Quantitative Data: The word data typically conjures daunting pictures of tables of numbers and complex statistical analyses. Many questions relevant to student success can be answered—at least in part—with numbers, such as “How many first-time, full-time students persist to graduation in six years?” or “How does academic performance differ for students who do or do not use tutoring or other academic support services?” What data do you have about the beginning student experience, retention, and other success indicators?

- Entering student info—HS GPA, Rank, etc.  EBI
- CIRP  NSSE
- BCSSE  Other
- Gateway course success rates  Other

Student Success Indicators
- What are the institutional retention and academic achievement rates for students (e.g. percentage of entering students who receive certificates, diplomas, degrees, and/or transfer to another institution?)
- What is the breakdown by gender, age, socio-economic status, language spoken at home, and race/ethnicity

Curricular Trouble Spots
In what courses or areas of the curriculum do students experience difficulty? These trouble spots are likely to include:
- Courses where 30% of the students stop attending classes after one month
- Courses where 50% of students earn low grades or withdraw
- Courses that have a reputation among students for being tough

Reliable quantitative instruments, including NSSE & the College Student Experiences Questionnaire (CSEQ), are available to examine important dimensions of student learning and engagement in the first year of college.

NSSE Items positively correlated with FY GPA and retention:

<table>
<thead>
<tr>
<th>Asked questions in class or contributed to class discussions</th>
<th>Discussed grades or assignments with an instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Made a class presentation</td>
<td>Talked about career plans with a faculty member or advisor</td>
</tr>
<tr>
<td>Prepared two or more drafts of a paper or assignment before turning it in</td>
<td>Discussed ideas from your readings or classes with faculty members outside of class</td>
</tr>
<tr>
<td>Come to class without completing readings or assignments</td>
<td>Received prompt feedback from faculty on your academic performance (written or oral)</td>
</tr>
<tr>
<td>Worked with other students on projects during class</td>
<td>Worked harder than you thought you could to meet an instructor's standards or expectations</td>
</tr>
<tr>
<td>Worked with classmates outside of class to prepare class assignments</td>
<td>Worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)</td>
</tr>
<tr>
<td>Tutored or taught other students (paid or voluntary)</td>
<td>Discussed ideas from your readings or classes with others outside of class (students, family members, coworkers, etc.)</td>
</tr>
<tr>
<td>Participated in a community-based project as part of a regular course</td>
<td>Had serious conversations with students of a different race or ethnicity than your own</td>
</tr>
<tr>
<td>Used an electronic medium (list-serv, chat group, Internet, etc.) to discuss or complete an assignment</td>
<td>Had serious conversations with students who differ from you in terms of their religious beliefs, political opinions, or personal values</td>
</tr>
<tr>
<td>Used e-mail to communicate with an instructor</td>
<td></td>
</tr>
</tbody>
</table>

How does your campus perform on these measures?
Note that NSSE measures associated with FY student success differ by campus. For example,

- **Humboldt State University** linked NSSE results with student departure data to discover that students who withdrew were less likely to work with their classmates on class assignments than students who persisted. They also found that students with lower grades and who live off campus were more likely to withdraw. These results prompted faculty members to structure more collaborative learning in first year courses, to facilitate the formation of study groups, and for the institution to consider implementing learning communities to increase opportunities for students to interact with their classmates.

- **Georgia Institute of Technology** identified several NSSE items as predictors of first-year student retention including: participation in practicum, internship, field experience, co-op experience, or clinical assignment; quality of relationship with peers; the extent to which the institution emphasizes attending campus events and activities; and perception of gains in job or work-related knowledge and skills. The analysis at Georgia Tech, a technologically based institution with the largest optional co-op program in the nation, illustrates the influence of distinctive campus programs to student engagement and retention. These two examples demonstrate the importance of using data to identify context specific factors associated with student retention to tailor strategies to increase persistence.

**Considering Quantitative Data:** What do these data suggest about the quality of the FY experience? Who succeeds? Where are the shortcomings? Around which aspects of the FY experience do you need more information, or What do you still need to know? Which data points need demand more in-depth information?

**Qualitative Assessments:** Useful, insightful data also can come in other forms and from other sources, including personal experiences and narratives. Qualitative research methods are particularly useful for describing and interpreting complex concepts and experiences, such as students’ understanding of institutional expectations or the meaning faculty make of institutional messages about the appropriate balance of teaching and research. Pertinent sources of qualitative data include:

- Documents, including campus newspapers, planning documents, students' written work, admissions materials, both print and electronic
- Observations of student use of and interactions in a residence hall dining area, traffic patterns in the union, and student-faculty interactions in service learning activities
- Individual interviews and focus groups of faculty, students, student affairs staff, and institutional leaders

**ISES Framework for Assessing Student Engagement and Success:** The *Inventory for Student Engagement and Success* (ISES) offers a practical approach to understanding the extent to which the conditions for educational effectiveness exist on campus. The ISES includes sets of diagnostic queries that focus on the six properties and conditions common to high-performing schools (see *Student Success in College*, Jossey –Bass, 2005) as well as the five clusters of effective educational practices featured in NSSE.

Quantitative and qualitative data sources of information should be combined to answer the diagnostic queries that guide the ISES approach.
Using ISES — Assessing Clear Pathways to Student Success. The ISES diagnostic queries associated with a key condition for FY student success — Clear Pathways to Student Success — are detailed below. To check the internal validity of the answers to ISES questions, ask: “How do we know? How do we know our answers are accurate? Where is the corroborating evidence?” For example, one question asks, “Are pathways to and expectations for student success clear to new students?” An instructive response to that question would include detailed reports from students about their experiences and impressions.

Diagnostic Queries — Clear Pathways to Student Success:
I. Acculturation
   Teaching Students How to Succeed
   1. What messages does the institution communicate to prospective community members (students, faculty, staff) about:
      A. Expectations for student performance and outcomes
      B. Expectations that students assume a fair share of responsibility for their learning
   2. Who communicates these messages and when? Are the messages consistent with the institution’s espoused mission, values, and expectations?
   3. Do all prospective community members receive the same messages?
   4. What do current students, faculty, and staff recall about being newcomers? Did they feel welcome? Did they have a clear understanding of “how we do things here?” Were their understandings consistent with what the institution espouses?
   5. What symbols and actions communicate to newcomers the importance of students and their learning and success?
   6. Does the institution communicate high expectations for students—asking them to aspire and stretch beyond their perceived limits?
   7. Are high expectations communicated to some students and not to others?

Creating a Sense of Community
1. Do all students feel a sense of “specialness” about the institution and about being its students? Or are feelings of “specialness” limited to certain groups of students?
2. What traditions and events introduce students to the values of the institution? To what extent are those traditions consistent or inconsistent with the espoused institutional values? What acculturation experiences should be added?

II. Alignment
Creating Pathways to Student Success
1. To what extent are resources, structures, programs, policies, and practices for student learning and development consistent with the institution’s mission and students’ characteristics?
2. Are various pathways to student success—what different types of students need to do to succeed—consistent with the characteristics of your students?
3. Are forms of challenge and support consistent with the needs of students and with the institution’s educational priorities? Do students who need extra support receive it?

Front-loading Resources
1. To what extent are resources “front-loaded” to foster students’ academic and social success? Are these experiences integrated with or tangential to the curriculum? How might they be integrated more effectively?
2. Do students learn about resources for their learning before or when they need them?
3. What programs assist the transition and success of students in need of additional preparation for college? To what extent are these programs used? What evidence exists to show that they are effective?
Early Warning Systems and Safety Nets
1. What policies and practices identify students at risk? To what extent are they used, in what ways, and by whom? How and for whom are they effective?
2. To what extent and in what ways are safety nets in the form of resources, programs, policies, practices, and structures for students in difficulty available and used? By whom are they used? Who does not use them?
3. To what extent are these resources, programs, policies, practices, and structures effective, and for whom?

Integration of Complementary Student Success Initiatives
1. To what extent are the institution’s resources, programs, policies, practices, and structures for student success redundant and responsive? To what extent are they fragmented, unresponsive, and ineffective?
2. To what extent are the institution’s formal out-of-class policies, programs, practices, resources, and facilities consistent with its educational priorities? Do they facilitate or inhibit student learning?
3. To what extent are students’ out-of-class lives consistent with the institution’s expectations? In what ways do students’ out-of-class lives facilitate or inhibit their learning and success? Do some of students make particularly good or bad choices about how they spend their out-of-class time? What mechanisms—if any—identify students who are less engaged in educationally purposeful activities than they should be to succeed?
4. To what extent and in what ways are students, faculty, and staff accountable for meeting the institution’s expectations? Are reward systems consistent with the institution’s espoused educational priorities?
5. What groups or offices collect and disseminate information about students and their experiences? How is the information obtained, communicated, and used?
6. Where in the institution are the various “pictures” of students and their experiences brought together to create a holistic understanding of the quality of undergraduate programs?

Example of ISES Application: Using ISES Queries to inform the work of Admissions and Student Recruitment
A good fit between student expectations and campus environment is associated with student satisfaction and engagement. Recruitment materials should communicate accurate expectations and experiences to new students. Orientation should build upon these materials and reinforce what it takes to achieve academic and social success at the institution.

As you consider the next student recruitment season, what messages does your institution send—intentionally and unintentionally—about:

Student success behaviors:
- What is the image of the successful student projected by your printed admissions materials, the institutional Web site, and by campus tour guides?
- To what extent does the projected image accurately portray academic expectations and positively impact students’ decision to enroll, persist, and graduate?

Acculturation and acclimation:
- How do prospective students learn about what it takes for academic success?
- Are they able to find one or more affinity groups that provide social support?
- What do transition events and materials collectively communicate to different groups of students about institutional values, academic expectations, and the extent to which they are welcome and affirmed?
- How do these experiences introduce students to campus resources and opportunities?

Student engagement and persistence:
- How much do admissions personnel know and share with prospective students about student engagement as measured by NSSE or other instruments?
- To what extent do admissions personnel discuss persistence and graduation rate information with prospective students?
Vignette: Clearly Marked Pathways to Success
First-Year Seminar: Wheaton College
All Wheaton’s first-year students take the First-Year Seminar (FYS) in the first semester of college. First-Year Seminar is a credit-bearing experience taught by a team of instructors, including a faculty member, a librarian, and two preceptors (junior- or senior-level students). The faculty member is the student’ academic advisor throughout the first year, or until the student selects an academic major. The progress of FYS groups and individual students are monitored by the faculty. First-Year Seminar precep-

Example of Application
Admissions and Student Recruitment
A good fit between student expectations and campus environment is associated with student satisfaction and engagement. Recruitment materials should communicate accurate expectations and experiences to new students. Orientation should build upon these materials and reinforce what it takes to achieve academic and social success at the institution.

As you consider the next student recruitment season, what messages does your institution send—intentionally and unintentionally—about:

Student success behaviors:
• What is the image of the successful student projected by your printed admissions materials, the institutional Web site, and by campus tour guides?
• To what extent does the projected image accurately portray academic expectations and positively impact students’ decision to enroll, persist, and graduate?

Acculturation and acclimation:
• How do prospective students learn about what it takes for academic success?
• Are they able to find one or more affinity groups that provide social support?
• What do transition events and materials collectively communicate to different groups of students about institutional values, academic expectations, and the extent to which they are welcome and affirmed?
• How do these experiences introduce students to campus resources and opportunities?

Student engagement and persistence:
• How much do admissions personnel know and share with prospective students about student engagement as measured by NSSE or other instruments?
• To what extent do admissions personnel discuss persistence and graduation rate information with prospective students?