2011 National Survey of Student Engagement

University Park Executive Summary

Commissioned on behalf of Penn State by the Vice President for Student Affairs, Undergraduate Education, and the Commonwealth Campuses
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2011 NATIONAL SURVEY OF STUDENT ENGAGEMENT

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SUMMARY

This document presents an overview of the NSSE administration at Penn State and University Park’s aggregate findings, focusing primarily on comparisons between the 2008 and 2011 findings. There are few significant changes between 2008 and 2011 at the University Park aggregate level, but this is not unexpected, given the decentralized nature of the University’s NSSE initiatives. In 2008, each University Park college and participating Commonwealth Campus was charged with identifying strategic indicators from the NSSE data and implementing appropriate efforts to increase student engagement related to those indicators. While it is important to provide this overview for University Park, it is at the college and Commonwealth Campus levels that NSSE findings are most likely to be truly meaningful.

OVERVIEW

“The National Survey of Student Engagement (NSSE) documents dimensions of quality in undergraduate education and provides information and assistance to colleges, universities, and other organizations to improve student learning. Its primary activity is annually surveying college students to assess the extent to which they engage in educational practices associated with high levels of learning and development” (NSSE 2005 Annual Survey Results).

The concept of engagement as a measure of educational quality is consistently supported by research. For example, the literature relates particular classroom activities and specific faculty and peer practices to high-quality undergraduate student outcomes. Pascarella and Terenzini (2005) summarize the research stating, “Because individual effort and involvement are the critical determinants of college impact, institutions should focus on the ways they can shape their academic, interpersonal, and extracurricular offerings to encourage engagement.”

NSSE focuses on the student engagement triad: how students spend their time, the level to which institutions provide effective educational practices, and the ability of institutions to channel student energy toward these activities. Calling attention to the presence or absence of such practices can highlight specific areas for individual colleges to improve. Those institutions that more fully engage their students in the variety of activities that contribute to valued outcomes of college can claim to be
of higher quality compared with other colleges and universities where students are less engaged. Although it does not directly measure student learning, NSSE provides data that are “inherently easy for faculty to use to modify teaching practices” (NASULGC, 2006).

NSSE results are diagnostic and help institutions look holistically at the undergraduate experience. They help institutions pinpoint aspects that are not in line with the mission or what institutions expect. While helping institutions identify strengths and weaknesses in educational programs, the findings also help institutions know what to focus on to improve student learning and success both inside and outside the classroom.

Survey Design

NSSE is administered to degree-seeking undergraduates—to both first-years and graduating seniors. The majority of the survey questions are considered process measures: they ask students to report on their participation in educationally purposeful activities such as making a class presentation, writing papers, and discussing grades or assignments with instructors. These questions are then grouped into composite scores, which serve as indicators of effective educational practice. These composite scores, or the benchmarks of effective educational practice, include the level of academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences, and supportive campus environment. In addition, there are several questions that address overall satisfaction with the institution, self-reported learning outcomes, and academic advising.

Administration

Several of Penn State’s campuses participated in the 2008 administration of NSSE, and those same campuses participated again in 2011. The decision to participate rested on a number of needs including providing strategic indicators, supplying follow-up measures of student-centeredness, providing data to inform initiatives related to the first-year experience, and assisting the University with its assessment plan for the Middle States accreditation process. Since the same campuses participated in 2008 and 2011, NSSE data can be used to measure change in specific dimensions of student engagement and student-centeredness.

In the spring of 2011, 10 campuses (Abington, Altoona, Berks, Brandywine, Erie-Behrend, Fayette – the Eberly Campus, Harrisburg, University Park, Worthington Scranton, and York) administered NSSE. Because the survey focuses on seniors, nine campuses were not included because of their low number of graduating seniors. In 2011, a census sampling strategy was used, so all eligible first-year and senior students at each of the ten participating campuses were invited to participate. Based on Fall 2010 enrollment, there were 7,647 first-year students and 9,019 senior students in the population. Students who were confirmed for graduation at the conclusion of the Fall 2010 semester were not eligible for inclusion. A total of 5,258 University Park students responded to the survey, yielding a 32% response rate.

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1 These numbers are based on students who met all of the specific NSSE guidelines for inclusion, and therefore do not exactly match Fall 2010 enrollment numbers published elsewhere. For details on the NSSE population parameters, contact Student Affairs Research and Assessment.
Available Data

Each participating campus and each University Park college received individual reports including means and frequencies for first-years and seniors and a summary of findings for the five composite scores. In addition, each report contains comparisons to three groups. Each campus is first compared to its Penn State comparison group (the other participating campuses excluding University Park). For the colleges, their first comparison is to the other CIC (Committee on Institutional Cooperation) institutions that participated in 2011. The other two comparison groups were selected by each college and campus.

Each unit was also provided with various resources to assist them with interpreting the data, raw data files to conduct additional, customized analyses, and a “dashboard” report to view their results based on the composite scores and how they compare to their respective groups. Requests for information specific to individual campuses or colleges should be referred to the appropriate NSSE liaison (see Appendix).

Understanding the Data in this Report

Percentages and means presented throughout this report are weighted by gender and enrollment status (and institution size for peer group comparisons). Weighting is a statistical technique designed to remove bias from a survey sample and make the results better reflect the target population.

Where mean comparisons are presented, asterisks are used to denote comparison group means that are statistically significantly different from those at University Park.

* p < .05  
** p < .01  
*** p < .001

Effect sizes are often presented in addition to statistical significance in order to provide additional relevance for the mean comparisons. Where large sample sizes lead to high sensitivity in significance testing, effect size (Cohen’s d) indicates the “practical significance” of a mean difference. It is calculated by dividing the mean difference by the pooled standard deviation. Throughout this report, an effect size of .20 – .49 is considered small, .50 – .79 moderate, and .80 or greater large.

Comparison Groups

Penn State joined more than 700 other colleges and universities that participated in the 2011 survey, so the data provide Penn State with the opportunity to compare to similar institutions. To provide internal comparison among the Penn State participating campuses, Penn State participated in the NSSE administration as a system. University Park was provided with data that compared its results to the aggregate of the other nine Commonwealth Campuses that participated in the survey (Abington, Altoona, Berks, Brandywine, Erie - The Behrend College, Fayette - The Eberly Campus, Harrisburg, Worthington Scranton, and York). Because the survey focuses on first-years and seniors, nine campuses were not included due to their low number of seniors.

Additionally, University Park received aggregate comparison data for the other participating Committee on Institutional Cooperation (Big Ten) institutions (Indiana, Iowa, Minnesota, and Wisconsin), as well as for other peers (Florida State University, North Carolina State University, Texas A&M, University of Delaware, University of Georgia, University of Maryland, University of
Massachusetts, University of South Carolina, University of Tennessee, University of Utah, University of Washington, Virginia Polytechnic Institute and State University).

In general, Penn State University Park students’ metrics were comparable to those of Penn State’s Commonwealth Campus students, to students at the other participating CIC institutions, and to students in Penn State’s larger peer group. Although many statistically significant differences are found in the mean comparisons, the very small effect sizes (typical Cohen’s d < .20) suggest that most of these differences are artifacts of the large sample sizes and are of little practical significance.

**NSSE Findings**

**Preparation for Class**

Incoming students are often told that being a Penn State student is the equivalent of a full-time job (or more), and Penn State policy supports this assertion. The distribution of time for a typical lecture, discussion, or recitation is one-third formal instruction and two-thirds outside preparation. Extrapolating this guideline suggests that students registered for 15 credit hours (12.5 hours of instruction) should be studying approximately 25 hours per week. Different guidelines for time distribution for other credit-bearing courses such as laboratory courses and independent study mean that this extrapolation provides only a rough guideline. Figure 1 illustrates that only 28% of first-years and 29% of seniors are approaching this benchmark at University Park, and similar numbers are spending ten hours or less preparing for class each week. For both first-years and seniors, the number who reported spending at least 21 hours per week preparing for class increased in 2011, while the number reporting ten hours or less decreased substantially. Although statistically significant at the p<.001 level, these changes were not practically significant, as indicated by effect size.

![Figure 1. Time Spent Preparing for Class](image)

**Basic Skills**

In 2011, the proportion of first-year students who “often” or “very often” made a class presentation remained the same compared to 2008, while the proportion of seniors declined slightly, but not significantly, from 2008 to 2011. The proportion of first-years and seniors who “often” or “very often”
prepared multiple drafts of a paper or assignment during the past academic year decreased from 2008 (Figure 2). The decline among first-years was statistically, but not practically, significant. Students’ ratings of the extent to which their experience at Penn State contributed to their knowledge, skills, and personal development in written communication, oral communication, critical thinking, and independent learning did not change substantially from 2008 (Table 1). First-year students’ average rating of their writing and seniors’ ratings of their speaking were both significantly lower in 2011 than in 2008, but effect sizes suggest these differences are not meaningful.

![Figure 2. Percent of Students Who Often/Very Often Made Presentations or Prepared Multiple Paper Drafts](image)

Table 1. Students’ mean ratings of the extent to which Penn State contributed to their knowledge, skills, and personal development.

<table>
<thead>
<tr>
<th>To what extent has your experience at Penn State contributed to...</th>
<th>First-Years 2008</th>
<th>First-Years 2011</th>
<th>Sig.</th>
<th>Seniors 2008</th>
<th>Seniors 2011</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing clearly &amp; effectively</td>
<td>3.02</td>
<td>2.97</td>
<td>*</td>
<td>3.07</td>
<td>3.03</td>
<td></td>
</tr>
<tr>
<td>Speaking clearly &amp; effectively</td>
<td>2.83</td>
<td>2.82</td>
<td></td>
<td>3.01</td>
<td>2.96</td>
<td>*</td>
</tr>
<tr>
<td>Thinking critically &amp; analytically</td>
<td>3.28</td>
<td>3.28</td>
<td></td>
<td>3.35</td>
<td>3.34</td>
<td></td>
</tr>
<tr>
<td>Learning effectively on your own</td>
<td>3.08</td>
<td>3.10</td>
<td></td>
<td>3.08</td>
<td>3.11</td>
<td></td>
</tr>
</tbody>
</table>

*Response options: 1 = Very little, 2 = Some, 3 = Quite a bit, 4 = Very much

Higher-Order Skills

The percentage of seniors who reported that they “often” or “very often” worked on papers or projects that required integrating ideas from various sources or putting together ideas from different courses remained high in 2011 (Figure 3). On average, seniors reported that their coursework emphasized analysis, synthesis, and making judgments “quite a bit” (Table 2); with significant gains in analysis and synthesis over 2008.
Table 2. Seniors’ mean ratings of the extent to which their coursework emphasized higher-order thinking.

<table>
<thead>
<tr>
<th>Coursework emphasized:</th>
<th>2008</th>
<th>2011</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzing the basic elements of an idea, experience, or theory</td>
<td>3.20</td>
<td>3.28</td>
<td>***</td>
</tr>
<tr>
<td>Synthesizing and organizing ideas, information or experiences into new, more complex interpretations and relationships</td>
<td>2.93</td>
<td>3.00</td>
<td>**</td>
</tr>
<tr>
<td>Making judgments about the value of information, arguments, or methods</td>
<td>2.89</td>
<td>2.92</td>
<td></td>
</tr>
</tbody>
</table>

Response options: 1 = Very little, 2 = Some, 3 = Quite a bit, 4 = Very much

Professional Skills

Professional skills are an important aspect of all disciplines in today’s increasingly collaborative and global workplace, and this is reflected in the experiences of Penn State students. Approximately half of all respondents indicated working with other students during class (Figure 4). Similar numbers of first-year students reported working with other students outside of class (Figure 4); this represents a statistically, but not practically, significant decline since 2008. Seniors reported working with other students outside of class more frequently than did first-year students. Slightly more than half of all students indicated that they “often” or “very often” tried to understand the views of others, with first-year reports of this type of engagement exhibiting a significant increase over 2008 (Figure 4). Again, the effect size suggests that it is not practically meaningful. Over three-quarters of students reported that their experience at Penn State contributed to their ability to work effectively with others (76% of first-years and 82% of seniors).
Experiential Learning

Penn State places a high value on encouraging students to apply their skills outside the classroom, an experiential learning approach that provides benefits to students and often to the larger community. Approximately two-thirds of Penn State seniors reported having participated in a practicum, internship, field experience, co-op experience, or clinical assignment and approximately the same proportion reported having participated in community service or volunteer work (Figure 5). Just over one in four seniors reported having worked on a research project with a faculty member outside of course or program requirements, a practice that not only builds students’ disciplinary and professional skills, but one that also provides high-quality student-faculty interactions. The proportion of seniors having engaged in these activities remained unchanged from 2008.

Figure 5. Percentage of Seniors Engaging in Active Learning Outside of the Classroom
Diversity and Multiculturalism

Penn State’s *Framework to Foster Diversity* outlines Penn State’s goals for building a diverse, inclusive, and equitable institution, and NSSE includes several metrics that can be used to gauge success in this endeavor. On average, students included diverse perspectives in their coursework and engaged in serious conversations with diverse others between “sometimes” and “often” over the current school year, with first-years and seniors reporting similar levels of engagement in these areas (Table 3). On average, students had significantly fewer serious conversations with students who hold different beliefs in 2011 than they did in 2008, though the differences were not practically significant. Ninety-one percent of first-years and 84% of seniors indicated that their experience at Penn State contributed (“some”, “quite a bit”, or “very much”) to their understanding of people of other racial and ethnic backgrounds.

### Table 3. Students’ mean comparisons on measures related to diversity and multiculturalism.

<table>
<thead>
<tr>
<th>How often have you:</th>
<th>First-Years</th>
<th></th>
<th>Seniors</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Included diverse perspectives in class discussions or writing assignments</td>
<td>2.56</td>
<td>2.60</td>
<td>2.48</td>
<td>2.50</td>
<td></td>
</tr>
<tr>
<td>Had serious conversations with students of a different race or ethnicity</td>
<td>2.59</td>
<td>2.59</td>
<td>2.61</td>
<td>2.58</td>
<td></td>
</tr>
<tr>
<td>Had serious conversations with students who are very different from you religiously, politically, etc.</td>
<td>2.74</td>
<td>2.64</td>
<td>***</td>
<td>2.72</td>
<td>2.66</td>
</tr>
</tbody>
</table>

Response options: 1 = Never, 2 = Sometimes, 3 = Often, 4 = Very often

Citizenship

Penn State seeks to produce students who will actively contribute to the welfare of their communities, large and small. Almost half of students (44% of first-years and 45% of seniors) indicated that they had participated in a community-based project, such as service learning, as part of a regular course. When asked to what extent their Penn State experience contributed to development of a personal code of ethics, 60% of seniors indicated “quite a bit” or “very much” (Figure 6). Similarly, 46% of seniors reported the same for contributing to the welfare of their community, up from 42% in 2008 (Figure 6). This increase was statistically significant but was not practically significant.

![Figure 6. Percentage of Seniors Who Say Their Penn State Experience Contributed Quite a Bit or Very Much to Their Development as Citizens](image-url)
CONCLUSION

This document presents a brief peek into the extensive findings from the National Survey of Student Engagement at Penn State University Park, focusing on comparisons with the last administration of this survey in 2008. Overall, there are few significant changes between 2008 and 2011 at the University Park aggregate level, but this is not unexpected, given the decentralized nature of the University's NSSE initiatives. Further, comparisons to three distinct peer groups (Penn State's Commonwealth Campuses, the CIC, and other peers) revealed few substantive differences between the engagement of University Park students and their peers. While it is important to provide this overview for University Park, it is at the college and Commonwealth Campus levels that NSSE findings are most likely to be truly meaningful.
APPENDIX

NSSE Steering Committee

Francis Achampong, Chancellor
Penn State Fayette, The Eberly Campus

Mary Lou D’Allegro, Senior Director
Institutional Research, Assessment and Planning
Penn State Berks

Lori Bechtel-Wherry, Chancellor
Penn State Altoona

Jason Broadwater, Director
Student and Enrollment Services
Penn State Fayette, The Eberly Campus

Michael Dooris, Director
Planning and Institutional Assessment
Penn State University Park

Andrea Dowhower, Assistant Vice President
Division of Student Affairs
Penn State University Park

Renata Engel, Associate Dean for Undergraduate Studies
College of Engineering
Penn State University Park

Brian Fernandes, Director
Student and Enrollment Services
Penn State Fayette, The Eberly Campus

Tanya Furman, Assistant Vice President and Associate Dean
Office of Undergraduate Education
Penn State University Park

Angela Linse, Executive Director and Associate Dean
Schreyer Institute for Teaching Excellence
Penn State University Park

Katherine Reed, Graduate Assistant
Student Affairs Research and Assessment
Penn State University Park

Louise Sandmeyer, Executive Director
Planning and Institutional Assessment
Penn State University Park

Patrick Tanner, Director
Student and Enrollment Services
Penn State York

Campus NSSE Liaisons

Penn State Abington
Gale Siegel, Director of Student Affairs

Penn State Altoona
Carl Larsen, Assistant Dean for Policy and Planning

Penn State Berks
Blaine Steensland, Senior Director of Student Affairs & Enrollment Management

Penn State Brandywine
Matthew Shupp, Director of Student Affairs

Penn State Erie, The Behrend College
Andrew Watters, Associate Director for Academic and Career Planning Center

Penn State Fayette, The Eberly Campus
Jason Broadwater, Director of Student and Enrollment Services

Penn State Harrisburg
Donald Holtzman, Senior Director of Student Affairs and Enrollment

Penn State University Park
Betty Harper, Director of Student Affairs Research and Assessment

Penn State Worthington Scranton
Sandy Feather, Associate Director of Enrollment Management

Penn State York
Patrick Tanner, Director of Student and Enrollment Services
College NSSE Liaisons

College of Arts and Architecture
Gary Kesler, Associate Dean

College of Agricultural Sciences
Tracy Hoover, Interim Associate Dean for Undergraduate Education

Smeal College of Business
Gus Colangelo, Associate Dean for Undergraduate Education

College of Communications
Marie Hardin, Associate Dean for Undergraduate Education and Outreach

College of Education
Jacqueline Edmondson, Associate Dean of Undergraduate and Graduate Studies

College of Earth and Mineral Sciences
Stacy Davidson, Undergraduate Recruiter/Academic Advisor, Office of the Associate Dean for Education

College of Engineering
Jackie Gardner, Data and Communications Specialist

College of Health and Human Development
Doug Ford, Assistant Dean for Undergraduate Education

School of Information Sciences and Technology
Lisa Linze, Director, Office of Learning Initiatives & Instructional Assessment

The College of the Liberal Arts
Mary Fleming, Director of Advising

School of Nursing
Raymonde Brown, Associate Dean for Undergraduate Programs and Outreach

Eberly College of Science
Rick Robinett, Director of Undergraduate Studies and Graduate Studies