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Overview

Each year, the National Survey of Student Engagement (NSSE) collects information from freshmen and seniors at four-year colleges and universities across the country to assess the extent to which students are engaged in a variety of educational practices. NSSE is grounded in the theoretical framework that student engagement, measured by the frequency with which students participate in activities that represent effective educational practices, is a meaningful proxy for measuring general collegiate engagement. This report provides the results for Thomas J. Watson School of Engineering and Applied Science.

Respondent Characteristics

During the Spring of 2011, Binghamton University administered the NSSE to a group of randomly selected first year (FY) and senior students (SR). A total of 4,872 students were selected (FY = 1,740 and SR = 3,132) for the survey and 1,434 students responded to the survey. Overall response rate for this survey was 29% (FY = 25% and SR = 31%). Among the respondents, 15% (215) respondents were from Thomas J. Watson School of Engineering and Applied Science. Among the Watson respondents, 80% (172) were male and 20% (43) were female while 39% (83) were freshman students and 61% (132) were senior students.

Contact Information

The Office of Institutional Research and Assessment serves as the institutional repository for Binghamton University data for the NSSE survey. Questions, comments and requests for more detailed information may be directed to this office, located in AD 305, extension 72365, or by email at nfatima@binghamton.edu.
Benchmark Comparisons

In an effort to facilitate more meaningful and productive discussions about student engagement and the importance to student learning, collegiate quality, and institutional improvement, NSSE created the National Benchmarks of Effective Educational Practice. The benchmarks represent clusters of items on the survey and are expressed in 100-point scales. The institutional benchmark score is the weighted arithmetic average (mean) of the corresponding survey items, calculated by dividing the sum of values for each item by the total number of students responding to that item. The benchmarks and the related items are:

- **Level of Academic Challenge (LAC):** Includes items related to time spent preparing for class, the amount of reading and writing, deep learning, and institutional expectations for academic performance.
  - Number of assigned textbooks, books or book-length packs of course readings
  - Number of written papers or reports of 20 pages or more
  - Number of written papers or reports of between 5 and 19 pages
  - Number of written papers or reports of fewer than 5 pages
  - Coursework emphasizes: Analyzing the basic elements of an idea, experience or theory
  - Coursework emphasizes: Synthesizing and organizing ideas, information or experiences into new, more complex interpretations and relationships
  - Coursework emphasizes: Making judgments about the value of information, arguments or methods
  - Coursework emphasizes: Applying theories or concepts to practical problems or in new situations
  - Worked harder than you thought you could to meet an instructor’s standards or expectations
  - Campus environment emphasizes spending significant amounts of time studying and on academic work
  - Prepared for class 21 or more hours per week

- **Active and Collaborative Learning (ACL):** Includes items related to class participation, working collaboratively with other students inside and outside of class, tutoring, and involvement in community-based projects.
  - Asked questions in class or contributed to class discussions
  - Made a class presentation
  - Worked with other students on projects during class
  - Worked with classmates outside of class to prepare assignments
  - Tutored or taught other students
  - Participated in a community-based project as part of a regular course
Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

**Student-Faculty Interaction (SFI):** Includes items related to the frequency with which students talk with faculty members and advisors, discuss ideas from class with faculty members outside of class, get prompt feedback on academic performance, and work with faculty on research projects.

- Discussed grades or assignments with an instructor
- Talked about career plans with a faculty member or advisor
- Discussed ideas from your readings or classes with faculty members outside of class
- Worked with faculty members on activities other than coursework (committees, orientation, student-life activities, etc.)
- Received prompt feedback from faculty on your academic performance (written or oral)
- Worked or planned to work with a faculty member on a research project outside of course or program requirements

**Supportive Campus Environment (SCE):** Includes items related to students’ perception of the extent to which the campus helps them succeed academically and socially, assists them in coping with non-academic responsibilities, and promotes supportive relations among students and their peers, faculty members, and administrative personnel and offices.

- Campus environment provides the support you need to help you succeed academically
- Campus environment helps you cope with your non-academic responsibilities (work, family, etc.)
- Campus environment provides the support you need to thrive socially
- Quality of relationships with other students
- Quality of relationships with faculty members
- Quality of relationships with administrative personnel and offices

**Enriching Educational Experiences (EEE):** Includes items related to students’ interaction with students of different racial or ethnic backgrounds or with different political opinions or values, use of electronic technology, and participation in activities such as internships, community service, study abroad, co-curricular activities, and/or a culminating senior experience.

- Practicum, internship, field experience, co-op experience or clinical assignment
- Community service or volunteer work
- Foreign language coursework
- Study abroad
- Independent study or self-designed major
- Culminating senior experience (comprehensive exam, capstone course, thesis, project, etc.)
- Participating in co-curricular activities (organizations, publications, student government, sports, etc.)
- Had serious conversations with students who have different religious beliefs, political opinions or personal values
- Had serious conversations with students of a different race or ethnicity
- Campus environment encourages contact among students from different economic, social, and racial or ethnic backgrounds
- Used electronic technology (list-serve, chat group, Internet, etc.) to discuss or complete an assignment
- Participate in a learning community or some other formal program where groups of students take two or more classes together

The following chart presents a comparative analysis of Watson freshman and senior student benchmark scores:
Mean Comparisons

Academic and Intellectual Experiences

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)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Freshman (1st year)</th>
<th>Senior (4th year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asked questions in class or contributed to class discussions</td>
<td>2.63</td>
<td>2.62</td>
</tr>
<tr>
<td>Made a class presentation</td>
<td>2.56</td>
<td>2.63</td>
</tr>
<tr>
<td>Prepared two or more drafts of a paper or assignment before turning it in</td>
<td>2.30</td>
<td>2.08</td>
</tr>
<tr>
<td>Worked on a paper or project that required integrating ideas or information from various sources</td>
<td>3.14</td>
<td>3.08</td>
</tr>
<tr>
<td>Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments</td>
<td>2.32</td>
<td>2.27</td>
</tr>
<tr>
<td>Come to class without completing readings or assignments</td>
<td>2.95</td>
<td></td>
</tr>
<tr>
<td>Worked with other students on projects DURING CLASS</td>
<td>2.48</td>
<td></td>
</tr>
<tr>
<td>Worked with classmates OUTSIDE OF CLASS to prepare class assignments</td>
<td>3.35</td>
<td>3.29</td>
</tr>
<tr>
<td>Put together ideas or concepts from different courses when completing assignments or during class discussions</td>
<td>2.48</td>
<td></td>
</tr>
<tr>
<td>Tutored or taught other students (paid or voluntary)</td>
<td>2.94</td>
<td></td>
</tr>
<tr>
<td>Participated in a community-based project (e.g., service learning) as part of a regular course</td>
<td>2.16</td>
<td></td>
</tr>
<tr>
<td>Used an electronic medium (listserv, chat group, Internet, instant messaging, etc.) to discuss or complete an assignment</td>
<td>2.66</td>
<td>3.06</td>
</tr>
<tr>
<td>Used e-mail to communicate with an instructor</td>
<td>2.96</td>
<td>3.35</td>
</tr>
<tr>
<td>Discussed grades or assignments with an instructor</td>
<td>2.65</td>
<td></td>
</tr>
<tr>
<td>Talked about career plans with a faculty member or advisor</td>
<td>2.18</td>
<td></td>
</tr>
<tr>
<td>Discussed ideas from your readings or classes with faculty members outside of class</td>
<td>1.79</td>
<td>2.18</td>
</tr>
<tr>
<td>Received prompt written or oral feedback from faculty on your academic performance</td>
<td>1.99</td>
<td>2.44</td>
</tr>
<tr>
<td>Worked harder than you thought you could to meet an instructor’s standards or expectations</td>
<td>2.61</td>
<td>2.44</td>
</tr>
<tr>
<td>Worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)</td>
<td>2.57</td>
<td>2.61</td>
</tr>
<tr>
<td>Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)</td>
<td>1.54</td>
<td>1.74</td>
</tr>
<tr>
<td>Had serious conversations with students of a different race or ethnicity than your own</td>
<td>2.67</td>
<td>2.69</td>
</tr>
<tr>
<td>Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal...</td>
<td>2.80</td>
<td>3.03</td>
</tr>
</tbody>
</table>
Mental Activities

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)

Reading and Writing

During the current school year, about how much reading and writing have you done? (1 = None, 2 = 1 to 4, 3 = 5 to 10, 4 = 11 to 20, 5 = More than 20)
Problem Set
In a typical week, how many homework problem sets do you complete? (1 = None, 2 = 1 to 2, 3 = 3 to 4, 4 = 5 to 6, 5 = More than 6)

Examinations
Select the circle that best represents the extent to which your examinations during the current school year have challenged you to do your best work:

(1 = Very little, 7 = Very much)
Additional Collegiate Experiences
During the current school year, about how often have you done each of the following? (1 = Never, 2 = Sometimes, 3 = Often, 4 = Very Often)

Enriching Educational Experiences
Which of the following have you done or do you plan to do before you graduate from your institution? (1 = Have not decided, 2 = Do not plan to do, 3 = Plan to do, 4 = Done)
Quality of Relationships

Select the circle that best represents the quality of relationships with people at your institution. (1 = Lowest quality, 7 = Highest quality)

![Quality of Relationships Chart]

Time Usage

(About how many hours do you spend in a typical 7-day week doing each of the following? (1 = 0 hrs/wk, 2 = 1-5 hrs/wk, 3 = 6-10 hrs/wk, 4 = 11-15 hrs/wk, 5 = 16-20 hrs/wk, 6 = 21-25 hrs/wk, 7 = 26-30 hrs/wk, 8 = More than 30 hrs/wk)

![Time Usage Chart]
Institutional Environment

To what extent does your institution emphasize each of the following? (1 = Very little, 2 = Some, 3 = Quite a bit, 4 = Very much)

- Institutional emphasis: Spending significant amounts of time studying and on academic work
  - Freshman (1st year): 3.39
  - Senior (4th year): 3.10

- Institutional emphasis: Providing the support you need to help you succeed academically
  - Freshman (1st year): 3.21
  - Senior (4th year): 2.69

- Institutional emphasis: Encouraging contact among students from different economic, social, and racial or ethnic backgrounds
  - Freshman (1st year): 2.81
  - Senior (4th year): 2.38

- Institutional emphasis: Helping you cope with your non-academic responsibilities (work, family, etc.)
  - Freshman (1st year): 2.21
  - Senior (4th year): 1.79

- Institutional emphasis: Providing the support you need to thrive socially
  - Freshman (1st year): 2.37
  - Senior (4th year): 2.12

- Institutional emphasis: Attending campus events and activities (special speakers, cultural performances, athletic events, etc.)
  - Freshman (1st year): 2.89
  - Senior (4th year): 2.51

- Institutional emphasis: Using computers in academic work
  - Freshman (1st year): 3.49
  - Senior (4th year): 3.59
**Educational and Personal Growth**

To what extent has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas? (1 = Very little, 2 = Some, 3 = Quite a bit, 4 = Very much)

<table>
<thead>
<tr>
<th>Institutional contribution</th>
<th>Freshman (1st year)</th>
<th>Senior (4th year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquiring a broad general education</td>
<td>3.17</td>
<td>2.87</td>
</tr>
<tr>
<td>Acquiring job or work-related knowledge and skills</td>
<td>3.04</td>
<td>3.00</td>
</tr>
<tr>
<td>Writing clearly and effectively</td>
<td>2.77</td>
<td>2.64</td>
</tr>
<tr>
<td>Speaking clearly and effectively</td>
<td>2.90</td>
<td>2.80</td>
</tr>
<tr>
<td>Thinking critically and analytically</td>
<td>3.39</td>
<td>3.27</td>
</tr>
<tr>
<td>Analyzing quantitative problems</td>
<td>3.39</td>
<td>3.34</td>
</tr>
<tr>
<td>Using computing and information technology</td>
<td>3.56</td>
<td>3.58</td>
</tr>
<tr>
<td>Working effectively with others</td>
<td>3.38</td>
<td>3.21</td>
</tr>
<tr>
<td>Voting in local, state (provincial), or national (federal) elections</td>
<td>1.47</td>
<td>1.65</td>
</tr>
<tr>
<td>Learning effectively on your own</td>
<td>2.89</td>
<td>2.88</td>
</tr>
<tr>
<td>Understanding yourself</td>
<td>2.54</td>
<td>2.55</td>
</tr>
<tr>
<td>Understanding people of other racial and ethnic backgrounds</td>
<td>2.40</td>
<td>2.20</td>
</tr>
<tr>
<td>Solving complex real-world problems</td>
<td>2.78</td>
<td>2.99</td>
</tr>
<tr>
<td>Developing a personal code of values and ethics</td>
<td>2.42</td>
<td>2.56</td>
</tr>
<tr>
<td>Contributing to the welfare of your community</td>
<td>2.08</td>
<td>1.94</td>
</tr>
<tr>
<td>Developing a deepened sense of spirituality</td>
<td>1.63</td>
<td>1.48</td>
</tr>
</tbody>
</table>
Academic Advising and Satisfaction

(1 = Poor, 2 = Fair, 3 = Good, 4 = Excellent)

(1 = Definitely no, 2 = Probably no, 3 = Probably yes, 4 = Definitely yes)*

Overall, how would you evaluate the quality of academic advising you have received at your institution?

How would you evaluate your entire educational experience at this institution?

If you could start over again, would you go to the SAME INSTITUTION you are now attending?*

Freshman (1st year) | Senior (4th year)

3.01 | 2.85
3.24 | 3.10
3.36 | 3.04