

2006 National Survey of Student Engagement Scores for First-Year Students In Freshman Learning Communities

As part of the comprehensive review of the Freshman Learning Communities, 2006 National Survey of Student Engagement (NSSE) responses of first-year students enrolled in the FLC program are compared with responses of other first-year students. Norma Fewell of the Office of Information Management used student identification numbers to identify which 2006 NSSE responders were in a learning community. Note that these results provide a snapshot of the FLC program in 2006; recent changes in the FLC program may mean that these results may not apply to the program's current configuration.

A total of 179 first-year students in the cohort were identified as having participated in the 2006 NSSE. Of those, 69 (38.5%) were enrolled in a freshman learning community and 110 (61.5%) were not. The FLC group was, on average, 2.5 years younger than the non-FLC group, a statistically significant difference. There were no significant differences between the two groups in sex, race/ethnicity, or SAT or ACT scores. No attempt has been made in these analyses to control for differences in demographic characteristics between the two groups.

Demographic Variable	FLC (n = 69)	Non-FLC (n = 110)
Mean Age**	20.52 ± 4.98	23.03 ± 8.00
% Age 23 or Younger*	87.1%	74.0%
% Female	73.4%	69.6%
% Caucasian	95.5%	97.1%
Mean SAT Total Score	975.74 ± 145.00	990.87 ± 147.15
Mean SAT Math Score	492.77 ± 88.48	490.00 ± 76.81
Mean SAT Verbal Score	482.98 ± 77.65	500.87 ± 86.00
Mean ACT Score	19.79 ± 3.12	21.33 ± 3.58

* $p = .05$

** $p < .05$

Benchmark Scores

NSSE reports five *Benchmarks of Educational Practice* which are related to gains in student development and achievement. The five major NSSE Benchmark Scores for each group are presented in the table below.

Benchmark Score	Group	Mean	Standard Deviation	Statistical Significance	Effect Size*
Level of Academic Challenge	FLC	50.00	14.29	n.s. †	n/a
	Non-FLC	46.06	12.14		
Active and Collaborative Learning	FLC	46.67	16.65	.001	.50
	Non-FLC	38.04	17.11		

Student - Faculty Interaction	FLC Non-FLC	34.32 27.57	17.45 18.32	.018	.37
Enriching Educational Experiences	FLC Non-FLC	30.01 17.87	12.88 11.02	.000	1.01
Supportive Campus Environment	FLC Non-FLC	59.84 52.86	15.11 18.70	.013	.39

*NSSE recommends these interpretations of effect sizes: .1 = small; .3 = medium; .5 = large; .7 = very large

†n.s. = not significant

While students in the learning communities reported a marginally higher level of academic challenge, they scored significantly higher on all other benchmarks. Participation in FLC had a moderate impact on the amount and quality of Student-Faculty Interaction. FLC participation had a large impact on Active and Collaborative Learning, with students in FLC's being more likely to report such experiences. FLC students reported experiencing a more Supportive Campus Environment than non-FLC students, with the FLC experience having a medium-to-large effect on this benchmark.

FLC status had the largest effect on the Enriching Educational Experiences benchmark. This difference between the two groups is artificially inflated, because the benchmark includes an item about learning community participation. However, that is just one of many items contributing to this score. To further understand these findings, we can examine student scores on NSSE "scalelets," mini-scales of NSSE items that cluster together and have been shown to have high reliability and validity. Three scalelets, Use of Information Technology, Emphasis on Diversity, and Varied Educational Experiences, are related to the Enriching Educational Experiences benchmark. Results for each scalelet and the individual items comprising it are presented in the table below.

Enriching Educational Experiences Scalelet/Item	FLC Status	Mean	Standard Deviation	Statistical Significance	Effect Size
<i>Use of Information Technology (Scalelet)</i>	FLC Non-FLC	70.49 58.97	19.52 23.28	.001	.51
Used an electronic medium (list-serv, chat group, internet, etc.) to discuss or complete an assignment ¹	FLC Non-FLC	2.67 2.32	1.07 1.02	< .001	.32
Used email to communicate with an instructor ¹	FLC Non-FLC	3.09 2.69	.74 .95	.003	.44
Institution emphasizes using computers in academic work ²	FLC Non-FLC	3.59 3.31	.56 .81	.008	.38
<i>Emphasis on Diversity (Scalelet)</i>	FLC Non-FLC	48.78 41.13	23.29 24.91	.03	.35
Had serious conversations with students of a different race or ethnicity than your own ¹	FLC Non-FLC	2.18 2.08	.95 1.03	n.s.	n/a

Had serious conversations with students who differ from you in terms of their religious beliefs, political opinions, or personal values ¹	FLC	2.62	.86	n.s.	n/a
	Non-FLC	2.33	1.04		
Institution emphasizes encouraging contact among students from different economic, social, and racial or ethnic backgrounds ²	FLC	2.58	1.02	.009	.43
	Non-FLC	2.17	.90		

¹In your experience at your institution during the current school year, about how often have you.... 1=never, 2=sometimes, 3=often, 4=very often

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

FLC students, compared to Non-FLC students, reported much higher levels of Use of Information Technology. More than half of FLC students said they "often" or "very often" used an electronic medium to discuss or complete an assignment, compared to 40% of non-FLC students. While every FLC student reported contacting an instructor at least sometimes via email, 7% of non-FLC students reported they had never done so. Far more FLC students (77%) than non-FLC students (50%) reported using email to contact an instructor "often" or "very often." Nearly all (97%) of FLC students reported that IU Kokomo places "quite a bit" or "very much" emphasis on using computers in academic work, while 82% of non-FLC students reported this level of emphasis.

FLC students were somewhat more likely to report a higher level of institutional emphasis on diversity. Although these students did not report higher levels of serious conversations with students who were different from themselves in terms of race/ethnicity or in terms of personal values and beliefs, they did report higher levels of institutional emphasis on encouraging contact with students with diverse backgrounds.

The third scalelet, Varied Educational Experiences, was influenced almost exclusively by the item asking whether students were participating in a learning community. Most of the items in this section ask whether a student has completed certain experiences (e.g., senior capstone experience, study abroad, independent research) that first-year students have little opportunity to have completed, so it is not surprising that there was no difference between the two groups on those items. They did differ in how much emphasis they believed that IU Kokomo places on attending campus events and activities. FLC students were significantly more likely to perceive a stronger emphasis on attending campus events such as special speakers, cultural performances, and the like, as compared to non-FLC students: 2/3 of FLC students, compared to fewer than half of non-FLC students, said that IU Kokomo places strong emphasis on attending such events. However, FLC students did not differ from non-FLC students in the amount of time they spent participating in co-curricular activities.

FLC Goal: Forming Community

One of the major goals of the Freshman Learning Community project is to form a community of learners. The table below shows the results for four scalelets related to the goal of forming a community of learners: Collaborative Learning, Course-Related Interactions with Faculty, Out-of-Class Interactions with Faculty, and Interpersonal Environment. The scores for each scalelet are listed in the table below. The individual NSSE items comprising each scalelet are listed following the scalelet name.

Forming Community Scalelet/Item	FLC Status	Mean	Standard Deviation	Statistical Significance	Effect Size
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<i>Collaborative Learning (scalelet)</i>	FLC Non-FLC	44.04 39.38	19.27 20.12	n.s.	n/a
Worked with other students on projects during class ¹	FLC Non-FLC	2.83 2.53	.84 .82	.02	.35
Worked with classmates outside of class to prepare class assignment ¹	FLC Non-FLC	2.29 2.13	.88 .82	n.s.	n/a
Tutored or taught other students (paid or voluntary) ¹	FLC Non-FLC	1.38 1.47	.69 .83	n.s.	n/a
Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.) ¹	FLC Non-FLC	2.83 2.59	.93 .85	n.s.	n/a
<i>Course-Related Interactions with Faculty (scalelet)</i>	FLC Non-FLC	45.81 37.63	21.29 21.34	.02	.37
Discussed grades or assignments with an instructor ¹	FLC Non-FLC	2.62 2.35	.84 .83	.04	.32
Discussed ideas from your readings or classes with faculty members outside of class ¹	FLC Non-FLC	1.90 1.68	.93 .81	n.s.	n/a
Received prompt feedback from faculty on your academic performance (written or oral) ¹	FLC Non-FLC	2.62 2.36	.80 .83	.046	.31
<i>Out-of-Class Interactions with Faculty (scalelet)</i>	FLC Non-FLC	22.58 17.20	19.55 18.96	n.s.	n/a
Talked about career plans with a faculty member or advisor ¹	FLC Non-FLC	2.22 2.01	.84 .84	n.s.	n/a
Worked with faculty members on activities other than coursework (committees, orientation, student-life activities, etc.) ¹	FLC Non-FLC	1.51 1.37	.79 .75	n.s.	n/a
Have you or do you plan to work on a research project with a faculty member outside of course or program requirements? (% have + % plan to)	FLC Non-FLC	28.6% 14.4%	--- ---	.04	.22†
<i>Interpersonal Environment (scalelet)</i>	FLC Non-FLC	70.43 63.41	15.83 20.27	.01	.40
Quality of relationships with other students ³	FLC Non-FLC	5.42 5.01	1.36 1.31	n.s.	n/a
Quality of relationships with faculty members ⁴	FLC Non-FLC	5.50 4.98	1.10 1.39	.01	.39

Quality of relationships with administrative personnel and offices ⁵	FLC	4.68	1.36		
	Non-FLC	4.39	1.72	n.s.	n/a

*Cohen's *d* except where indicated.

†Cramer's *V*

¹In your experience at your institution during the current school year, about how often have you.... 1=never, 2=sometimes, 3=often, 4=very often

³ 1=unfriendly, unsupportive, sense of alienation to 7=freindly, supportive, sense of belonging

⁴ 1=unavailable, unhelpful, unsympathetic to 7 = available, helpful, sympathetic

⁵ 1=unhelpful, inconsiderate, rigid to 7=helpful, considerate, flexible

There was no significant difference between FLC and non-FLC students in how much they engaged in collaborative learning *outside* of class; about 28% of students in each group reported they "often" or "very often" worked with classmates on assignments outside of class. As well, more than two-thirds of the students in each group said they had never tutored other students. On the other hand, FLC students were significantly more likely to have worked with other students *in* class. More than 60% of FLC students reported they "often" or "very often" worked with other students in class, compared to only 46% of non-FLC students. Interestingly, a little over 7% of non-FLC students, compared to 3% of FLC students, reported they *never* worked with other students in class.

FLC students reported substantially higher *course-related* interactions with faculty members than did non-FLC students. They were more likely to have discussed grades or assignments with their instructors—96% of FLC students and 88% of non-FLC students had discussed grades or assignments with instructors at least sometimes during the current school year. FLC students also were more likely to report that they received prompt feedback from faculty on their work, with 54% saying they "often" or "very often" received prompt feedback, compared to 41% of non-FLC students. However, FLC students did not report higher *out-of-class* interactions with faculty members, although more did report that they had worked, or planned to work, with a faculty member on research.

FLC students perceived a more positive interpersonal environment at IU Kokomo. Their relationships with other students were only marginally more positive, perhaps because both groups reported very high levels of positive relationships with other students--72% non-FLC and 75% of FLC students characterized their relationships with their peers as friendly, supportive, and conveying a sense of belonging. FLC students' relationships with faculty members were substantially more positive than those of non-FLC students—83% of FLC students, compared to 63% of non-FLC students, rated faculty as being available, helpful, and sympathetic. Unfortunately, FLC experience had no impact on the quality of relationships with administrative personnel and offices, with only 49% of non-FLC students and 47% of FLC students perceiving personnel in these offices as being helpful, considerate, and flexible.

FLC Goal: Promoting Skills in Writing and Public Speaking

Another goal of the Freshman Learning Community program is to promote skills in writing and public speaking. The NSSE scalelet and individual items related to this goal are listed in the table below.

Writing and Speaking Skills Scalelet/Item	FLC Status	Mean	Standard Deviation	Statistical Significance	Effect Size
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<i>Writing (Scalelet)</i>	FLC Non-FLC	46.42 41.73	13.01 12.21	.02	.37
Prepared two or more drafts of a paper or assignment before turning it in ¹	FLC Non-FLC	2.99 2.99	.92 .91	n.s.	n/a
Worked on a paper or project that required integrating ideas or information from various sources ¹	FLC Non-FLC	3.48 3.13	.66 .72	.001	.49
Number of written papers or reports of 20 pages or more during current school year ⁶	FLC Non-FLC	1.29 1.24	.82 .60	n.s.	n/a
Number of written papers or reports between 5 and 19 pages during current school year ⁶	FLC Non-FLC	2.23 2.09	.84 .71	n.s.	n/a
Number of written papers or reports of fewer than 5 pages during current school year ⁶	FLC Non-FLC	2.83 2.49	.96 .79	.01	.39
<i>Speaking (not a Scalelet)</i>					
Made a class presentation ¹	FLC Non-FLC	2.90 2.31	.71 .80	<.001	.75
Asked questions in class or contributed to class discussions ¹	FLC Non-FLC	2.84 2.67	.82 .83	n.s.	n/a

¹In your experience at your institution during the current school year, about how often have you.... 1=never, 2=sometimes, 3=often, 4=very often

⁶1=none, 2=between 1 & 4, 3=between 5 & 10, 4=between 11 & 20, 5=more than 20

FLC students scored significantly higher on the Writing scalelet, though they were *not* more likely to prepare two or more drafts of a paper before turning it in. About 2/3 of students in each group said they “often” or “very often” prepared multiple drafts. FLC students did report working on a paper or project requiring integrating ideas or information more frequently than did non-FLC students--over 91% of FLC students said they “often” or “very often” worked on such projects, compared to 82% of non-FLC students. FLC students also reported having written more papers of five or fewer pages than did non-FLC students, with over 60% of FLC students and 42% of non-FLC students having written 5 or more of such papers during the current school year. These differences may be attributed, in part, to the fact that FLC students took Freshman Composition as part of their FLC experience. Many non-FLC students may have already taken or tested out of freshman composition and may not have been in a composition course during the year.

Regarding public speaking, FLC students were substantially more likely to have made a class presentation than the non-FLC students. Over 13% of non-FLC students reported they never had made a class presentation, compared to only 1% of FLC students. This is not surprising, given that FLC students were taking Public Speaking at the time NSSE was administered. There was no difference between FLC and non-FLC students in how much they asked questions or contributed to class discussions. Most (96-97%) students reported they at least sometimes asked questions or contributed to class discussions.

FLC Goal: Promoting Academic Success

A third goal of the Freshman Learning Community program is to promote academic success. NSSE scalelets related to this goal include Support for Student Success and Course Challenge. Results for these scalelets, and the individual items comprising the scalelets, are presented in the table below.

Promoting Academic Success Scalelet/Item	FLC Status	Mean	Standard Deviation	Statistical Significance	Effect Size
<i>Support for Student Success (Scalelet)</i>	FLC Non-FLC	50.00 42.39	21.41 23.99	.04	.32
Institution emphasizes providing the support you need to help you succeed academically ²	FLC Non-FLC	3.23 2.82	.75 .88	.002	.24
Institution emphasizes helping you cope with non-academic responsibilities (work, family, etc.) ²	FLC Non-FLC	2.05 1.91	.86 .92	n.s.	n/a
Institution emphasizes providing the support you need to thrive socially ²	FLC Non-FLC	2.22 2.08	.85 .84	n.s.	n/a
<i>Course Challenge (Scalelet)</i>	FLC Non-FLC	59.86 59.14	14.58 13.61	n.s.	n/a
Worked harder than you thought you could to meet an instructor's standards or expectations ¹	FLC Non-FLC	2.57 2.40	.92 .82	n.s.	n/a
Come to class without completing readings or assignments ¹	FLC Non-FLC	2.10 2.05	.71 .74	n.s.	n/a
Examinations during the current school year challenged you to do your best work ¹	FLC Non-FLC	5.26 5.51	1.07 1.31	n.s.	n/a
How many hours a week do you spend preparing for class ⁷	FLC Non-FLC	3.59 3.61	1.51 1.38	n.s.	n/a
Institution emphasizes spending significant amounts of time studying and on academic work ²	FLC Non-FLC	3.27 3.16	.62 .67	n.s.	n/a

¹In your experience at your institution during the current school year, about how often have you.... 1=never, 2=sometimes, 3=often, 4=very often

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

⁷1=0 hrs/week, 2=1-5 hrs/week, 3=6-10 hrs/week, 4=11-15 hrs/week, 5=16-20 hrs/week, 6=21-25 hrs/week, 7=26-30 hrs/week, 8=more than 30 hrs/week

FLC students perceived significantly higher levels of support for their success than non-FLC students, especially in terms of their academic success. Over 80% of FLC students (compared to 62% of non-FLC students) reported that IU Kokomo "quite a bit" or "very much" emphasized providing support they need to succeed academically. However, there was no significant difference between the two groups in how much emphasis they thought IU Kokomo placed on providing support in non-academic areas.

The two groups did not differ from each other on any of the measures of course challenge. About 20% of

students in each group reported they "often" or "very often" came to class without having completed the readings or assignments. About 80% of students in each group reported that their exams challenged them to do their best work. About 40% of students in each group reported spending more than 10 hours a week preparing for class; about a quarter of students reported spending less than 6 hours a week preparing for class.

NSSE researchers have developed a "Deep Learning" scale which taps into how much students use deep-level processing, such as going beyond memorization of content to working to understand its meaning, reflecting on one's own learning processes, and integrating information from various sources. Deep-level processing has been shown to be related to higher grades, better retention of new information, and better transfer of learning to new situations—all important to student success. FLC students scored significantly higher than their non-FLC peers on the Deep Learning scale.

The Deep Learning scale is composed of three subscales: Higher-Order Thinking, Integrative Learning, and Reflective Learning. Results for these three subscales, and the items that comprise them, are shown in the following table.

Deep Learning Subscale/Item	FLC Status	Mean	Standard Deviation	Statistical Significance	Effect Size
<i>Higher-Order Thinking (Subscale)</i>	FLC Non-FLC	62.31 58.33	25.90 22.83	n.s.	n/a
Coursework emphasizes analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components ²	FLC Non-FLC	2.94 3.85	.93 .73	n.s.	n/a
Coursework emphasizes synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships ²	FLC Non-FLC	2.82 2.67	.97 .83	n.s.	n/a
Coursework emphasizes making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions ²	FLC Non-FLC	2.91 2.70	.88 .85	n.s.	n/a
Coursework emphasizes applying theories or concepts to practical problems or in new situations ²	FLC Non-FLC	2.82 2.78	.92 .87	n.s.	n/a
<i>Integrative Learning (Subscale)</i>	FLC Non-FLC	57.68 49.97	18.05 17.08	.005	.43
Worked on a paper or project that required integrating ideas or information from various sources ¹	FLC Non-FLC	3.48 3.13	.66 .72	.001	.49

Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments ¹	FLC Non-FLC	2.91 2.68	.85 .81	n.s.	n/a
Put together ideas or concepts from different courses when completing assignments or during class discussions ¹	FLC Non-FLC	2.54 2.42	.82 .73	n.s.	n/a
Discussed ideas from your readings or classes with faculty members outside of class	FLC Non-FLC	1.90 1.68	.93 .81	n.s.	n/a
Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.) ¹	FLC Non-FLC	2.83 2.59	.93 .85	n.s.	n/a
<i>Reflective Learning (Subscale)</i>	FLC Non-FLC	58.29 51.32	26.43 26.57	n.s.	n/a
Examined the strengths and weaknesses of your own views on a topic or issue ¹	FLC Non-FLC	2.74 2.32	.92 1.01	.008	.42
Tried to better understand someone else's views by imagining how an issue looks from his or her perspective ¹	FLC Non-FLC	2.82 2.66	.98 .87	n.s.	n/a
Learned something that changed the way you understand an issue or concept ¹	FLC Non-FLC	2.69 2.65	.87 .93	n.s.	n/a

¹In your experience at your institution during the current school year, about how often have you.... 1=never, 2=sometimes, 3=often, 4=very often

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

FLC students did not differ from non-FLC students on items related to Higher Order Thinking, such as how much their coursework emphasized analysis, synthesis, and other higher-order cognitive tasks. Similarly, FLC students did not differ from non-FLC students on items related to Reflective Learning, with the exception that FLC students more often examined the strengths and weaknesses of their own views. 92% of FLC students reported they at least sometimes examined their own views, compared to 76% of non-FLC students.

FLC students did differ significantly from non-FLC students on the Integrative Learning subscale. This is important because interdisciplinary learning is a stated goal of the FLC program. FLC students more often worked on projects that required integrating ideas from various sources compared to their non-FLC peers: 91% of FLC students reported working on these kinds of projects, compared to 82% of the non-FLC students. Although there were no significant differences among the other items for this subscale, for each item, FLC students reported slightly higher levels of integrative learning activities than their non-FLC peers, contributing to the substantial difference between FLC and non-FLC students on the scale as a whole.

Other Items of Interest

Students in the FLC program, compared to freshmen who were not, were substantially more likely to say that IU Kokomo had contributed to their ability to work effectively with others, to solve complex real-world

problems, and contribute to the welfare of their community. In addition, FLC students, more than their peers, said that IU Kokomo had contributed to their self-understanding and their development of a personal code of values and ethics. FLC students were more positive about the quality of their academic advising than non-FLC students, even though, at the time of this NSSE administration (spring 2006), academic advisors were not a formal part of the FLC program.

FLC students did not differ from non-FLC students in their evaluation of their entire educational experience at IU Kokomo. Neither were they more likely to say that if they could start over again, they would choose to go to IU Kokomo.

Summary

FLC students, as compared to non-FLC students,

- Scored substantially higher on four of the five NSSE benchmarks.
- Reported higher levels of information technology use in their coursework.
- Reported a stronger institutional emphasis on diversity.
- Reported higher levels of course-related interactions with faculty and much more positive relationships with faculty.
- Reported greater levels of prompt feedback from faculty.
- Reported higher levels of institutional support for their academic success.
- Reported somewhat greater levels of integrative learning.
- Reported doing more writing and public speaking in their courses.
- Perceived a stronger institutional contribution to their personal development, including a personal code of ethics.

No differences were found between FLC and non-FLC students on their reports of

- Amount of academic challenge.
- Amount of deep learning they engage in, including amount of higher-order (beyond memorization) and reflective thinking emphasized by their courses.
- Amount of collaborative learning, especially outside of the classroom.
- Amount of out-of-class interactions with faculty or students.
- Amount of non-academic support offered by IU Kokomo.
- Quality of relationships with other students or administrative personnel.
- Amount of interaction with diverse students.
- The likelihood that they would choose IU Kokomo if they could start over again.
- Their overall evaluation of their educational experience at IU Kokomo.

Discussion

Student responses to the 2006 National Survey of Student Engagement suggest that Freshman Learning Community students are substantially more engaged, as measured by NSSE benchmarks, than their peers. A major goal of the FLC program is to form a community of learners. NSSE results indicate that this goal is partially met--FLC students have more positive relationships with faculty, and more course-related interactions with faculty, than do their non-FLC peers. They do not, however, have more positive relationships with their peers or with administrative personnel. They also do not participate more often in co-curricular activities.

NSSE results also suggest that the FLC experience contributes somewhat less to factors associated with student

success, such level of academic challenge and amount of higher-order and reflective thinking. FLC students do, however, report substantially using information technology at substantially higher levels, and they perceive greater levels of institutional support for their academic success than do their peers.

NSSE is not a direct indicator of improvement in writing and public speaking. Other, more direct assessment of these student learning outcomes is recommended.

It is recommended that the campus review the 2009 NSSE results when they become available in fall 2009. With the current configuration of the FLC program, it is unlikely that there will be very many first-year students who have not taken NSSE to use as a comparison group, but scores from the 2009 FLC cohort can be compared to the 2006 cohort to see whether patterns of responses have changed as the FLC program has changed. FLC faculty can help the campus achieve a good response rate by encouraging their students to participate in NSSE in spring.