, all publicly funded universities in Ontario agreed to participate in NSSE. Results of selected NSSE questions are used for official reporting purposes (e.g. as a part of multi-year accountability agreements with the Ontario Ministry of Training Colleges and Universities) and as public accountability measures (e.g. Common University Dataset Ontario (CUDO)). Results from selected questions also make their way into publications like the university issue of Maclean's magazine.

At Lakehead University, 1,500 first year and 1,500 senior year students enrolled in the winter term of 2007-2008 were randomly selected and invited to participate in NSSE 2008. A total of 1,195 students completed the survey for a response rate of 40%, which was higher than the 36% response rate for the Ontario university system¹, but lower than the response rate at Lakehead in 2006 (46%).

This document provides a summary of Lakehead University's results for the 2008 NSSE. Results are presented in two ways: as percentages and as means. Percentage values represent the proportion of respondents who answered in the stated way. For example, 25% of responding first year and 23% of responding senior year undergraduate students at Lakehead University rated their entire educational experience at Lakehead as excellent. These results can be assumed to accurately reflect the thoughts of the first year Lakehead University undergraduate student population within +/- 3.1% 19 times out of 20, and the thoughts of the senior year Lakehead University undergraduate student population within +/- 3.3% 19 times out of 20. For analysis, including comparisons with other universities, between Faculties and across NSSE administrations (i.e. NSSE 2006), categorical responses are coded and means are derived and compared using the *t*-test for independent samples. For this report, we use a significance level of either $\alpha=0.01$ or $\alpha=0.05$ for interpreting statistical significance. Statistical significance does not guarantee that the difference in the means is large and worthy of attention by decision makers. Therefore we report the Cohen's *d* effect size (the difference between the means expressed in standard deviation units). Following Cohen's definition, an effect size of less than 0.20 is considered to be trivial, between 0.2 and 0.49 is small, 0.5 to 0.79 is medium and 0.8 or more is large.

¹ Ontario university system calculations represent the responses of first year or senior year undergraduate students at all publicly funded Ontario universities not including Lakehead.

Portrait of Lakehead University Students

Data collected from the NSSE questionnaire provide valuable information about students' backgrounds, lifestyle and financial situation. The self-reported characteristics of undergraduate students attending Lakehead University in the 2007 / 2008 academic year are presented in Table 1. Compared to the Ontario university system, Lakehead University has older students, more first generation students, more Aboriginal students and fewer students who are not Canadian citizens.

Table 1: Self-reported characteristics of first year and senior year undergraduate students attending Lakehead University in the 2007/2008 academic year.

NSSE 2008: Self-Reported Characteristics	First Year	Senior Year
Age (≤ 19)	61%	0.2%
20-23	19%	68%
≥ 24	21%	32%
First generation – mother with no university experience	65%	64%
– father with no university experience	68%	59%
– mother with no post-secondary education	32%	32%
– father with no post-secondary education	40%	32%
Not a Canadian citizen	2%	1%
Aboriginal	9%	9%

Notes: Accurate within +/-3.1% 19 times out of 20 for first year students and within +/- 3.3% 19 times out of 20 for senior year students
No post-secondary education = parent's education is high school or less

First year undergraduate students at Lakehead University live with parents, guardians or relatives (37%), independently (34%), or in on-campus housing / residence (29%). The most popular living arrangement for senior year undergraduate students at Lakehead University is to live independently (60%), followed by living with parents, guardians or relatives (30%), and living in on-campus housing / residence (10%).

Time usage:

- The median Lakehead University undergraduate student, both first year and senior year, spends:
 - 6-10 hours / week on campus outside of class,
 - 11-15 hours / week preparing for class,
 - 0 hours / week participating in co-curricular activities (e.g. organizations, student government, intramural sports).

Finances:

- Personal savings are the most frequently used method of financing some or all of an undergraduate education at Lakehead University.
- Government loans are the most frequently used means of obtaining large sums of money (>\$5,000) to finance an undergraduate education at Lakehead University.
- Financial pressures or work obligations are the biggest obstacle to academic progress at Lakehead University for 35% of first year and 36% of senior year undergraduate students.

Student Satisfaction

Undergraduate students at Lakehead University are satisfied with their university experience and most would select Lakehead if they were to start their undergraduate career again. Specifically:

- 76% of first year and 72% of senior year undergraduate students at Lakehead University rate their entire educational experience as excellent or good.
- 79% of first year and 72% of senior year undergraduate students at Lakehead University would definitely or probably select the same institution if they were to start over again.

The mean response to the 'entire educational experience' question for first year and for senior year students at Lakehead University is significantly different in a negative direction compared to the mean response for first year and for senior year students in the rest of the Ontario university system. In addition, the mean response to the 'attend the same institution again' question for first year and for senior year students at Lakehead University is significantly different in a negative direction compared to the mean response of first year and senior year undergraduate students in the rest of the Ontario university system. However, in all cases, the Cohen's *d* effect sizes are trivial (<0.20).

There were few significant differences when the responses to the satisfaction questions were examined by Faculty. Faculties for which there was a significant difference include:

- First year undergraduate students in the Faculty of Education had a mean response on the 'entire educational experience' question that was significantly different in a positive direction with a small effect size when compared to the rest of the first year undergraduate students at Lakehead University.
- First year undergraduate students in the Faculty of Social Sciences and Humanities had a mean response on the 'entire educational experience' question that was significantly different in a negative direction with a small effect size when compared to the rest of the first year undergraduate students at Lakehead University.
- Senior year students in the Faculty of Engineering had a mean response on the 'attend the same institution again' question that was significantly different in a negative direction with a small effect size when compared to the rest of the senior year undergraduate students at Lakehead University.

The mean response of first year undergraduate students at Lakehead University to the 'entire educational experience' question in 2008 was significantly different in a negative direction when compared to the mean response of first year Lakehead University undergraduate students in 2006. This indicates that the level of satisfaction among first year students at Lakehead University has fallen although the effect size is trivial, indicating that this drop may not be of practical importance.

Educational and Personal Growth

The top three self-reported educational and personal growth outcomes for undergraduate students at Lakehead University are: thinking critically and analytically, acquiring a broad general education and writing clearly and effectively (first year students) / learning effectively on your own (senior year students).

- 80% of first year and 85% of senior year undergraduate students at Lakehead University feel that their experience at Lakehead has helped them 'very much' or 'quite a bit' to think critically and analytically.
- 75% of first year and 82% of senior year undergraduate students at Lakehead University feel that their experience at Lakehead has helped them 'very much' or 'quite a bit' to acquire a broad general education.
- 68% of first year undergraduate students at Lakehead University feel that their experience at Lakehead has helped them 'very much' or 'quite a bit' to write clearly and effectively.
- 78% of senior year undergraduate students at Lakehead University feel that their experience at Lakehead has helped them 'very much' or 'quite a bit' to learn effectively on their own.

On several items, first year Lakehead University undergraduate students' self-reported educational and personal growth outcomes are lower than those of their counterparts in the rest of the Ontario university system. Scores were significantly different and negative for the items using computing and information technology; voting in local, provincial or federal elections; learning effectively on your own; understanding yourself; understanding people of other racial and ethnic backgrounds; solving complex, real-world problems; and developing a deepened sense of spirituality (highlighted red in Table 2).

Senior year Lakehead University undergraduate students' self-reported educational and personal growth outcomes are similar to those of their Ontario counterparts on all but one item. For the item acquiring job or work-related knowledge and skills senior year undergraduate students at Lakehead University had a higher mean score than their Ontario counterparts (highlighted green in Table 2).

For only one educational and personal growth item was the Cohen's *d* effect size greater than trivial. First year Lakehead University undergraduate students were less likely than their Ontario counterparts to feel (with a small effect size) that their experience at Lakehead helped them to understand themselves.

Table 2: The mean responses of first year and senior year undergraduate students at Lakehead University to each of the educational and personal growth questions compared to the mean responses of first year and senior year undergraduate students in the rest of the Ontario university system. For the items highlighted in green, the responses of Lakehead University students are significantly different in a positive direction compared to the Ontario university system; for the items highlighted in red, the responses of Lakehead University students are significantly different in a negative direction compared to the Ontario university system.

NSSE 2008: Mean Educational and Personal Growth Scores <i>To what extent has your experience at this institution contributed to your knowledge, skills and personal development in the following areas?</i>	First Year		Senior Year	
	Lakehead (n=567-575)	Ontario (n=19,000)	Lakehead (n=511-515)	Ontario (n=17,000)
Thinking critically and analytically	3.16	3.19	3.33	3.35
Voting in local, provincial, or federal elections	1.97	2.09	2.01	1.99
Using computing and information technology	2.70	2.81	2.99	2.95
Contributing to the welfare of your community	2.15	2.26	2.30	2.27
Understanding people of other racial and ethnic backgrounds	2.34	2.52	2.42	2.53
Developing a personal code of values and ethics	2.41	2.51	2.56	2.55
Acquiring a broad general education	3.04	3.11	3.19	3.19
Learning effectively on your own	2.83	3.00	3.12	3.12
Working effectively with others	2.77	2.72	3.00	2.91
Solving complex real-world problems	2.43	2.56	2.62	2.61
Analyzing quantitative problems	2.80	2.89	3.01	2.97
Understanding yourself	2.52*	2.71	2.75	2.78
Speaking clearly and effectively	2.52	2.53	2.83	2.85
Developing a deepened sense of spirituality	1.65	1.82	1.58	1.66
Acquiring job or work-related knowledge and skills	2.66	2.62	2.82	2.71
Writing clearly and effectively	2.87	2.77	2.98	3.03

Notes: Response categories: 1= very little, 2= some, 3= quite a bit, 4= very much
 Data weighted prior to analysis to account for differences in enrolment and gender
 Means compared using the t-test for independent samples using significance level of $\alpha = .01$
 Cohen's *d* effect sizes are calculated for items that are found to be significantly different; * indicates a small effect size (0.20-0.49) and no asterisk indicates a trivial effect size (0.19 or less)

To determine how Lakehead University's educational and personal growth results have changed over time, we compared the mean score on each of these items to the mean score received on NSSE 2006 (Table 3). For first year undergraduate students, the mean score for the majority of the educational and personal growth items was not significantly different from the 2006 scores. However, for the four items where there was a significant difference, it was in a negative direction. For senior year undergraduate students, the 2008 mean score was either not significantly different from or significantly different in a positive direction compared to the 2006 scores.

For only one item was the effect size greater than trivial. In 2008, first year Lakehead University undergraduate students were less likely than first year students in 2006 to feel that their experience at Lakehead helped them to vote in elections (small effect size).

Table 3: The mean responses of first year and senior year undergraduate students at Lakehead University on the educational and personal growth questions in 2008 compared to the mean responses of first year and senior year undergraduate students at Lakehead University in 2006. For the items highlighted in green, the responses of 2008 students are significantly different in a positive direction compared to the responses of 2006 students; for the items highlighted in red, the responses of 2008 students are significantly different in a negative direction compared to the responses of 2006 students.

NSSE: Mean Educational and Personal Growth Scores – Lakehead University <i>To what extent has your experience at this institution contributed to your knowledge, skills and personal development in the following areas?</i>	First Year		Senior Year	
	2008 <i>(n=568-576)</i>	2006 <i>(n=560-563)</i>	2008 <i>(n=511-515)</i>	2006 <i>(n=698-701)</i>
Thinking critically and analytically	3.16	3.19	3.33	3.27
Voting in local, state, or national elections	1.97*	2.32	2.01	2.00
Using computing and information technology	2.70	2.76	2.99	2.96
Contributing to the welfare of your community	2.15	2.18	2.30	2.19
Understanding people of other racial and ethnic backgrounds	2.34	2.47	2.42	2.38
Developing a personal code of values and ethics	2.41	2.50	2.56	2.53
Acquiring a broad general education	3.04	3.04	3.19	3.09
Learning effectively on your own	2.83	2.98	3.12	3.06
Working effectively with others	2.77	2.84	3.00	2.94
Solving complex real-world problems	2.43	2.49	2.62	2.58
Analyzing quantitative problems	2.80	2.81	3.01	2.91
Understanding yourself	2.52	2.65	2.75	2.70
Speaking clearly and effectively	2.52	2.54	2.83	2.71
Developing a deepened sense of spirituality	1.65	1.65	1.58	1.62
Acquiring job or work-related knowledge and skills	2.66	2.75	2.82	2.76
Writing clearly and effectively	2.87	2.78	2.98	2.85

Notes: Response categories: 1= very little, 2= some, 3= quite a bit, 4= very much
 Data weighted prior to analysis to account for differences in enrolment and gender
 Means compared using the *t*-test for independent samples using a significance level of $\alpha = .05$
 Cohen's *d* effect sizes are calculated for items that are found to be significantly different; * indicates a small effect size (0.20-0.49) and no asterisk indicates a negligible effect size (0.19 or less)

Educational and personal growth results vary by Faculty. The mean educational and personal growth scores of undergraduate students pursuing their primary major in each of the seven undergraduate Faculties at Lakehead University are presented in Table 4 and Table 5. Orillia campus students are reported separately². Comparisons are with the remaining students in first year or senior year. Scores that are significantly different in a positive direction are highlighted green, while those that are significantly different in a negative direction are highlighted in red.

² At the time the survey was conducted the only program offered at the Orillia campus where students were eligible to complete the NSSE survey was the interdisciplinary Bachelor of Arts and Science along with its honours and concurrent education streams.

Table 4: Mean responses to selected educational and personal growth questions of first year undergraduate students at Lakehead University and within its seven undergraduate Faculties. Orillia campus students are reported separately. For the items highlighted in green, the responses of students in a given Faculty (or at the Orillia campus) are significantly different in a positive direction compared to the rest of the Lakehead University students in that year level; for the items highlighted in red, the responses of students in a given Faculty (or at the Orillia campus) are significantly different in a negative direction compared to the rest of the Lakehead University students in that year level.

NSSE 2008: Mean Educational and Personal Growth Scores – by Faculty <i>To what extent has your experience at this institution contributed to your knowledge, skills and personal development in the following areas?</i> <i>1=very little, 2=some, 3=quite a bit, 4=very much</i>	First Year Students								
	Lakehead	Business (n=35-36)	Education – Concurrent (n=160-162)	Engineering (n=28-29)	Forestry (n=11)	Health and Behavioural Sciences (n=111-113)	Orillia (n=68-69)	Science & Environmental Studies (n=74-75)	Social Sciences & Humanities (n=79-82)
Acquiring job or work-related knowledge and skills	2.65	3.14**	2.46*	3.00	3.18	2.88*	2.59	2.54	2.46
Writing clearly and effectively	2.86	3.03	2.90	2.55	3.09	2.73	3.09*	2.76	2.86
Speaking clearly and effectively	2.51	2.78	2.54	1.96**	2.73	2.58	2.81*	2.25*	2.41
Thinking critically and analytically	3.16	3.28	3.02*	3.28	3.09	3.26	3.33*	3.11	3.09
Analyzing quantitative problems	2.79	3.44**	2.62*	3.41**	2.82	2.71	2.77	3.04*	2.52*
Acquiring a broad general education	3.04	3.03	3.05	2.76	2.91	3.11	3.22*	2.97	2.98
Using computing and information technology	2.68	3.26**	2.44*	3.10*	3.27**	2.69	2.84	2.73	2.47*
Working effectively with others	2.78	3.06	2.72	3.00	3.09	3.04*	2.72	2.59	2.53*
Solving complex real-world problems	2.43	2.56	2.39	2.93**	3.00**	2.44	2.34	2.45	2.22*
Learning effectively on your own	2.84	3.08	2.85	3.03	3.00	2.86	2.68	2.90	2.65*

Notes: Data not weighted

Means compared using the t-test for independent samples using a significance level of $\alpha = .05$

Cohen's *d* effect sizes are calculated for items that are found to be significantly different; * indicates a small effect size (0.20-0.49) and ** indicates a medium effect size (0.50-0.79)

Table 5: Mean responses to selected educational and personal growth questions of senior year undergraduate students at Lakehead University and within its seven undergraduate Faculties. For the items highlighted in green, the responses of students in a given Faculty are significantly different in a positive direction compared to the rest of the Lakehead University students in that year level; for the items highlighted in red, the responses of students in a given Faculty are significantly different in a negative direction compared to the rest of the Lakehead University students in that year level.

NSSE 2008: Mean Educational and Personal Growth Scores – by Faculty <i>To what extent has your experience at this institution contributed to your knowledge, skills and personal development in the following areas?</i> <i>1=very little, 2=some, 3=quite a bit, 4=very much</i>	Senior Year Students								
	Lakehead	Business (n=40-41)	Education - Concurrent (n=105-107)	Engineering (n=62)	Forestry (n=14)	Health and Behavioural Sciences (n=110-113)	Orillia (n=0)	Science & Environmental Studies (n=65-67)	Social Sciences & Humanities (n=109-111)
Acquiring job or work-related knowledge and skills	2.85	3.05	2.86	3.02	3.43**	3.19*		2.58*	2.41**
Writing clearly and effectively	2.99	3.17	2.92	2.45**	3.50**	3.05		2.88	3.22*
Speaking clearly and effectively	2.84	3.17*	2.89	2.31**	3.29	2.96		2.76	2.86
Thinking critically and analytically	3.33	3.39	3.12*	3.35	3.57	3.51*		3.24	3.35
Analyzing quantitative problems	3.00	3.12	2.64**	3.52**	3.50**	3.13		3.12	2.73*
Acquiring a broad general education	3.19	3.15	3.08	3.05	3.43	3.33*		3.33	3.15
Using computing and information technology	2.98	3.39*	2.69*	3.29*	3.57**	2.95		3.09	2.83
Working effectively with others	3.03	3.39*	3.12	3.02	3.50**	3.10		2.70*	2.86
Solving complex real-world problems	2.63	2.93*	2.37*	2.87*	3.00	2.85*		2.43	2.49
Learning effectively on your own	3.12	3.07	3.00	3.40*	3.07	3.19		3.15	3.02

Notes: Data not weighted

Means compared using the *t*-test for independent samples using a significance level of $\alpha = .05$

Cohen's *d* effect sizes are calculated for items that are found to be significantly different; * indicates a small effect size (0.20-0.49),

** indicates a medium effect size (0.50-0.79) and no asterisk indicates a negligible effect size (0.19 or less)

Benchmarks of Effective Educational Practice

The NSSE Institute developed five benchmarks of effective educational practice that form the core of the reports they produce. These benchmarks are: Level of Academic Challenge (LAC), Active and Collaborative Learning (ACL), Student-Faculty Interaction (SFI), Enriching Educational Experiences (EEE), and Supportive Campus Environment (SCE). Each benchmark is comprised of between six to twelve survey questions (items) and can be used to “focus discussions about student engagement and to guide institutional improvement efforts”³. Benchmark scores are calculated for each responding student by converting question responses to a zero to one hundred point scale and calculating the mean of the responses to the questions that make up each benchmark. To be given a benchmark score, a responding student must have answered at least three-fifths of the questions that comprise the benchmark. Institutional benchmark scores are determined from the mean of the students’ benchmark scores. Benchmark scores do not have an absolute meaning; however, comparisons over time and between institutions can provide administrators with useful findings. For all benchmarks, a higher score is better; each of the five benchmarks is positively correlated with self-reported achievements in practical competence, general education and personal and social development⁴.

Lakehead University’s scores are similar to (not significantly different from) those of their Ontario counterparts on most of the benchmark-year categories (Table 6). On the Active and Collaborative Learning benchmark, the score of senior year Lakehead University students is significantly different in a positive direction compared to the senior year students in the rest of the Ontario university system. However, for three benchmark-year categories the mean score of Lakehead University students is significantly different in the negative direction compared to the Ontario university system. This occurs for first year Level of Academic Challenge, first year Enriching Educational Experiences and senior year Enriching Educational Experiences. However, only for first year Enriching Educational Experiences is the effect size, a measure of practical significance, greater than trivial. Compared to Canada Peer Universities⁵, Lakehead scored significantly different and lower on two benchmarks for first year students and significantly different and lower on three benchmarks for senior year students. However, only for the Supportive Campus Environment benchmark for senior year students was the effect size greater than trivial. Lower scores with small and medium effect sizes in comparison to Carnegie Peer students indicate the potential for improvement.

³ [NSSE] National Survey of Student Engagement. (2006). *Interpreting the Benchmark Comparisons Report*. In National Survey of Student Engagement, *NSSE Institutional Report 2006*. Indiana: Indiana University, Bloomington.

⁴ [NSSE] National Survey of Student Engagement (2007). *Validity*. Retrieved January 2008, from http://nsse.iub.edu/html/PsychometricPortfolio_Validity.cfm

⁵ Universities included in the Canada Peers comparison group include: Brock University, Laurentian University, Memorial University of Newfoundland – St. John’s Campus, Saint Mary’s University, Thompson Rivers University, Trent University, Université du Québec à Chicoutimi, Université du Québec à Rimouski, Université du Québec à Trois-Rivières, Université du Québec en Abitibi-Témiscamingue, University of British Columbia – Okanagan, University of Ontario Institute of Technology, University of Prince Edward Island, and Wilfrid Laurier University.

Table 6: Mean benchmark scores for Lakehead University, compared to the mean benchmark scores for the Ontario university system, Canada Peer Universities and Carnegie Peer Universities. For the items highlighted in green, the responses of Lakehead University students are significantly different in a positive direction compared to the comparison group; for the items highlighted in red, the responses of Lakehead University students are significantly different in a negative direction compared to the comparison group.

NSSE 2008: Mean Benchmark Scores	First Year				Senior Year			
	Lakehead (n=582- 633)	Ontario (n≅ 19,000)	Canada Peers (n≅7,500)	Carnegie Peers (n≅6,000)	Lakehead (n=517- 551)	Ontario (n≅ 17,000)	Canada Peers (n≅5,500)	Carnegie Peers (n≅5,500)
Level of Academic Challenge (LAC)	49.9	51.4	50.3	51.4	56.2	55.9	56.0	56.1
Active and Collaborative Learning (ACL)	35.7	35.3	37.7	43.6*	46.8	44.0	47.7	53.4*
Student-Faculty Interaction (SFI)	25.0	23.5	24.6	34.5**	33.0	32.8	35.7	45.0**
Enriching Educational Experiences (EEE)	22.2	25.1*	23.8	26.1*	32.0	34.9	34.0	41.5**
Supportive Campus Environment (SCE)	55.5	55.9	57.3	61.3*	52.0	51.5	56.0*	59.6*

Notes: Data weighted prior to analysis to account for differences in enrolment and gender
Means compared using the *t*-test for independent samples using a significance level of $\alpha = .01$
Cohen's *d* effect sizes are calculated for items that are found to be significantly different; * indicates a small effect size (0.20-0.49),
** indicates a medium effect size (0.50-0.79) and no asterisk indicates a trivial effect size (less than 0.19)

Each benchmark is composed of questions representing items (activities or practices) correlated to positive student outcomes and superior institutional quality. Several items representing good practices at Lakehead University are found within individual benchmark items.

Areas of excellence, compared to the Ontario university system, for first year undergraduate students at Lakehead University include:

- Asking questions in class / contributing to class discussions
- Working with other students on projects during class
- Discussing grades or assignments with an instructor
- Talking about career plans with a faculty member or advisor
- Number of short and medium length papers written
- Participating in a practicum, internship, field experience, co-op or clinical assignment
- High quality relationships with faculty members

Areas of excellence, compared to the Ontario university system, for senior year undergraduate students at Lakehead University include:

- Working with other students on projects during class
- Working with classmates outside of class to prepare class assignments
- Participating in a community-based project as part of a regular course
- Number of long length papers written
- Participating in a learning community or some other formal program where groups of students take two or more classes together

- High quality relationships with other students
- High quality relationships with faculty members

Lakehead University's benchmark scores for NSSE 2008 can be compared to benchmark scores from NSSE 2006. For the majority of the benchmark scores, there was no significant difference between the scores received on NSSE 2008 and the scores on NSSE 2006 (Table 7). The most important exceptions were that the first year scores on the Active and Collaborative Learning and the Enriching Educational Experiences benchmarks were significantly different and lower in 2008 compared to 2006; however, the effect size was trivial. For senior year students the 2008 score on the Student-Faculty Interaction benchmark was significantly different and positive, with a trivial effect size, compared to the score in 2006.

Table 7: Mean benchmark scores for first year and senior year undergraduate students at Lakehead University in 2008 compared to the mean benchmark scores for first year and senior year undergraduate students at Lakehead University in 2006. For the items highlighted in green, the responses of students in 2008 are significantly different in a positive direction compared to the responses of students in 2006; for the items highlighted in red, the responses of students in 2008 are significantly different in a negative direction compared to the responses of students in 2006.

NSSE: Mean Benchmark Scores – Lakehead University	First Year		Senior Year	
	2008 (n=582-633)	2006 (n=567-624)	2008 (n=517-551)	2006 (n=708-757)
Level of Academic Challenge (LAC)	49.9	50.9	56.2	55.9
Active and Collaborative Learning (ACL)	35.7	38.5	46.8	45.2
Student-Faculty Interaction (SFI)	25.0	24.2	33.0	30.7
Enriching Educational Experiences (EEE)	22.2	24.0	32.0	31.6
Supportive Campus Environment (SCE)	55.5	56.2	52.0	50.8

Notes: Data weighted prior to analysis to account for differences in enrolment and gender
Means compared using the *t*-test for independent samples using a significance level of $\alpha = .05$
Cohen's *d* effect sizes are calculated for items that are found to be significantly different; no asterisk indicates a trivial effect size (less than 0.19)

To assess the presence of effective educational practices by Faculty, we compared the mean scores on all five benchmarks for each of the seven undergraduate Faculties to the mean score for the rest of the first year or senior year Lakehead University students. We also compared the mean score of students at the Orillia campus to the rest of the first year students at Lakehead University. Table 8 presents the mean scores and, where significantly different, the effect size for first year students, while Table 9 presents the results for senior year students. Positive and significant scores are highlighted in green, while negative and significant scores are highlighted in red.

Table 8: The mean benchmark scores of first year students at Lakehead University by undergraduate Faculty. Orillia campus students are reported separately. For the items highlighted in green, the responses of students in a given Faculty (or at the Orillia campus) are significantly different in a positive direction compared to the rest of the Lakehead University students in that year level; for the items highlighted in red, the responses of students in a given Faculty (or at the Orillia campus) are significantly different in a negative direction compared to the rest of the Lakehead University students in that year level.

NSSE 2008: Mean Benchmark Scores – By Faculty	First Year				
	Level of Academic Challenge	Active and Collaborative Learning	Student-Faculty Interaction	Enriching Educational Experiences	Supportive Campus Environment
Lakehead (Total)	49.9	35.8	24.8	22.3	55.6
Business (<i>n</i> =36-38)	49.7	38.6	24.5	20.5	53.0
Education – Concurrent (<i>n</i> =163-175)	48.8	35.7	24.6	22.6	56.3
Engineering (<i>n</i> =29-35)	58.0**	35.9	22.5	21.2	51.8
Forestry (<i>n</i> =11)	48.2	47.2**	28.3	22.9	63.6
Health and Behavioural Sciences (<i>n</i> =117-126)	48.7	35.1	24.5	23.9	54.1
Orillia (<i>n</i> =69-73)	55.4*	40.9*	28.7*	21.0	58.6
Science & Environmental Studies (<i>n</i> =75-85)	49.9	32.0*	22.9	22.0	56.2
Social Sciences & Humanities (<i>n</i> =83-90)	46.9*	33.9	24.5	22.0	54.7

Notes: Data not weighted

Means compared using the *t*-test for independent samples using a significance level of $\alpha = .05$

Cohen's *d* effect sizes are calculated for items that are found to be significantly different; * indicates a small effect size (0.20-0.49) and ** indicates a medium effect size (0.50-0.79)

Table 9: The mean benchmark scores of senior year students at Lakehead University by undergraduate Faculty. For the items highlighted in green, the responses of students in a given Faculty are significantly different in a positive direction compared to the rest of the Lakehead University students in that year level; for the items highlighted in red, the responses of students in a given Faculty are significantly different in a negative direction compared to the rest of the Lakehead University students in that year level.

NSSE 2008: Mean Benchmark Scores – By Faculty	Senior Year				
	Level of Academic Challenge	Active and Collaborative Learning	Student-Faculty Interaction	Enriching Educational Experiences	Supportive Campus Environment
Lakehead (Total)	56.4	47.2	33.0	32.4	52.1
Business (<i>n</i> =41-42)	60.5	54.1*	31.8	27.1*	54.1
Education – Concurrent (<i>n</i> =106-114)	56.3	51.4*	31.4	34.2	51.3
Engineering (<i>n</i> =62-67)	59.6	39.3**	25.9*	26.8*	50.7
Forestry (<i>n</i> =14-15)	67.3***	51.7	45.5**	41.4**	62.9**
Health and Behavioural Sciences (<i>n</i> =114-118)	57.0	49.8	34.2	36.0*	51.5
Science & Environmental Studies (<i>n</i> =69-75)	53.7	43.5	36.4	30.3	49.3
Social Sciences & Humanities (<i>n</i> =111-121)	53.0*	44.7	34.2	32.2	54.0

Notes: Data not weighted

Means compared using the *t*-test for independent samples using a significance level of $\alpha = .05$

Cohen's *d* effect sizes are calculated for items that are found to be significantly different; * indicates a small effect size (0.20-0.49), ** indicates a medium effect size (0.50-0.79) and *** indicates a large effect size (≤ 0.80)

For the Faculty of Forestry and the Forest Environment, the Faculty of Health and Behavioural Sciences and the Faculty of Education, a comparison of benchmark scores for both first year and senior year students showed that responses were either not significantly different from those of the rest of the first year or senior year population at Lakehead University or significantly different with a positive effect. Where the mean benchmark scores for the Faculty of Social Sciences and Humanities and the Faculty of Science and Environmental Studies were significantly different from the rest of the student body, it was in the negative direction. While there were several significant differences for the Faculty of Business and the Faculty of Engineering, the type and the magnitude of the differences varied by benchmark and year level (Table 7 and Table 8).

First year students at the Orillia campus had mean scores that were significantly different and positive compared to the rest of the first year students at Lakehead University on the Level of Academic Challenge, Active and Collaborative Learning and Student-Faculty Interaction benchmarks.