Occasionally an idea comes along that seems to clarify complex issues and potentially resolve fundamental problems in a given line of endeavor. Such is the connection between collegiate quality and student engagement. For years, judgments about the quality of the undergraduate experience have turned on evidence about an institution's reputation and resources—students' SAT scores, faculty credentials, library holdings, and so on. But students can be surrounded by impressive...
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resources and not routinely encounter classes or take part in activities that engage them in authentic learning. Moreover, with more than 70 percent of an increasingly diverse pool of high school graduates going on to some form of postsecondary education, it makes little sense now (if it ever did) to focus on measures that pertain only to a small fraction of institutions.

A more meaningful approach to evaluating an institution is to determine how well it fosters student learning. Decades of studies show that college students learn more when they direct their efforts to a variety of educationally purposeful activities. To assess the quality of the undergraduate education at an institution, we need good information about student engagement: the time and energy students devote to educationally sound activities inside and outside of the classroom, and the policies and practices that institutions use to induce students to take part in these activities. Indeed, one of the goals of the National Survey of Student Engagement (NSSE) is to insinuate the language of effective educational practice into discussions about collegiate quality, both on and off the campus.

The engagement premise is deceptively simple, even self-evident: The more students study a subject, the more they learn about it. Likewise, the more students practice and get feedback on their writing, analyzing, or problem solving, the more adept they become. The very act of being engaged also adds to the foundation of skills and dispositions that is essential to live a productive, satisfying life after college. That is, productive practices. This effort, NSSE (pronounced “Nessie”), was initially bankrolled by The Pew Charitable Trusts. Now, institutional fees cover the cost of participating (for more information about NSSE’s mission, philosophies, and guiding principles see the May/June 2001 Change issue or visit the NSSE Web site at www.iub.edu/~nsse). After a word about the evolution and status of the NSSE project, this article summarizes some of what we have learned so far about the engagement patterns of different groups of students and some of the questions and challenges the NSSE results raise.

ENGAGEMENT FROM NSSE

students who are involved in educationally productive activities in college are developing habits of the mind and heart that enlarge their capacity for continuous learning and personal development. (See Lee Shulman’s article, “Making Differences,” in the November/December 2002 issue of Change for an amplification of the “engagement as an end in itself” argument.)

Four years ago a group of researchers launched an initiative to determine the extent to which college students were engaging in educationally effec-

NSSE IN REVIEW

NSSE is both a new way to think about collegiate quality and a college student survey. As a survey, NSSE complements and extends research programs such as UCLA’s entering-student survey (CIRP) by focusing specifically on educational activities that are related to learning and personal development. After three years we have information from
285,000 first-year and senior students from more than 600 four-year colleges and universities about their behaviors. These data also provide us with a defined view of the institutional practices that mirror those highlighted in the classic report, "Seven Principles of Good Practice in Undergraduate Education." It's gratifying, indeed, that so many schools are taking seriously their responsibility for strengthening student learning. Although NSSE does not directly assess learning outcomes, the results from the survey point to areas where colleges are performing well in enhancing learning, as well as to aspects of the undergraduate experience that could be improved.

To facilitate the conversation about student engagement, learning, and institutional improvement, we grouped key questions from the survey into five clusters or benchmarks of effective educational practices (Chart 1). The NSSE benchmarks are a window into student and institutional performance at the national, sector, and institutional levels. What do different colleges and universities expect in terms of homework, reading and writing assignments, and intellectual tasks? How frequently do students participate in various forms of active and collaborative learning? How often do students interact with their professors? With many more historically underrepresented students matriculating, it’s important to examine the engagement patterns of these groups. Are students with certain characteristics more engaged than others? If so, what might account for the differences and, equally important, what might we do about them? The NSSE results take into account (where appropriate) such variables as year in school, race, sex, age, transfer status, place of residence (on or off campus), major field of study, enrollment status (full- or part-time), parents’ educational attainment, sector, undergraduate headcount, Carnegie classification, urbanicity, and institutional selectivity.

**Who’s Engaged and Who’s Not?**

With three years of findings, major patterns of student engagement at the national and sector levels have emerged. But any generalizations about institutions, institutional type, institutional size, or student groups should be considered with the caveat that there is great variation within each of these categories.

First, though smaller schools generally engage students more effectively, schools of similar sizes can vary widely. For example, Chart 2—The EKG of Student Engagement—shows the senior academic challenge benchmark scores, by size of school, for the 600-plus institutions that have participated in NSSE at least once since 2000. While smaller schools are generally more academically challenging, it’s also clear that some large universities exceed many smaller colleges on this benchmark. This pattern holds for the four other benchmarks of effective educational practice. So, in order to determine collegiate quality, we’ve got to probe more deeply into the nature of the student experience at a particular institution, and not assume that all colleges of a certain type and size are comparable.

Second, student engagement differs more within a given school (or institutional type) than between schools (or institutional types). This may sound counter-intuitive, but it’s consistent with other research. To illustrate, Chart 3 shows the range of student-faculty interaction benchmark scores of first-year students at 12 different baccalaureate liberal arts colleges, where we might expect student contact with faculty to be high, ranging from the lowest-scoring school on this benchmark to the highest.
While smaller schools are generally more academically challenging, it’s also clear that some large universities exceed many smaller colleges on this benchmark.

scoring. (Only the middle 80 percent of students at each institution is shown so that outliers do not skew the display.) The distance between the lowest and highest schools is quite substantial, almost 34 (on the adjusted 100-point scale), or about one-third of the scale, suggesting very large differences within this sector. The pattern represented here is similar for all benchmarks for all other institutional types.

These results suggest that one immediate step the vast majority of schools can take to improve undergraduate education is to identify students who are essentially disengaged and try to involve them in educationally purposeful activities. But this cannot simply be done by student category (younger and older, full-time and part-time), since this assumes that students in these groups are more alike than they actually are.

CHART 4. WHO’S MORE ENGAGED?

- Women
- Full-time students
- Students living on campus
- Native students (those who start at and graduate from the same school)
- Learning community students
- International students
- Students with diversity experiences

With these caveats in mind, Chart 4 lists the groups of students that are, on average, more engaged than others. Full-time students and students who live on campus (the vast majority of whom are enrolled full-time) are more engaged. This is to be expected, as they take more classes, read and write more, and spend more time preparing for class than their part-time counterparts. Because they live on campus, they have better access than their commuting peers to institutional resources for learning, including faculty members and other students. In addition, full-time students tend to have fewer obligations, such as family responsibilities and off-campus work, that preclude them from taking part in certain educational activities, such as study abroad or extracurricular events.

In terms of race and ethnicity there’s plenty of research and anecdotal evidence to indicate that students of color experience college differently than white students. The good news from NSSE is that the results suggest that they engage in effective educational practices to a comparable degree.

However, despite putting forth about the same amount of effort, African-American students report lower grades. White students generally get the highest grades, followed by Asian and multi-racial students and Latino and Native-American students. Why students of color get lower grades for comparable academic effort isn’t clear, given that GPA is positively related to all five benchmark scores and nearly all of the effective educational practices represented on the NSSE survey.

“MESSY” NSSE QUESTIONS

NSSE results sometimes raise difficult questions. For example, after receiving its results one state system was surprised to discover that its residential “flagship” campus was underperforming on the benchmarks of effective educational practice compared with its sister urban university. Some people involved in these discussions began to refer to the National Survey of Student Engagement as “messy NSSE,” because the data “messed up” the pecking order by contradicting long-standing perceptions of the relative quality of the institutions in the system. Here are some other messy questions worth pondering.

Are students putting forth enough academic effort? The life situations of both traditional-age and returning college students have become more complex. Among the latter group is the non-trivial number of students whose life exigencies severely limit the amount of time they can devote to their studies—those who work full-time, support and care for dependents, and so forth. Even the majority of traditional-aged, full-time students are working by the time they are seniors.

Nevertheless, most students come to college expecting to be more engaged than they are. What first-year students say they expect to do in college typically exceeds in almost every category of performance what they actually do. They expect to read more, write more, and take part in more cultural activities than they do, at least in the all-important first year of college when attitudes and habits are forming.

In a few areas, though, students’ experiences match their expectations. One of these, unfortunately, is the amount of time they will spend studying. Students start college knowing that they will need to study more than in high school, and they do—on average almost twice as many hours per week in college (12 or so) as in high school (about 5 to 6 hours). But the number is far short of what faculty say is needed to do well. If there’s a mantra for academe, “two for one” is it: undergraduate students should spend at least two hours preparing for every class hour (in math and science, 3 to 4 hours seems to be the expectation). Unfortunately, most students spend only about half that amount of time.

In addition, about one-fifth of both first-year students and seniors “frequently” come to class unprepared and say their institutions give little emphasis to studying and spending time on academic work. These disengaged students put very little effort into their studies and report making very little progress toward desired outcomes of college.

The problem does not begin in college. Record numbers of high school seniors are disengaged from academic work, according to UCLA’s Higher Education Research Institute, yet more than ever (45 percent) are graduating from high school with an A average, suggesting students are getting higher
The “disengagement compact”: “I’ll leave you alone if you leave me alone.”

That is, I won’t make you work too hard (read a lot, write a lot) so that I won’t have to grade as many papers or explain why you are not performing well.

grades for less effort. The wider and deeper college-going pool then brings these habits and expectations, not to mention a lack of preparation, with them to college.

Students typically don’t exceed their own expectations, particularly with regard to academic work. But students will go beyond what they think they can do under certain conditions, one of which is that their teachers expect, challenge, and support them to do so. Students read and write when we demand it. And in concert with other effective practices—prompt feedback, for example—they learn more. The next “messy NSSE” question is, are we willing to make the effort that such practices demand of us?

The more pages students write, the more pages faculty members have to read and give feedback about. And the more of that we do, the more likely it is that students will make appointments during office hours to talk with us about that feedback. In terms of student engagement, all this is generally positive. But it becomes problematic in terms of allocating time across multiple faculty priorities.

And this brings us to the unseemly bargain, what I call the “disengagement compact”: “I’ll leave you alone if you leave me alone.” That is, I won’t make you work too hard (read a lot, write a lot) so that I won’t have to grade as many papers or explain why you are not performing well. The existence of this bargain is suggested by the fact that at a relatively low level of effort, many students get decent grades—B’s and sometimes better. There seems to be a breakdown of shared responsibility for learning—on the part of faculty members who allow students to get by with far less than maximal effort, and on the part of students who are not taking full advantage of the resources institutions provide.

Even while we find ways to make learning more efficient (using technology, perhaps) and more engaging (using active and collaborative approaches), nothing substitutes for time on task. This is even more important if we think of engagement as a valued end in itself.

preparing for class if they are acquiring the skills and competencies they need to succeed after college. While the NSSE is built on research suggesting that certain practices lead to learning, it is not a direct assessment of that learning. And we have no learning measure that has been applied systematically across institutions and states, as is pointed out by the National Center on Public Policy and Higher Education, which again assigned an “incomplete” to the student learning category in its 2002 state-by-state report card, Measuring Up. In the absence of outcome measures, we are left with something like NSSE’s indicators of effective educational practice to estimate learning and to point institutions to student behaviors and institutional policies and practices where performance could be improved.

Is the active and collaborative learning movement inadvertently undercutting academic effort? We were initially pleasantly surprised when the first round of NSSE data showed that students were frequently engaging in certain forms of active and collaborative learning.

• Almost all students (98 percent) ask questions in class or contribute to class discussions, with about two-thirds doing so “frequently”;

• More than two-fifths (42 percent) of seniors report doing community work or service learning as part of a class assignment, indicating that many schools are incorporating this powerful pedagogical approach into their academic programs; and

• Most students (90 percent) report collaborating on projects and tasks: about 56 percent of seniors “frequently” work with classmates outside of class on academic tasks and assignments.
These gratifying findings suggest that faculty members are responding to the numerous calls to use engaging pedagogies. At the same time, NSSE data can't provide evidence of the quality of active and collaborative learning activities, only the frequency with which students say they engage in them. Anecdotal reports suggest many students don’t prepare as much for classes that feature in-class group work. Instead, they rely on their group members to pull them through a class activity.

Of course, a well-designed and implemented collaborative learning activity would prevent this from happening routinely, by building in opportunities for peer evaluation, instructor-graded individual contributions, and instructor observations. Yet in the rush to incorporate active and collaborative learning in the undergraduate program, it’s likely that good practice in this domain lags behind the adoption of the activity itself.

**How much interaction with faculty members is enough?** Another area of effective practice where “more” may not necessarily be “better” is student-faculty interaction. This is one measure where comparing one school against others like it has immediate relevance, especially if the institution promises that students will have frequent contact with their teachers. But how much is optimal?

As with the time-on-task question, we can’t answer this definitively in absence of relevant outcome measures. What is clear is that student-faculty interaction matters most to learning when it encourages students to devote greater effort to other educationally purposeful activities during college. The key is substantive contact. Casual contact with faculty members has little to no effect on learning gains or effort. In fact, we have some evidence that students who have the most out-of-class contact with faculty report making less progress toward desired outcomes. All this is to say that both the nature and frequency of contact matter.

Technology is altering our understanding of the faculty role in the learning process. After reviewing evidence from institutions participating in the Pew-funded Course Redesign Program conducted by the Center for Academic Transformation, Carol Twigg concluded that with an effective use of technol-

gogy, “student success can be achieved in class without increased student-faculty contact.” This requires being more intentional about the nature of the contact, such as being available on an as-needed, “when students get stuck” basis, which is built into the redesigned mathematics courses at Virginia Tech, the University of Alabama, and the University of Idaho.

For some purposes, occasional contact with faculty members may be enough. Three of the six behaviors on the student-faculty interaction benchmark are of this kind: discussing career plans, working with a faculty member outside of class on a committee or project, and doing research with a faculty member. For most students having the first two types of interactions once or maybe twice a semester is probably good enough. Working on a research project with a faculty member just once during college could be a life-altering experience. But for the other three activities—getting prompt feedback, discussing grades and assignments, and discussing ideas outside of class—we know that the more frequent the contact the better.

**Who is responsible for the quality of the educational experience of transfer students?** Forty percent of all seniors responding to NSSE began college at an institution other than the one they currently attend. At master’s-granting and doctoral institutions, almost half of seniors are transfers—and at some universities, the proportion of graduating seniors who are transfers exceeds 70 percent.

Chart 5 shows that transfer students are generally less involved in educationally engaging activities at the school from which they are about to graduate in four of the five areas: active and collaborative learning, student-faculty interaction, enriching educational experiences, and supportive campus environment. The number above each benchmark in Chart 5 is the effect size (standardized mean difference), which indicates the relative magnitude of the differences between transfer and nontransfer student performance. The larger the effect size, the more likely the quality of the educational experience of the two groups really differs in a meaningful way. Numbers smaller than .1 generally represent such a small difference that for all practical purposes transfer and native students are the same, such as on the academic challenge benchmark, which has an effect size of only .02.

Thus, we conclude that transfers generally find their institutions as academically challenging as their nontransfer peers do. In fact, they report comparable grades and are more likely to be prepared for class than nontransfer students. The differences on the other four benchmarks are all negative, suggesting that transfer students are less engaged, especially with regard to faculty contact and enriching educational experiences.

One explanation for this is that transfer students are more likely to be older
By their senior year, most students live off campus and are less exposed to campus activities that promote diversity awareness and have fewer naturally occurring opportunities for interacting with people who are different.

(63 percent are at least 24, compared to 13 percent of nontransfer students) and commuters; thus they are more likely to spend more hours a week working and caring for dependents. Moreover, more than half (54 percent) are first-generation students, compared with 38 percent of nontransfer students. But even after controlling for these factors, the differences in engagement favoring nontransfer students persist. This may be due in part to what we might call the “transfer tremor”—managing the challenges that come with learning how to negotiate the cultural pathways of their new institution. And the range and types of socializing experiences designed to ease the transition of new first-year college students—pre-school orientation, welcome week, special seminars, living together—are not routinely made available to transfer students.

That transfer students are less engaged overall than nontransfer students poses some challenges for academic advisors and student affairs professionals. It can also raise nettlesome questions for articulation agreements and for performance indicator systems. When evaluating the quality of the educational experience, how much responsibility for transfer student performance belongs to the institution, to the individual student, and to the other institutions transfer students have attended? What we can say at this point is that the under-engaged transfer student phenomenon is not a function of attending a certain type of institution. That is, there doesn’t seem to be any discernable differences in the engagement levels of transfers from community colleges compared with those who move from one four-year institution to another.

It’s possible for institutions to link NSSE data with student records, such as transcripts, to determine at what point students transfer (second year or later) and when their performance appears to be affected, if at all. With the Community College Survey of Student Engagement (CCSSE) coming online this spring under the direction of Kay McClenny at the University of Texas at Austin, we may for the first time have information the number of transfer students to increase. Finding ways to dampen transfer tremor and more fully engage these students in effective educational practices is a challenge we must address in order to improve the quality of postsecondary education. Toward this end, we conducted an analysis of the more than 600 four-year colleges and universities in the NSSE database, looking for transfer-friendly schools—that is, institutions where transfer students performed as well as or better than nontransfer students on the NSSE benchmarks. There were very few.

It seems wise to direct some effort and resources to learning what institutions can do to involve their transfer students at reasonable levels in effective educational practice. Almost 30 years ago John Gardner, then at the University of South Carolina, set out to enhance the quality of the first-year student experience. His success is evidenced by the widespread implementation of “orientation to college” seminars across the country and other innovations aimed to promote student success in the first year. Higher education sorely needs similar work of this kind on developing ways to engage transfer students in effective educational practice. One group that has taken up the challenge to recognize and promote the academic excellence and involvement of transfer students is the Tau Sigma honorary society, founded by Professor Lee Colquitt at Auburn University (www.auburn.edu/tausigma). Thirteen chapters now exist, all at public universities, and others are in the process of forming at other schools.

Does experience with diversity matter to student engagement? Understanding and learning how to work effectively with people from different backgrounds is a valued set of skills and competenc-
cies. NSSE asks four questions about students' exposure to and experiences with diversity:

1) The extent to which the school encourages contact among students of different backgrounds;
2) How frequently students have serious conversations with others of different races/ethnicities;
3) How frequently students have serious conversations with others who have very different religious beliefs or personal values; and
4) How frequently students incorporate diverse perspectives into class discussions or written reports.

Students who report more experience with diversity, net of other factors, are more involved in other effective educational practices and also report greater gains on many of the 15 learning and personal development items on the NSSE survey. For example, the more exposure to diversity, the more likely it is that students are involved in active and collaborative learning and the more satisfied they are with their college experience.

Diversity experiences vary somewhat by institutional type. Students at baccalaureate liberal arts colleges and doctoral/research extensive universities more frequently engage in diversity-related activities, while students at master's institutions do so least frequently. The density of racial and ethnic groups is also a factor in engagement, in that students at campuses with higher percentages of students from different racial and ethnic backgrounds, not surprisingly, report more diversity experiences. Students of color, on average, also report more diversity experiences (probably because they are usually outnumbered by white students in classes and elsewhere on campus and thus have more contact with them).

First-year students are more likely to report that their institutions encourage contact with students from different backgrounds. This is likely due in part to schools' promoting the importance of diversity during new student orientation, dorm-based activities, and first-year seminars. But by their senior year, most students live off campus and are less exposed to campus activities that promote diversity awareness and have fewer naturally occurring opportunities for interacting with people who are different. By this time many students are "diversity inoculated," having been presented with many messages about the importance of diversity early in their college years.

These explanations may be plausible, but are they acceptable? Is it satisfactory that more than a fifth of all seniors think that their schools give little emphasis to encouraging contact between students from different economic, social, and racial backgrounds? Is this the lasting impression we want newly graduated students to have about the value their institution places on diversity? Or should schools look for ways to reinforce the need and value of continuing to explore human differences in educationally purposeful ways?

**What's Next?**

There is much more to learn about student engagement and educational effectiveness than one intentionally short, highly focused student survey can tell us. To probe further, some institutions are combining their NSSE results with evidence from other surveys and academic records to develop rich, campus-specific profiles of the undergraduate experience. Portfolios and major field-specific outcomes assessments could also be instructive sources of evidence when linked with student engagement findings and other information. And we need to further document the relationships between student engagement data and valid measures of student learning.

We also need to learn more about what promotes engagement, both in undergraduate programs and in other levels of education. In the foreword to the "NSSE 2002 Report," Russ Edgerton and Lee Shulman wrote, "Students can be engaged in a range of effective practices and still not be learning with understanding." And students can be learning with understanding but not be able to apply what they are learning to practical matters or in different contexts. To respond to some of the messy NSSE questions raised earlier we need to determine the optimal and minimal levels of engagement in the various practices that yield satisfactory amounts of learning for various groups of students at different institutions or in various programs and levels of study.

NSSE data confirm what many have believed for a long time—that the quality of the undergraduate experience at one school can differ substantially from that of another school, even of the same size and caliber. One way for prospective students to find out whether the students at a college they are interested in are engaged in various activities is to ask the institution. As part of NSSE's public advocacy effort, it is making a pocket guide available to high school counselors, prospective college stu-
Education (AAHE) on this project to learn more about schools that have intentionally changed the way they work with their students to promote higher levels of student engagement that translate into achievement. Other partners in DEEP include the Wabash College Center of Inquiry in the Liberal Arts, the Association of American Colleges and Universities, the National Association of Student Personnel Administrators, and Lumina Foundation for Education.

NSSE is also working with AAHE and the Alliance for Equity in Higher Education on the BEAMS Project (Building Engagement and Attainment of Minority Students). This is an effort to reduce the national gap in educational attainment for African-Americans, Hispanics, and Native Americans by increasing the number of students from these groups who earn bachelor’s degrees (www.aah.org/BEAMS). This expanded workforce is transforming NSSE from an annual survey of undergraduates into a national movement for using survey data to improve the undergraduate experience.

**Conclusion**

Fortunately, nobody flies a plane across the Atlantic anymore without navigational instruments. Nor should colleges and universities make judgments about the effectiveness of their policies and practices in the absence of student engagement data or some comparable source of information about the quality of the student experience. NSSE is one compass that can help determine whether student behavior and institutional practices are headed in the right direction.

The good news is that many schools seem to be moving that way in some areas, such as incorporating active and collaborative learning activities and promoting internship and senior capstone experiences. But there’s also plenty of room for improvement. And it is only with the support of presidents, governing board members, academic and student life administrators, faculty members, and students that a variety of coherent, challenging, and complementary educational activities, inside and outside the classroom, will flourish on a campus.