

Deep Learning Items  
from the NSSE and FSSE Surveys:  
A Comparison of Student Experiences  
and Faculty Expectations

Office of Institutional Research

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The National Survey of Student Engagement (NSSE), coordinated by the Indiana University Center for Postsecondary Research, collects information from samples of first year and senior students about the nature and quality of their undergraduate experience. The standard NSSE sampling scheme calls for an equal number of randomly sampled first-year and senior students to comprise the institution's sample, with the sample size based on the total number of undergraduate students enrolled at the institution. URI students were surveyed in 2002, 2005, and 2007, but only data from the 2007 implementation are used here.

The Faculty Survey of Student Engagement (FSSE) complements NSSE and measures faculty members' expectations of student engagement in educational practices that are empirically linked with high levels of learning and development. Faculty members respond to the online survey choosing between two options that are either "course-based" or "typical student" questions. URI used the "course-based" method in 2008, the one time this survey was administered.

Because the surveys were designed to be complementary, some items in both NSSE and FSSE allow institutions to examine how faculty and students respond to similar questions. Using a set of twelve NSSE-FSSE items identified by the Wabash National Study of Liberal Arts Education (of which URI is a participant) as being associated strongly with deep learning (see appendix for reference), this report compares response distributions and scaled averages. The analyzed items relate to three areas: Integrative Learning, Higher Order Learning, and Reflective Learning.

Before proceeding to the results, several issues should be recognized when interpreting the data:

1. The perspectives of students and faculty are different and their understanding of the questions may be at variance, especially where NSSE and FSSE wording is slightly different. Only four of the items have identically worded response choices; in eight items the response wording is different. Students are asked to rate the *frequency* of some activity occurring whereas faculty are asked to rate the *importance level* of the activity. This admits a degree of incongruence in comparisons and the results estimate the proximity of student experiences with faculty expectations in the learning process.
2. Students are directed to consider all courses together while faculty members are focused on students in a particular course they have selected as representative.
3. Responses from students are obtained from separate populations of First-Year and Senior students whereas responses from faculty are stratified by the choice of a Lower Division or Upper Division course. These divisions allow a pairing of responses for First-Year students with Lower Division courses and Senior students with Upper Division courses. The overlap is imprecise, but generally comparable.
4. Statistical validity of results is important to interpretation. NSSE first-year and senior populations were selected randomly based on the demographic composition of the student body. The survey was conducted online in the spring of 2007 and produced a response rate of 24%. Although the sample of respondents is generally representative of the survey population, students who are male, African-American, Hispanic, and Non-resident Alien were under-represented. For the FSSE survey in the spring of 2008, all active faculty and per course instructors who could be contacted by email were asked to

participate. Response rate for faculty was 45%. The sample of respondents is representative of the survey population in terms of faculty rank and tenure status.

## Results

For each of the twelve Deep Learning items addressed in this report, the response distributions are analyzed. Comparisons are made in two ways: 1) by level of the student (first-year to senior; lower to upper division class), and 2) by respondent type (student to faculty member). A frequency distribution chart of responses and the average value on a numerical scale are shown in a separate section below.

### Integrative Learning item-1

*Work on a paper or project that required integrating ideas or information from various sources.*

Student experience generally parallels faculty expectation for this item. At the lower end of the scale almost no students report integration. At the higher end, where a majority of faculty consider integration to be very important, students see less integration than expected, especially the first-year students. Faculty place nearly the same emphasis on integration for lower and upper division courses.

### Integrative Learning item-2

*Include diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments.*

On the scale of importance, faculty have a broad range of expectations for this item. Students say that they experience diverse perspectives a little more frequently, judging by response mean values. The majority of student responses fall in the middle of the range.

### Integrative Learning item-3

*Put together ideas or concepts from different courses when completing assignments or during class discussions.*

Correspondence between expectations and experiences is very close when based on student level. Responses of first-year and lower-division groups match quite well, as do the responses of senior and upper-division. Between levels the case is different. First-year/lower-division students experience less of the combination of ideas and concepts than the senior/upper-division students.

### Integrative Learning item-4

(NSSE) *Discuss ideas from your readings or classes with faculty members outside of class.*  
(FSSE) *At least once, discuss ideas from readings or classes with you outside of class.*

The way that this question is asked of students and faculty is less congruent than the other items, but a general interpretation of the results shows that the discussion of ideas outside of class is very infrequent. Faculty perceive more of it happening than students report.

#### Integrative Learning item-5

*Discuss ideas from your readings or classes with others outside of class (other students, family members, co-workers, etc.)*

Contrary to results concerning discussions with faculty, both student and faculty perceive that discussion of ideas with non-faculty occurs more frequently and that student experience matches closely what the faculty observe to be happening.

#### Higher Order Learning item-1

*Analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components.*

Analysis is both expected and experienced by most faculty and students with little difference between first-year/lower-division and senior/upper-division pairings. But first-year students report slightly less experience than the faculty believes it presents in courses as shown by differentials in the “quite a bit” and “very much” responses.

#### Higher Order Learning item-2

*Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships.*

Synthesis is strongly expected by how much faculty emphasize it in their courses (50% say “very much”), but student experience tends to fall short – more so with first-year than senior students.

#### Higher Order Learning item-3

*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.*

Judging value is less consistently emphasized and experienced in courses at the different levels than analysis and synthesis.

#### Higher Order Learning item-4

*Applying theories or concepts to practical problems or in new situations.*

Application is strongly skewed to the high end of the scale in both student and faculty responses, although students report slightly less experience than faculty report emphasis.

#### Reflective Learning item-1

*Examine the strengths and weaknesses of your own views on a topic or issue.*

Although faculty think that students examining their own views is important, student experiences tend toward the middle of the distribution. Students report it happening “very often” at about one third the rate faculty consider it “very important.”

#### Reflective Learning item-2

*Try to better understand someone else's views by imagining how an issue looks from his or her perspective.*

Students say that trying to understand other views occurs less frequently than faculty say they emphasize this practice in class. Seniors are slightly more likely to do this than first-year students.

#### Reflective Learning item-3

*Learn something that changed the way you understand an issue or concept.*

The largest difference between student and faculty perceptions exists for this item. Although a majority of the faculty consider this very important, less than twenty percent of students say it happens very often. Larger fractions say it occurs only sometimes or often.

### Integrative Learning item-1

NSSE wording:

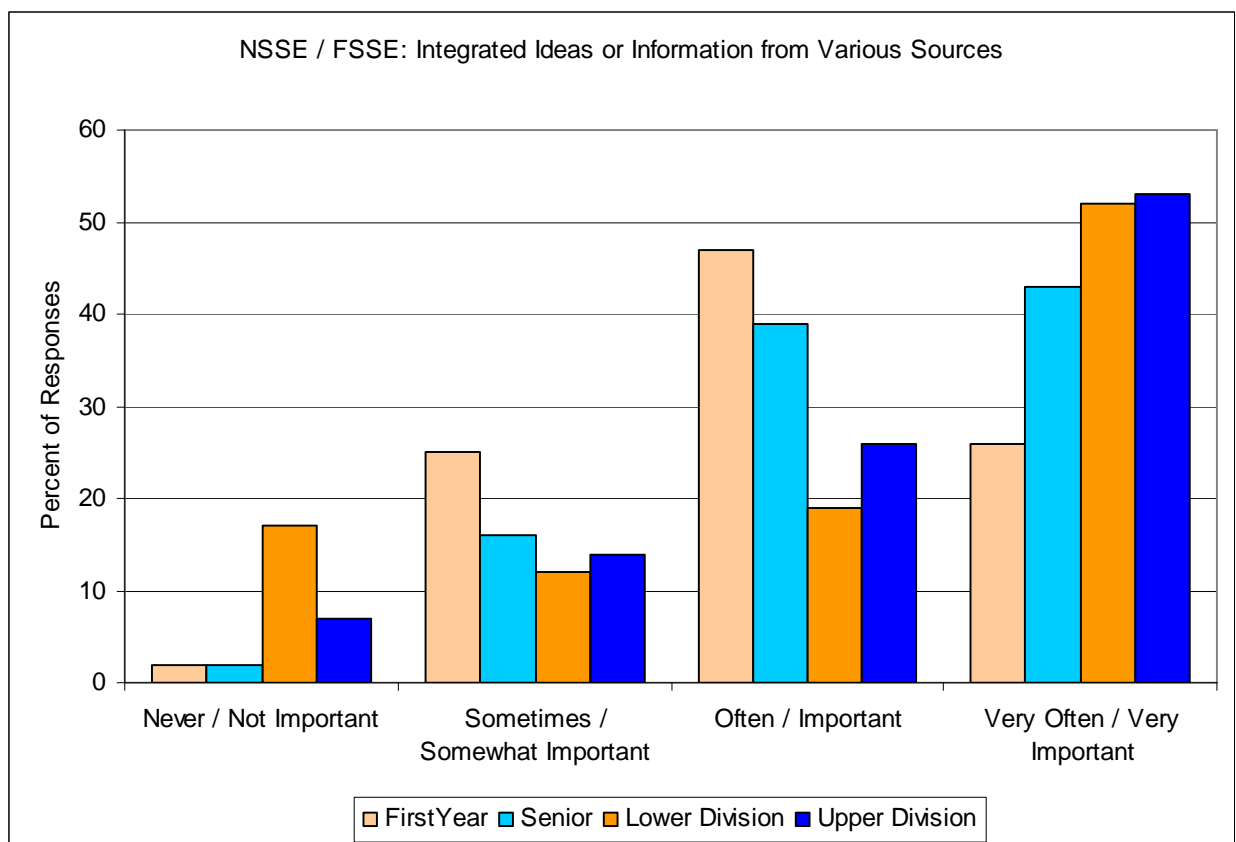
*In your experience at your institution during the current school year, about how often have you done each of the following? (1=never, 2=sometimes, 3=often, 4=very often)*

*Worked on a paper or project that required integrating ideas or information from various sources.*

FSSE wording:

*In your selected course section, how important to you is it that your students do the following? (1=not important, 2=somewhat important, 3=important, 4=very important)*

*Work on a paper or project that requires integrating ideas or information from various sources.*



	Mean	StDev		Mean	StDev
FirstYear	2.97	0.76	Senior	3.24	0.78
Lower Division	3.06	1.15	Upper Division	3.24	0.53

## Integrative Learning item-2

NSSE wording:

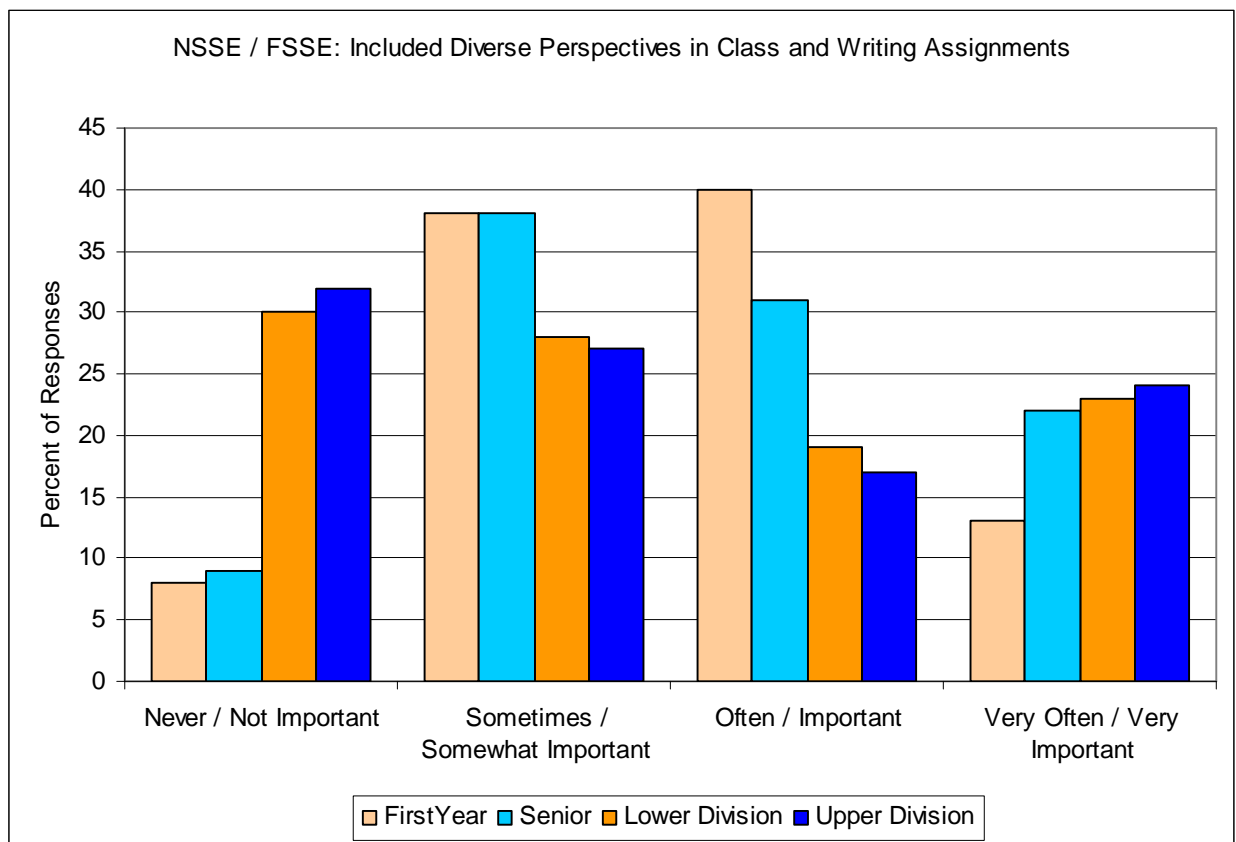
*In your experience at your institution during the current school year, about how often have you done each of the following? (1=never, 2=sometimes, 3=often, 4=very often)*

*Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments.*

FSSE wording:

*In your selected course section, how important to you is it that your students do the following? (1=not important, 2=somewhat important, 3=important, 4=very important)*

*Have class discussions or writing assignments that include diverse perspectives (different races, religions, genders, political beliefs, etc.)*



	Mean	StDev		Mean	StDev
FirstYear	2.58	0.83	Senior	2.66	0.92
Lower Division	2.35	1.13	Upper Division	2.34	0.76

### Integrative Learning item-3

NSSE wording:

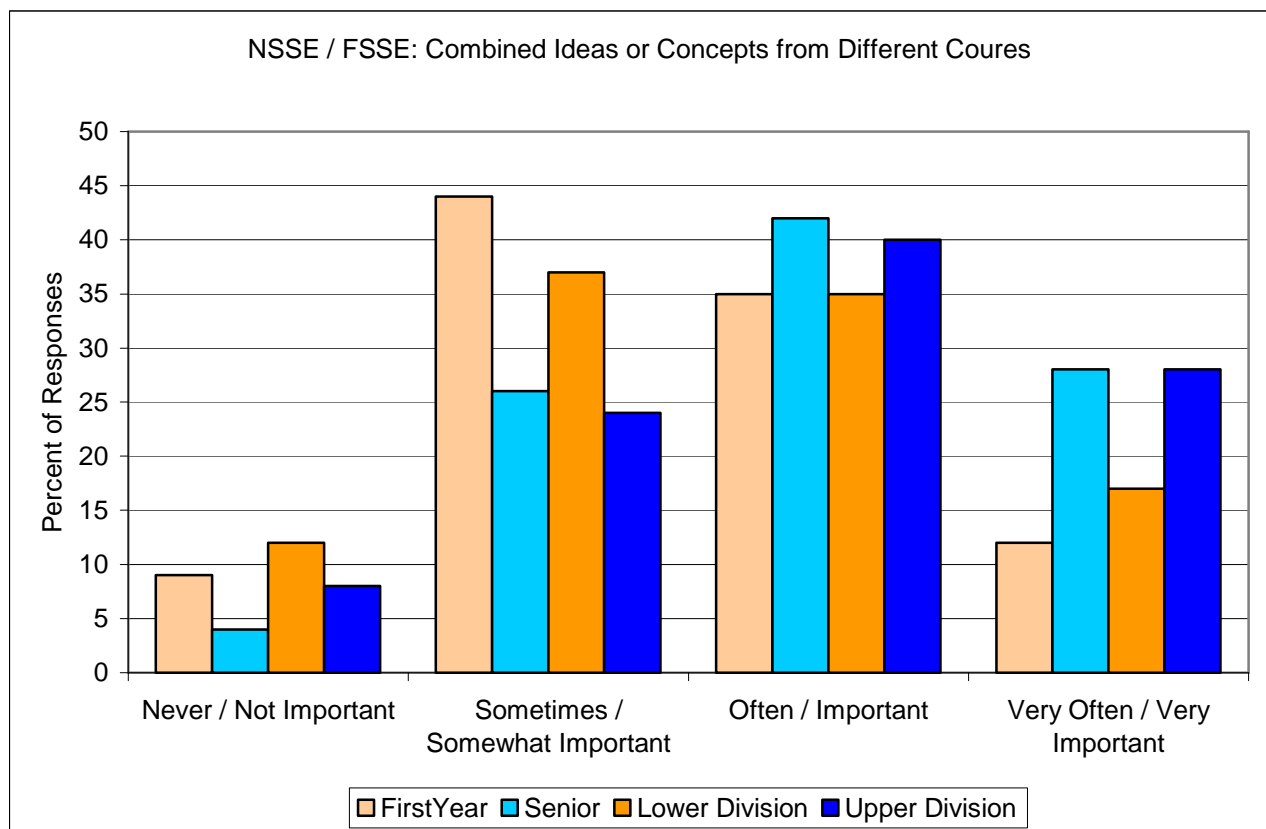
*In your experience at your institution during the current school year, about how often have you done each of the following? (1=never, 2=sometimes, 3=often, 4=very often)*

*Put together ideas or concepts from different courses when completing assignments or during class discussions.*

FSSE wording:

*In your selected course section, how important to you is it that your students do the following? (1=not important, 2=somewhat important, 3=important, 4=very important)*

*Put together ideas or concepts from different courses when completing assignments or during class discussions.*



	Mean	StDev		Mean	StDev
FirstYear	2.50	0.82	Senior	2.93	0.84
Lower Division	2.56	0.91	Upper Division	2.88	0.53



#### Integrative Learning item-4

NSSE wording:

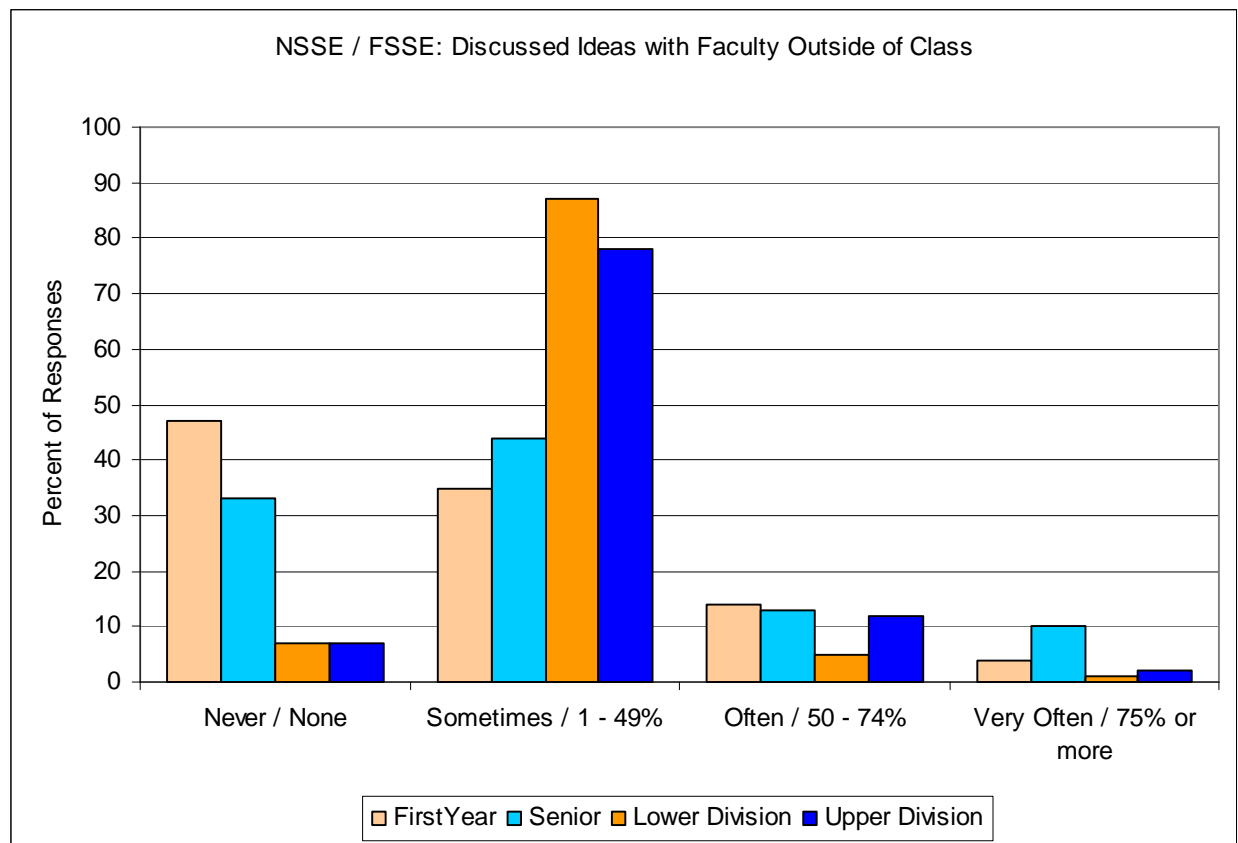
*In your experience at your institution during the current school year, about how often have you done each of the following? (1=never, 2=sometimes, 3=often, 4=very often)*

*Discussed ideas from your readings or classes with faculty members outside of class.*

FSSE wording:

*About what percent of students in your selected course section do the following (None, 1 - 24%, 25 - 49%, 50 - 74%, 75 or higher)*

*At least once, discuss ideas from readings or classes with you outside of class.*



	Mean	StDev		Mean	StDev
FirstYear	1.76	0.85	Senior	2.02	0.94
Lower Division	2.00	0.40	Upper Division	2.11	0.37

\*Note: The 1 – 24% and 25 – 49% categories in faculty responses have been combined for comparison to student responses.

### Integrative Learning item-5

NSSE wording:

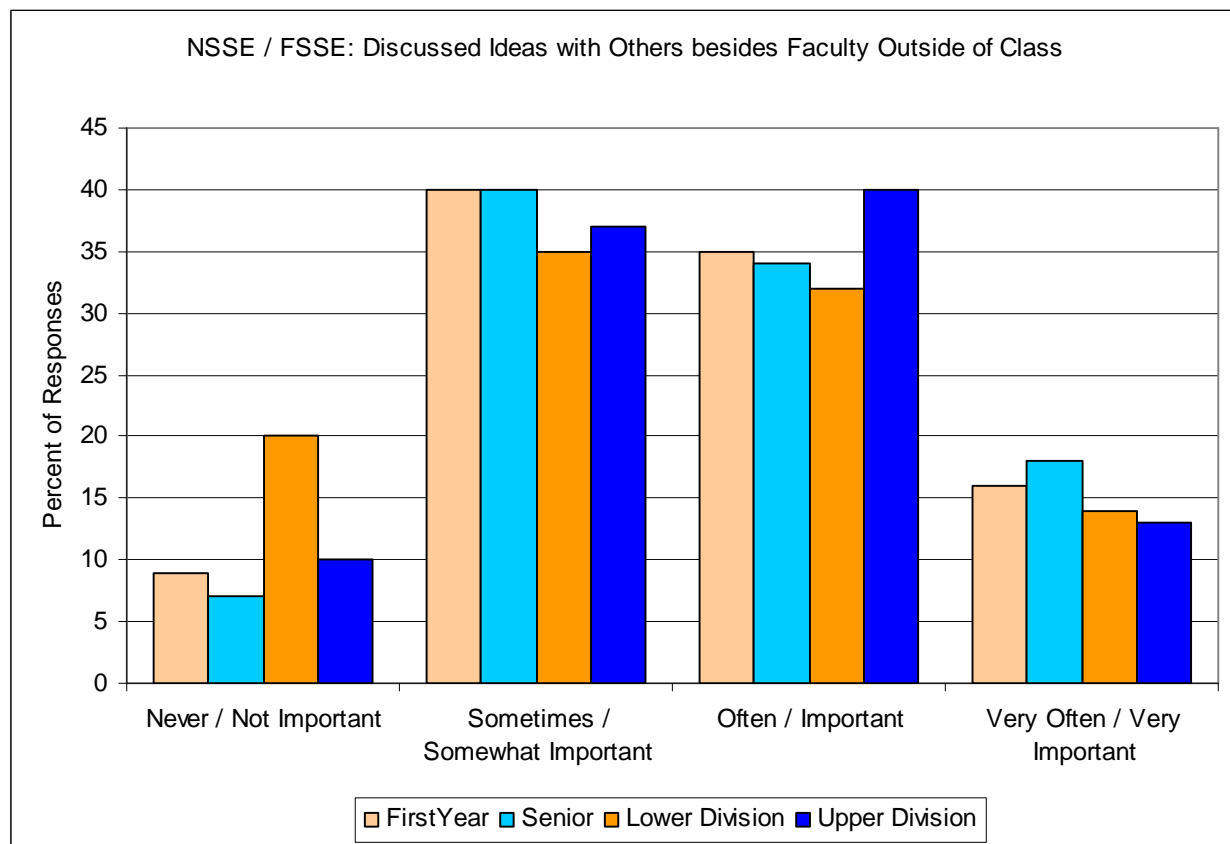
*In your experience at your institution during the current school year, about how often have you done each of the following? (1=never, 2=sometimes, 3=often, 4=very often)*

*Discuss ideas from your readings or classes with others outside of class (other students, family members, co-workers, etc.)*

FSSE wording:

*In your selected course section, how important to you is it that your students do the following? (1=not important, 2=somewhat important, 3=important, 4=very important)*

*Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)*



	Mean	StDev		Mean	StDev
FirstYear	2.58	0.87	Senior	2.64	0.86
Lower Division	2.40	0.96	Upper Division	2.56	0.52

## Higher Order Learning item-1

NSSE wording:

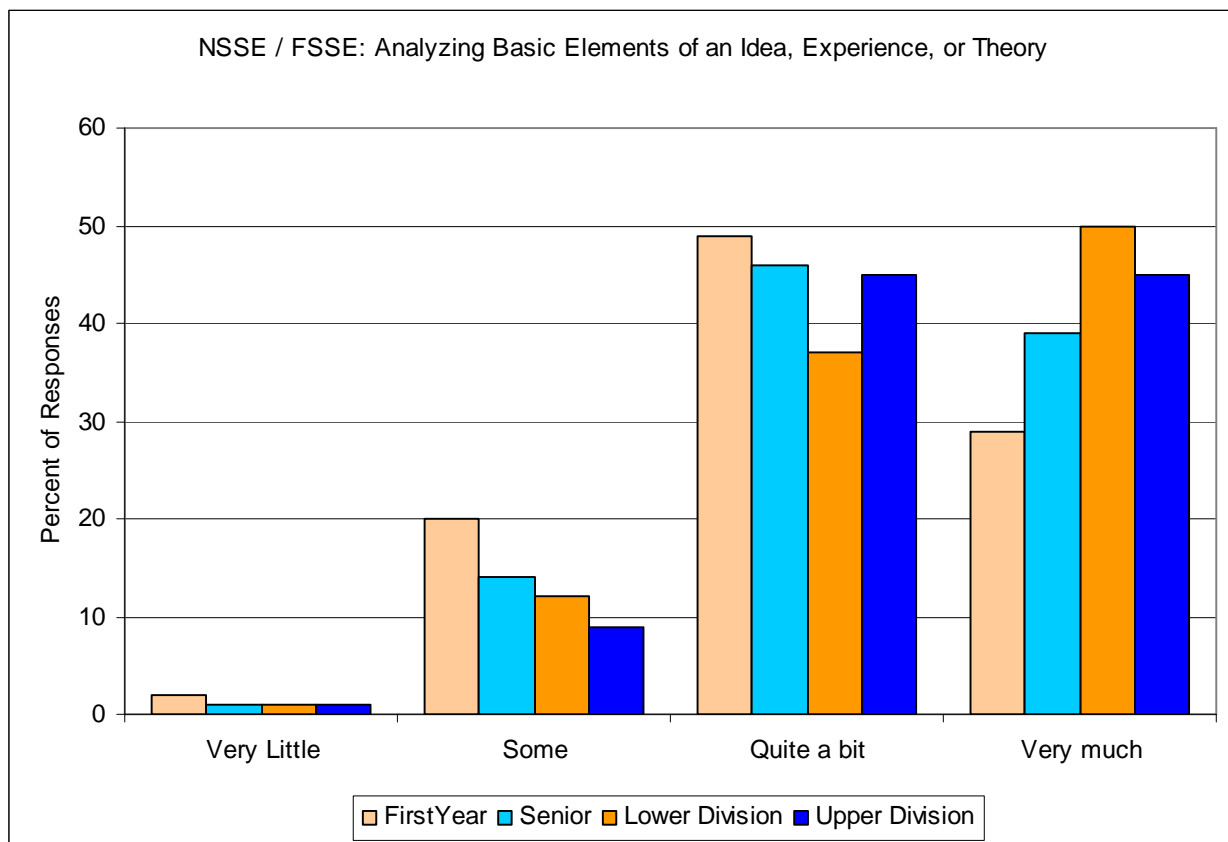
*During the current school year, how much has your coursework emphasized the following mental activities? (1=very little, 2=some, 3=quite a bit, 4=very much)*

*Analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components*

FSSE wording:

*In your selected course section, how much emphasis do you place on engaging students in each of these mental activities? (1=very little, 2=some, 3=quite a bit, 4=very much)*

*Analyzing the basic elements of an idea, experience or theory, such as examining a particular case or situation in depth, and considering its components.*



	Mean	StDev		Mean	StDev
FirstYear	3.04	0.76	Senior	3.23	0.72
Lower Division	3.37	0.73	Upper Division	3.34	0.38

## Higher Order Learning item-2

NSSE wording:

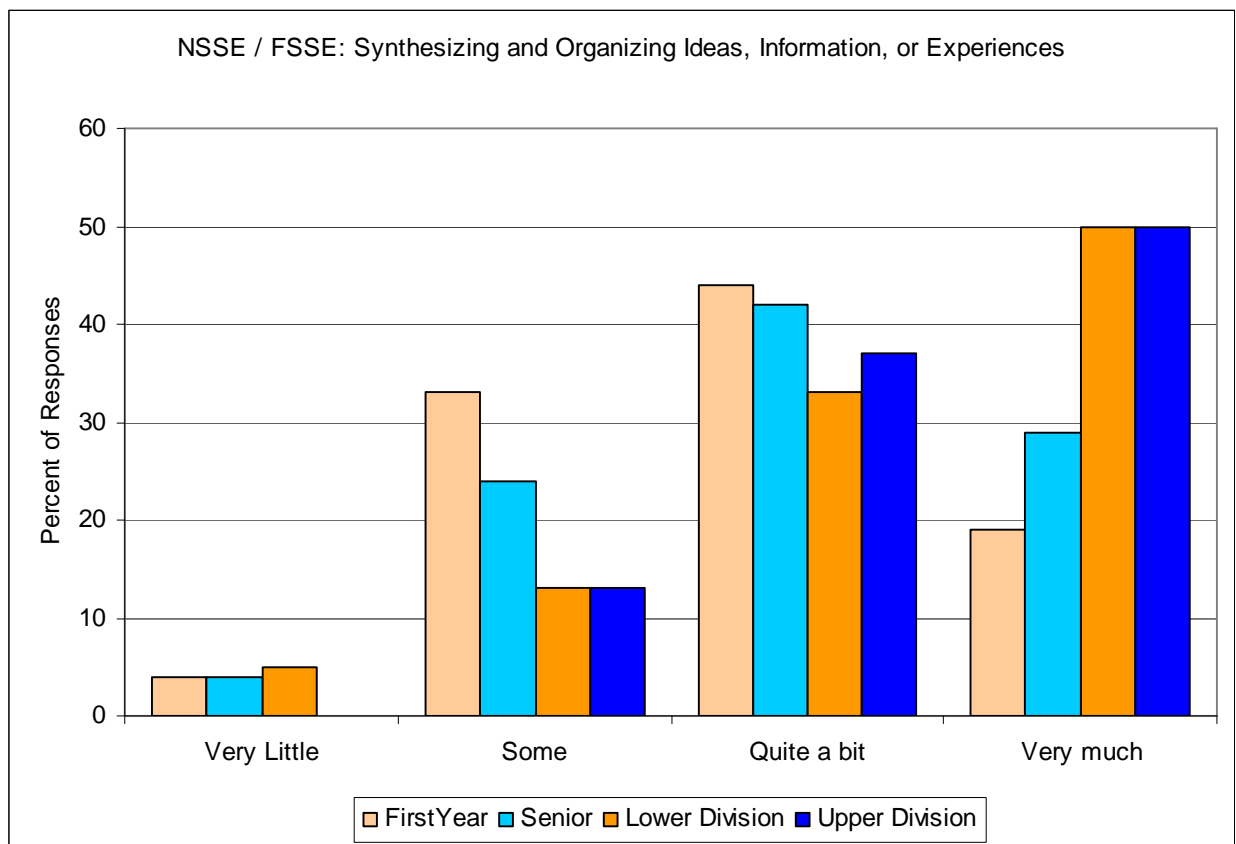
*During the current school year, how much has your coursework emphasized the following mental activities? (1=very little, 2=some, 3=quite a bit, 4=very much)*

*Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships.*

FSSE wording:

*In your selected course section, how much emphasis do you place on engaging students in each of these mental activities? (1=very little, 2=some, 3=quite a bit, 4=very much)*

*Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships.*



	Mean	StDev		Mean	StDev
FirstYear	2.78	0.80	Senior	2.96	0.84
Lower Division	3.27	0.87	Upper Division	3.37	0.38

### Higher Order Learning item-3

NSSE wording:

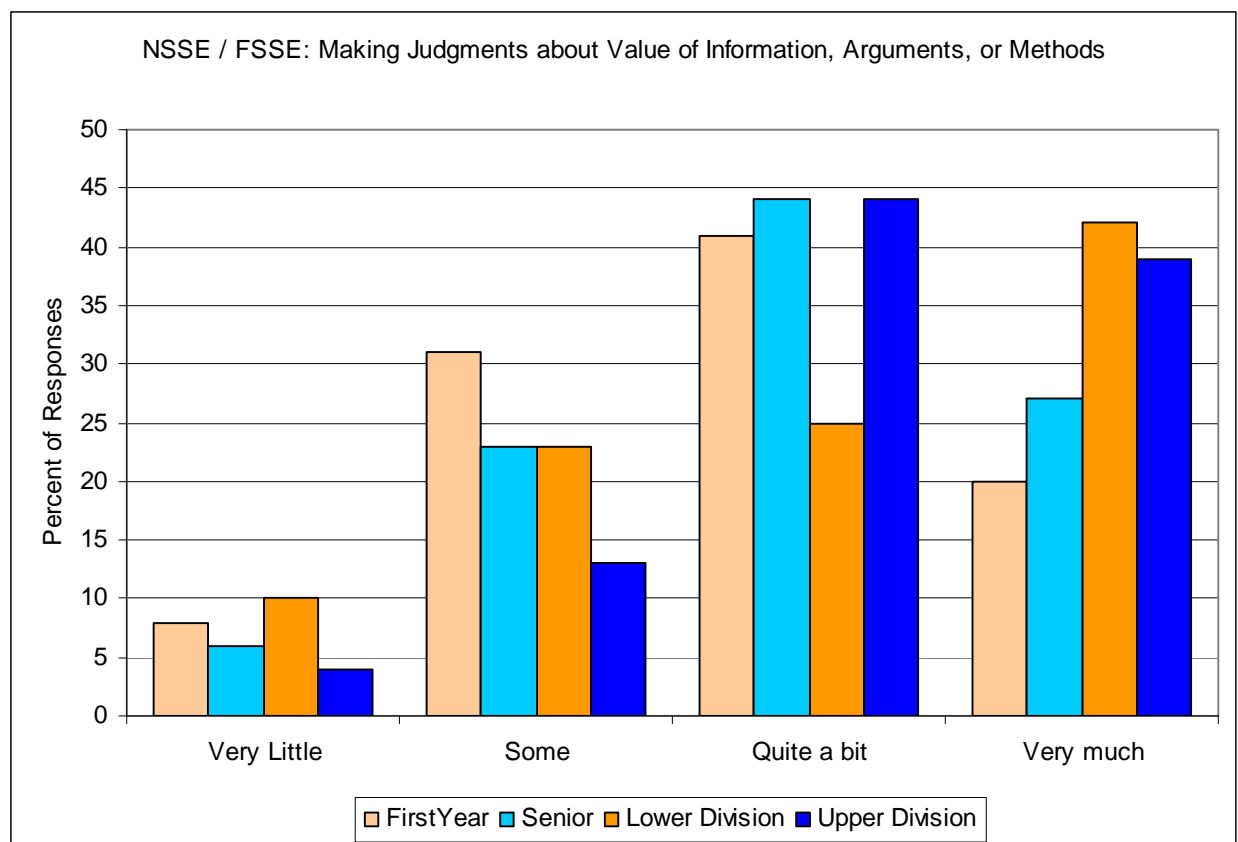
*During the current school year, how much has your coursework emphasized the following mental activities? (1=very little, 2=some, 3=quite a bit, 4=very much)*

*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.*

FSSE wording:

*In your selected course section, how much emphasis do you place on engaging students in each of these mental activities? (1=very little, 2=some, 3=quite a bit, 4=very much)*

*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.*



	Mean	StDev		Mean	StDev
FirstYear	2.72	0.87	Senior	2.92	0.86
Lower Division	2.99	1.02	Upper Division	3.17	0.45

#### Higher Order Learning item-4

NSSE wording:

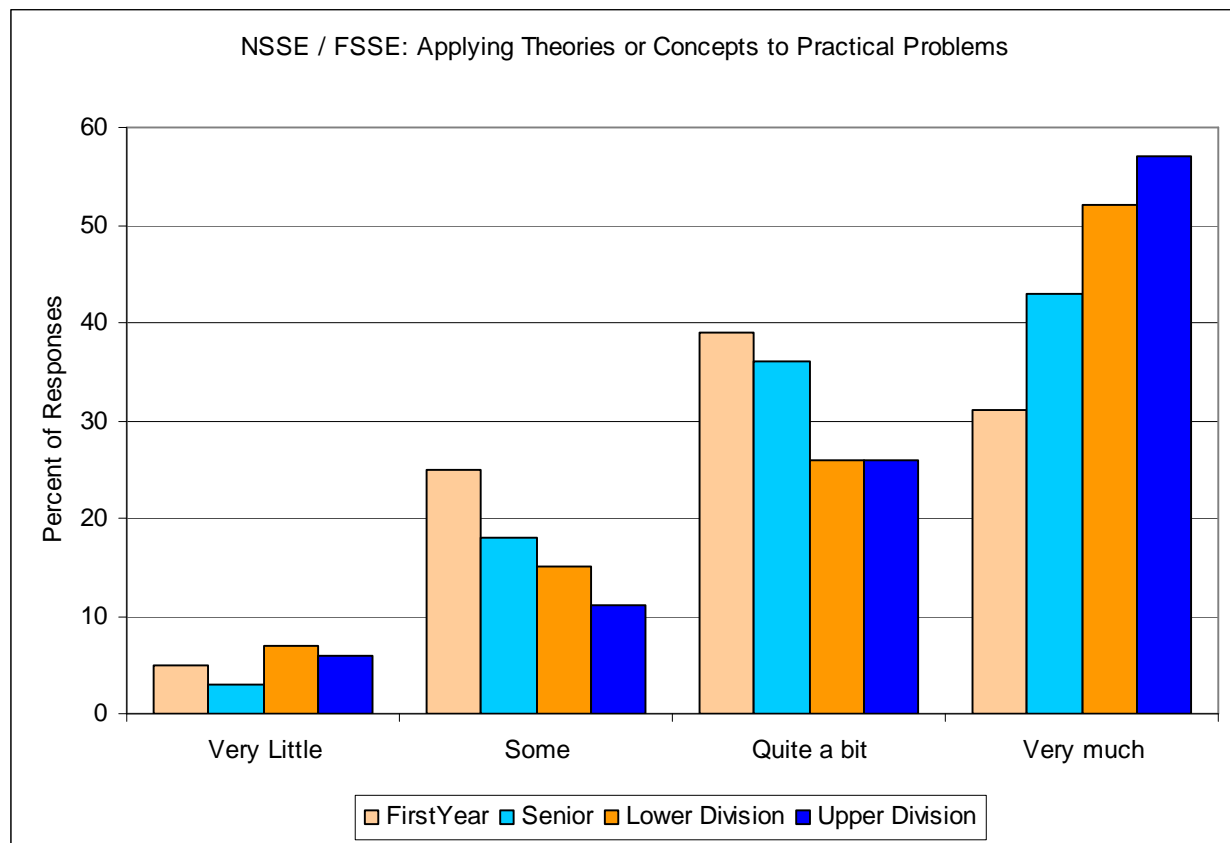
*During the current school year, how much has your coursework emphasized the following mental activities? (1=very little, 2=some, 3=quite a bit, 4=very much)*

*Applying theories or concepts to practical problems or in new situations.*

FSSE wording:

*In your selected course section, how much emphasis do you place on engaging students in each of these mental activities? (1=very little, 2=some, 3=quite a bit, 4=very much)*

*Applying theories or concepts to practical problems or in new situations.*



	Mean	StDev		Mean	StDev
FirstYear	2.97	0.87	Senior	3.19	0.83
Lower Division	3.23	0.95	Upper Division	3.34	0.49

## Reflective Learning item-1

NSSE wording:

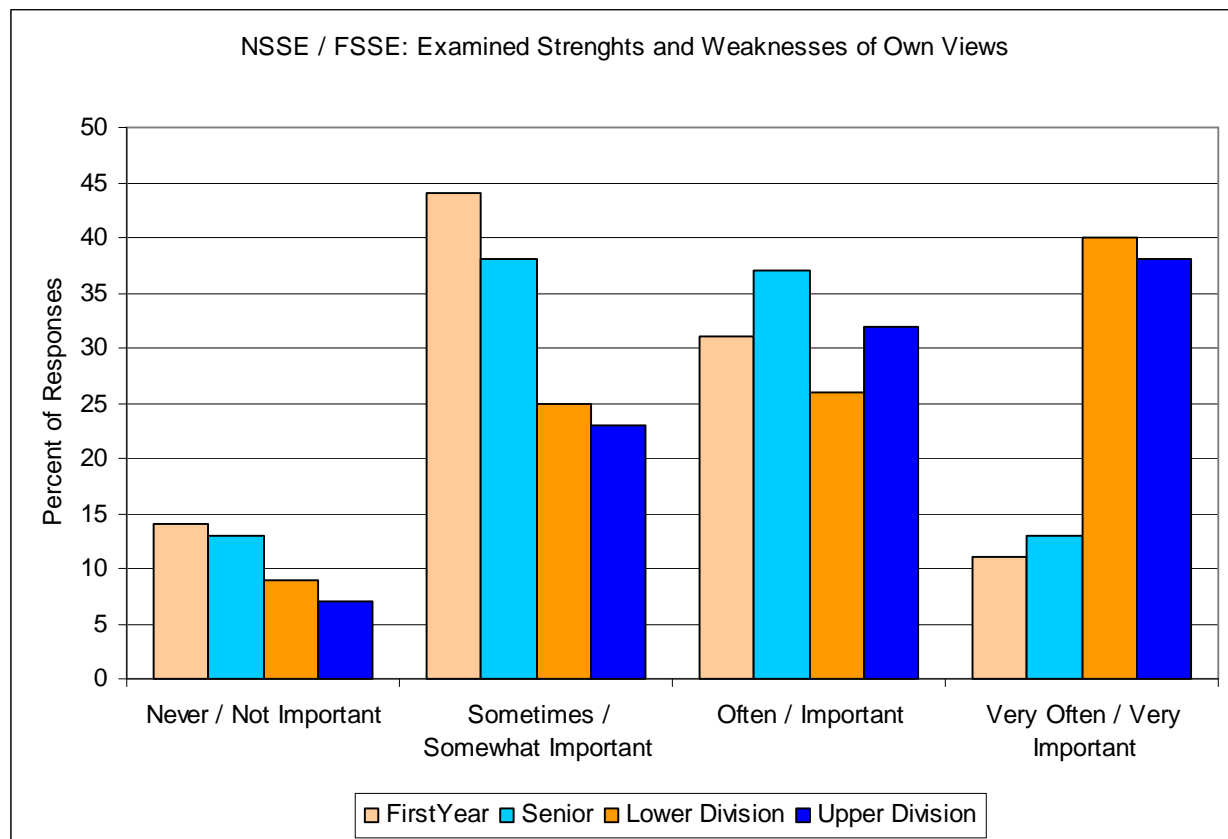
*During the current school year, about how often have you done each of the following?  
(1=never, 2=sometimes, 3=often, 4=very often)*

*Examined the strengths and weaknesses of your own views on a topic or issue.*

FSSE wording:

*In your selected course section, how important to you is it that your students do the following? (1=not important, 2=somewhat important, 3=important, 4=very important)*

*Examine the strengths and weaknesses of their views on a topic or issue.*



	Mean	StDev		Mean	StDev
FirstYear	2.39	0.86	Senior	2.49	0.87
Lower Division	2.97	1.00	Upper Division	3.01	0.55

## Reflective Learning item-2

NSSE wording:

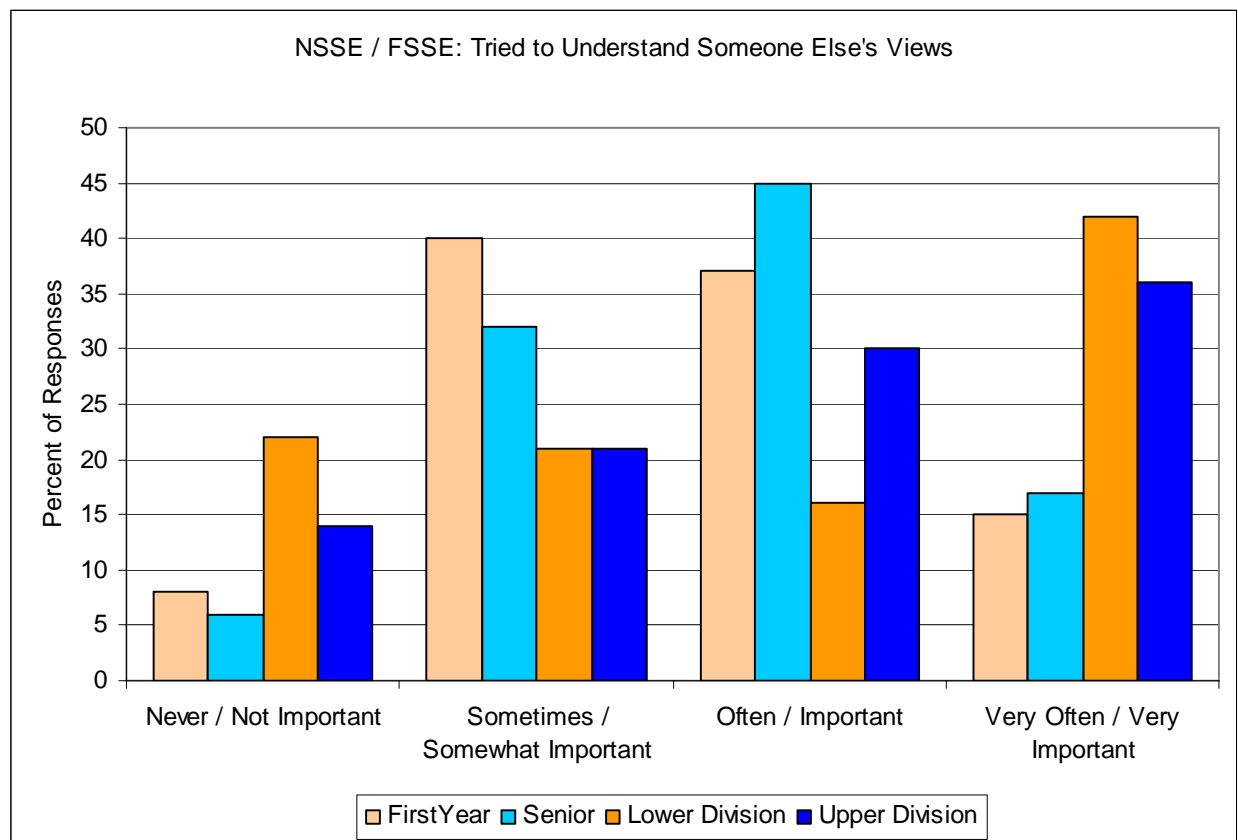
*During the current school year, about how often have you done each of the following?  
(1=never, 2=sometimes, 3=often, 4=very often)*

*Tried to better understand someone else's views by imagining how an issue looks from his  
or her perspective.*

FSSE wording:

*In your selected course section, how important to you is it that your students do the  
following? (1=not important, 2=somewhat important, 3=important, 4=very important)*

*Try to better understand someone else's views by imagining how an issue looks from that  
person's perspective.*



	Mean	StDev		Mean	StDev
FirstYear	2.59	0.84	Senior	2.73	0.81
Lower Division	2.77	1.20	Upper Division	2.87	0.62



### Reflective Learning item-3

NSSE wording:

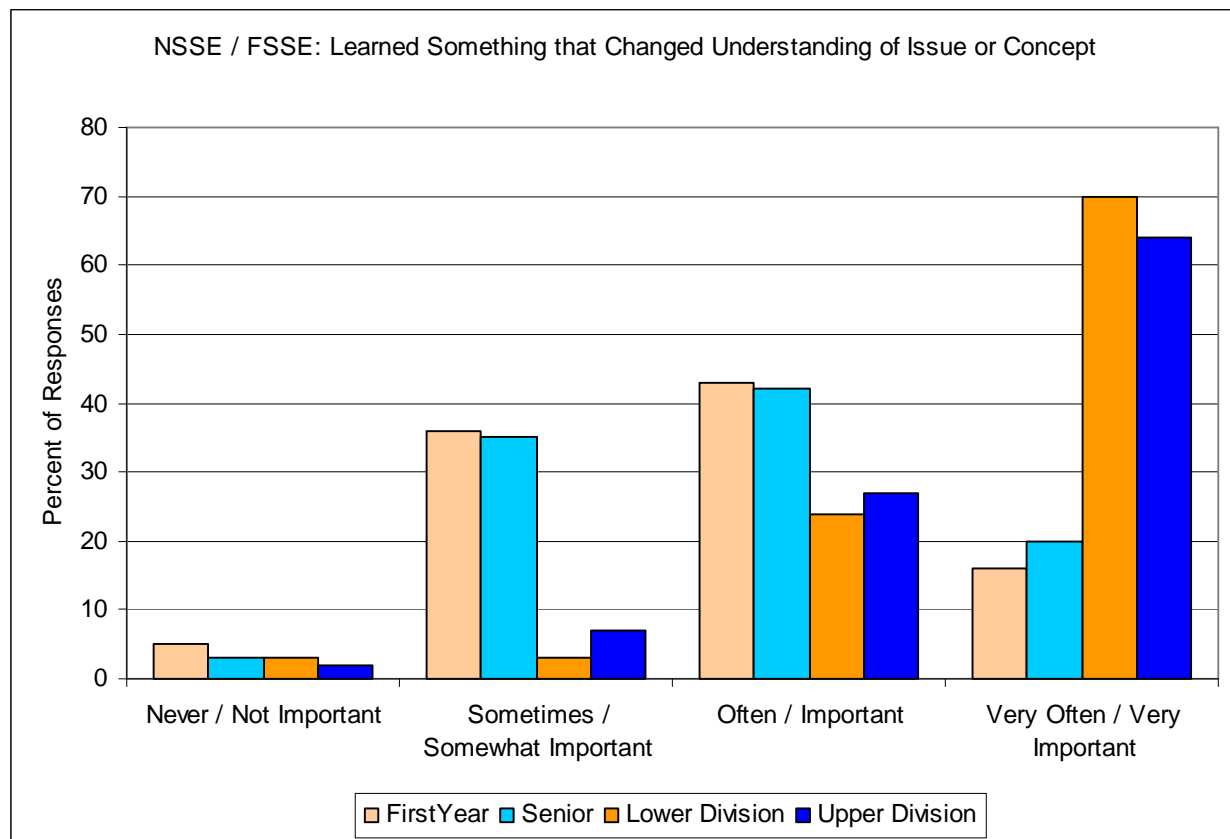
*During the current school year, about how often have you done each of the following?  
(1=never, 2=sometimes, 3=often, 4=very often)*

*Learned something that changed the way you understand an issue or concept.*

FSSE wording:

*In your selected course section, how important to you is it that your students do the following? (1=not important, 2=somewhat important, 3=important, 4=very important)*

*Learn something that changes the way they understand an issue or concept.*



	Mean	StDev		Mean	StDev
FirstYear	2.70	0.80	Senior	2.78	0.79
Lower Division	3.61	0.69	Upper Division	3.53	0.38

## Conclusions

The experiences of students generally come close to the expectations that faculty have in the twelve questions examined in this report. As shown by the response distributions and means, the emphasis in most cases is slightly ahead of the achievement. The overall trend is consistent and senior student responses are closer than first-year student responses to the faculty. This probably is due both to the specialization in upper division courses and to the awareness level of older students. Results from these comparisons provide some confidence that as more emphasis is made on deep approaches to learning, student learning is likely to improve.

## Appendix

From the abstract of a recent research paper:

“Deep learning” is important in higher education because students who utilize such an approach tend to get more out of their educational experiences. As learning is a shared responsibility between students and faculty, it is equally important to examine how much faculty members emphasize deep approaches to learning as it is to assess how much students employ these approaches.

Nelson Laird, T. F., Schwarz, M. J., Shoup, R. and Kuh, G. D. 2005. *Disciplinary Differences in Faculty Members' Emphasis on Deep Approaches to Learning*. Paper presented at the Annual Meeting of the Association for Institutional Research, May 14 – May 18, 2005, Chicago, IL  
<http://fsse.iub.edu/pdf/2006AIRFSSEDeepLearningFINAL.pdf>

# NSSE 2007 survey responses compared to FSSE 2008

## Academic and Intellectual Experiences

## Integrative Learning

NSSE response options: 1=never, 2=sometimes, 3=often, 4=very often  
FSSE response options: 1=not important, 2=somewhat important, 3=important, 4=very important

		Never	Sometimes	Often	Very Often			
		Not Important	Somewhat Important	Important	Very Important		Mean	SE
		PERCENT						StDev
1d. Worked on a paper or project that required integrating ideas or information from various sources	INTEGRAT							
	FirstYear	2	25	47	26		2.97	0.03
	Senior	2	16	39	43		3.24	0.04
Worked on a paper or project that requires integrating ideas or information from various sources	FINTEGRA							
	Lower Division	17	12	19	52		3.06	0.11
	Upper Division	7	14	26	53		3.24	0.04
1e. Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments	DIVCLASS							
	FirstYear	8	38	40	13		2.58	0.04
	Senior	9	38	31	22		2.66	0.05
Have class discussion or writing assignments that include diverse perspectives (different races, religions, genders, political beliefs, etc.)	FDIVCLAS							
	Lower Division	30	28	19	23		2.35	0.11
	Upper Division	32	27	17	24		2.34	0.06
1i. Put together ideas or concepts from different courses when completing assignments or during class discussions	INTIDEAS							
	FirstYear	9	44	35	12		2.50	0.04
	Senior	4	26	42	28		2.93	0.05
Put together ideas or concepts from different courses when completing assignments or during class discussions	FINTIDEA							
	Lower Division	12	37	35	17		2.56	0.09
	Upper Division	8	24	40	28		2.88	0.04
1p. Discussed ideas from your readings or classes with faculty members outside of class	FACIDEAS							
	FirstYear	47	35	14	4		1.76	0.04
	Senior	33	44	13	10		2.02	0.05
At least once, discuss ideas from readings or classes with you outside of class	FIDEAS							
	Lower Division	7	87	5	1		2.00	0.04
	Upper Division	7	78	12	2		2.11	0.03
* Response scale for FSSE on this question is different (what percent of students do this?)		None	1-49%	50-74%	>= 75%			

1t. Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)	OOCIDEAS	FirstYear	9	40	35	16	2.58	0.04	0.87
		Senior	7	40	34	18	2.64	0.05	0.86
Discuss ideas or readings from class with others outside of class (students, family members, co-workers, etc.)	FOOCID05	Lower Division	20	35	32	14	2.40	0.10	0.96
		Upper Division	10	37	40	13	2.56	0.04	0.52

## Mental Activities

## Higher Order Learning

NSSE and FSSE response options: 1=very little, 2=some, 3=quite a bit, 4=very much

Very Little	Some	Quite a bit	Very much	Mean	SE	StDev
PERCENT						

2b. Analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components	ANALYZE	FirstYear	2	20	49	29	3.04	0.03	0.76
		Senior	1	14	46	39	3.23	0.04	0.72
Analyzing the basic elements of an idea, experience, or theory	FANALYZE	Lower Division	1	12	37	50	3.37	0.07	0.73
		Upper Division	1	9	45	45	3.34	0.03	0.38
2c. Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships	SYNTHESZ	FirstYear	4	33	44	19	2.78	0.04	0.80
		Senior	4	24	42	29	2.96	0.05	0.84
Synthesizing and organizing ideas, information, or experiences	FSYNTHES	Lower Division	5	13	33	50	3.27	0.09	0.87
		Upper Division	0	13	37	50	3.37	0.03	0.38
2d. 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	EVALUATE	FirstYear	8	31	41	20	2.72	0.04	0.87
		Senior	6	23	44	27	2.92	0.05	0.86
Making judgments about the value of information, arguments, or methods	FEVALUAT	Lower Division	10	23	25	42	2.99	0.10	1.02
		Upper Division	4	13	44	39	3.17	0.04	0.45

2e. Applying theories or concepts to practical problems or in new situations	APPLYING	FirstYear	5	25	39	31	2.97	0.04	0.87
		Senior	3	18	36	43	3.19	0.05	0.83
Applying theories or concepts to practical problems or in new situations	FAPPLYIN	Lower Division	7	15	26	52	3.23	0.09	0.95
		Upper Division	6	11	26	57	3.34	0.04	0.49

#### Additional Collegiate Experiences

#### Reflective Learning

NSSE response options: 1=never, 2=sometimes, 3=often, 4=very often						Mean	SE	StDev	
FSSE response options: 1=not important, 2=somewhat important, 3=important, 4=very important									
		Never	Sometimes	Often	Very Often				
		Not Important	Somewhat Important	Important	Very Important				
		PERCENT							
6d. Examined the strengths and weaknesses of your own views on a topic or issue	OWNVIEW	FirstYear	14	44	31	11	2.39	0.04	0.86
		Senior	13	38	37	13	2.49	0.05	0.87
Examine the strengths and weaknesses of their views on a topic or issue	FOWNVIEW	Lower Division	9	25	26	40	2.97	0.10	1.00
		Upper Division	7	23	32	38	3.01	0.04	0.55
6e. Tried to better understand someone else's views by imagining how an issue looks from his or her perspective	OTHRVIEW	FirstYear	8	40	37	15	2.59	0.04	0.84
		Senior	6	32	45	17	2.73	0.05	0.81
Try to better understand someone else's views by imagining how an issue looks from that person's perspective	FOTHRVW	Lower Division	22	21	16	42	2.77	0.12	1.20
		Upper Division	14	21	30	36	2.87	0.05	0.62
6f. Learned something that changed the way you understand an issue or concept	CHNGVIEW	FirstYear	5	36	43	16	2.70	0.04	0.80
		Senior	3	35	42	20	2.78	0.05	0.79
Learn something that changes the way they understand an issue or concept	FCHNGVW	Lower Division	3	3	24	70	3.61	0.07	0.69
		Upper Division	2	7	27	64	3.53	0.03	0.38