

Chapter 1

DEVELOPING A COLLECTIVE INSTITUTIONAL COMMITMENT

If we wish to discover the truth about an educational system, we must look into its assessment procedures. What student qualities and achievements are actively valued and rewarded by the system? How are its purposes and intentions realized? To what extent are the hopes and ideals, aims and objectives professed by the system ever truly perceived, valued, and striven for by those who make their way within it? The answers to such questions are to be found in what the system requires students to do in order to survive and prosper. The spirit and style of student assessment defines the de facto curriculum.

—Derek Rowntree, 1987

OVERVIEW: Driven by intellectual curiosity about the efficacy of collective educational practices, assessment of student learning pursues questions about teaching and learning. This chapter provides an overview of institution- and program-level assessment as a systemic and systematic process of inquiry along the continuum of students' learning to determine what, how, and how well students learn over time. In addition, it presents an anatomy of the process that unfolds more specifically through succeeding chapters. To anchor assessment within professional and institutional values, it also focuses on developing collective principles of commitment. The Worksheets, Guides, and Exercises at the end of this chapter are designed to deepen, strengthen, or initiate a collective commitment to assessing for learning that is anchored in (1) intellectual curiosity about student learning, (2) institutional principles of commitment, and (3) meaningful beginnings.

A CULTURE OF INQUIRY

How humans learn is complex. Ask a group of people to identify strategies, contexts, and conditions for how they learn. That list will likely include some of the following responses: repetition; practice in multiple contexts; time; feedback from peers, colleagues, or trusted others; self-reflection; motivation; risk taking; modeling behavior against that of another; observation; preference for learning

a certain way to ground new learning, such as the need to visualize; and even the instructiveness of failure. More than a process of ingesting information, learning is a multidimensional process of making meaning. This process differs from human being to human being and may even vary within each of our own selves depending on the nature of the task we face. What is easy for one person to learn may be difficult for another.

Insert the complexity of learning into the complexity of what we expect our students to achieve while studying at our colleges and universities. At the undergraduate level we aim to develop complex, higher-order thinking abilities that, in turn, inform or shape behaviors, values, attitudes, and dispositions. We educate individuals to respond to environmental, social, technological, scientific, and international developments, as well as to work with diverse perspectives to solve interdisciplinary problems. We develop students' communication abilities so that they are versatile in their ability to represent their thoughts in written, oral, and visual forms for different audiences and purposes. We prepare students to develop lifelong learning habits of mind and ways of knowing that contribute to their personal and professional development. In addition, we educate our students to become morally and socially responsible citizens who contribute to their local and even global communities, cognizant of the ethical dimensions of their work, decisions, and actions. We also expect students to understand and practice the conventions, behaviors, disciplinary logic, and problem-solving strategies of their major field of study, as they become our future biologists, chemists, accountants, artists, journalists, physicians, researchers, and public figures.

At the graduate level we educate people to become experts who explore new territories in their fields or professions and question findings or challenge claims that lead to new directions in research and lines of inquiry. We educate them to work effectively in teams, to cross disciplinary boundaries, to become "scholar-citizens who connect their work to the needs of society" and understand "ethical conduct as researchers, teachers, and professionals, including issues of intellectual property" (Nyquist, 2002, p. 19).

How well do we achieve our educational intentions? How do we know? Therein lies the wellspring of an institutional commitment to assessment—intellectual curiosity about what and how well our students learn. Assessment is the means of answering those questions of curiosity about our work as educators. A systemic and systematic process of examining student work against our standards of judgment, it enables us to determine the fit between what we expect our students to be able to demonstrate or represent and what they actually do demonstrate or represent at points along their educational careers. Beyond its role of ascertaining

what students learn in individual courses, assessment, as a collective institutional process of inquiry, examines students' learning over time. It explores multiple sources of evidence that enable us to draw inferences about how students make meaning based on our educational practices.

This book presents a framework, processes, strategies, illustrative campus practices, key resources, guides, worksheets, and exercises that assist institutions in developing a sustainable culture of inquiry about students' learning. This inquiry builds on the successful practices of classroom-based assessment to explore students' cumulative learning at various points in their educational careers represented in their "texts," that is, their behaviors, interactions, reactions, reflections, and their visual or written products or performances. Specifically, this book focuses on assessing how well students achieve at two levels:

1. The program level (department, division, school, or service within an institution)
2. The institution level, based on a college's or university's mission statement, educational philosophy, or educational objectives

At these two levels of assessment, collective questions such as the following initiate inquiry into student learning:

- How well do students transfer and apply concepts, principles, ways of knowing, and problem solving across their major program of study?
- How well do students integrate their core curriculum, general studies, or liberal studies into their major program or field of study?
- How well do students develop understanding, behaviors, attitudes, values, and dispositions that the institution asserts it develops?

This book also presents inquiry into student learning as a systemic and systematic core process of institutional learning—a way of knowing about our work—to improve educational practices and, thus, student learning. Becoming learning organizations themselves, higher-education institutions deepen understanding of their educational effectiveness by examining the various ways in which students make their learning visible. Each chapter explores ways to position this inquiry into program- and institution-level processes, decisions, structures, practices,

forms of dialogue and channels of communication. Some campuses may embed or weave this institutional commitment into existing institutional structures and practices. Others may develop new ways of behaving that accommodate the depth and breadth of this commitment.

DIALOGUE ABOUT TEACHING AND LEARNING ACROSS THE INSTITUTION

Driven by compelling questions about how students translate what they have learned into their own set of practices, assessment promotes sustained institutional dialogue about teaching and learning. A complex process, learning occurs over time inside and outside of the classroom but not at the same time for all learners or under the same set of educational practices or experiences. Compatible with the intellectual curiosity that characterizes educators—a desire to explore and question issues from multiple perspectives—assessment channels intellectual curiosity into investigating students' learning. This investigation occurs through the multiple lenses of individuals who contribute to students' learning: faculty, staff, administrators, graduate and undergraduate students, local community leaders, alumni, and mentors.

Building a collective commitment to assessing student learning also involves establishing new or different kinds of relationships and opportunities for dialogue. Some of these relationships involve deepening or transforming working relationships that already exist, such as among faculty in a department, program, or division, or among professional staff in a service. Other relationships involve crossing boundaries to create lasting new partnerships, such as among academic affairs, student affairs, student services, and those in library and information resources. Still other relationships require breaking new ground to build an organic and systematic focus on learning and improving learning. Establishing learning circles or inquiry groups that track student learning over time to understand how students construct meaning along different dimensions of their educational experiences is one kind of groundbreaking relationship. Developing communication structures and processes that channel assessment results into program- and institution-level planning, budgeting, and decision making is yet another kind of new relationship. These kinds of relationships characterize a culture of inquiry that relies on evidence of student learning to

inform institutional actions, decisions, and long- and short-term planning focused on improving student achievement.

Learning as defined in this book encompasses not only knowledge leading to understanding but also abilities, habits of mind, ways of knowing, attitudes, values, and other dispositions that an institution and its programs and services assert they develop. Identifying patterns of student performance represented in various kinds of student “texts”—written, visual, oral, and interactive—provides robust evidence of how well undergraduate and graduate students progress toward and achieve our expectations for their learning. Exploring reasons why students are not achieving our expectations stimulates specific discussion about ways to improve the following sets of educational practices:

- Pedagogy
- Instructional design
- Curricular and co-curricular design
- Institutional programs and services that support, complement, and advance student learning
- Educational resources and tools
- Educational opportunities, such as internships or study abroad
- Advising

Situated within our sets of educational practices, assessment becomes integral to teaching and learning. Within this context we become more aware of how well we translate our intentions into multiple, varied, and frequent opportunities for students to learn. What an institution and its programs and services learn through students' work promotes programmatic and institutional dialogue and self-reflection about the processes of teaching and learning and their relationship to levels of student achievement. Dialogue and self-reflection, in turn, stimulate innovation, reform, modification, change, and revision or rethinking of educational practices and pedagogy to improve or strengthen student achievement.

ANATOMY OF THE COLLABORATIVE PROCESS

Providing a global view of assessment at this point in the book illustrates the dimensions of this internally driven commitment. As you read the following chapters, you will be able to flesh out the process for

your institution and its programs and services. If you already have a process in place, the remaining chapters may help to refine or deepen it.

The collaborative process has no universal model that fits all institutions. Rather, individual institutions embed or evolve practices that enable them to sustain a culture of inquiry. (Internet resources for assessment glossaries and online institutional handbooks, listed under “Additional Resources” at the end of this chapter, illustrate campus approaches.) Further, assessment is an iterative process—moving forward is often dependent on exploring or unearthing information that shapes a decision or on establishing new procedures or lines of communication that advance the process (Maki, 2000a). Assessment is also a process of nested discussions, decisions, and actions. Two examples illustrate this point:

- Developing institution- or program-level *outcome statements*, sentences that describe what students should be able to demonstrate during

or at the end of their undergraduate or graduate careers, is not simply a matter of wordmanship. Authoring them depends upon reaching consensus among educators about how, when, and where they address these outcomes. Clear outcome statements emerge from this kind of collaborative work.

- Determining a schedule to assess students’ cognitive development in a discipline rests on discussions among faculty and others who contribute to students’ learning about how they design their courses, curriculum, and educational experiences to advance students’ cognitive development. How students track and monitor their own development might also be a part of this discussion. Agreement about collective intentionality, then, becomes the backbone of a schedule to assess student learning.

Figure 1.1, Figure 1.2, and Figure 1.3 provide an anatomy of the collaborative assessment process.

A. State Expected Outcomes at the Appropriate Level	B. Identify Where Expected Outcomes Are Addressed	C. Determine Methods and Criteria to Assess Outcomes	D. State Institution’s or Program’s Level of Expected Performance	E. Identify and Collect Baseline Information
<p><i>For example:</i></p> <ul style="list-style-type: none"> • Derive supportable inferences from statistical and graphical data. • Analyze a social problem from interdisciplinary perspectives. • Evaluate proposed solutions to a community issue. 	<p><i>For example, in:</i></p> <ul style="list-style-type: none"> • Courses • Programs • Services • Internships • Community service projects • Work experiences • Independent studies 	<p><i>Examples:</i></p> <ul style="list-style-type: none"> • Test • In-class writing sample • In-class analysis of a problem • In-class collaborative problem-solving project • Portfolio • Performance • Simulation • Focus group 	<p><i>Examples:</i></p> <ul style="list-style-type: none"> • Numerical score on a national examination • Numerical score on a licensure examination • Holistic score on ability to solve a mathematical problem • Mastery-level score on a culminating project • Mastery-level score on writing samples 	<p><i>By means of:</i></p> <ul style="list-style-type: none"> • Standardized tests • Locally designed tests or other instruments • In-class writing exercise • In-class case study • Portfolio • Performance

FIGURE 1.1 Determining Your Expectations at the Institution and Program Levels

A. Determine Whom You Will Assess	B. Establish a Schedule for Assessment	C. Determine Who Will Interpret Results
<p><i>For example:</i></p> <ul style="list-style-type: none"> • All students • Student cohorts, such as <ul style="list-style-type: none"> • At-risk students • Historically underrepresented students • Students with SATs over 1200 • Traditional-aged students • Certificate-seeking students • International students • First-generation immigrant students 	<p><i>For example:</i></p> <ul style="list-style-type: none"> • Upon matriculation • At the end of a specific semester • At the completion of a required set of courses • Upon completion of a certain number of credits • Upon program completion • Upon graduation • Upon employment • A number of years after graduation 	<p><i>For example:</i></p> <ul style="list-style-type: none"> • Outside evaluators: <ul style="list-style-type: none"> • Representatives from agencies • Faculty at neighboring institutions • Employers • Alumni • Inside evaluators <ul style="list-style-type: none"> • Librarian on team for natural science majors • Student affairs representative on team to assess general education portfolio • Interdisciplinary team • Assessment committee • Writing center • Academic support center • Student affairs office

FIGURE 1.2 Determining Timing, Identifying Cohort(s), and Assigning Responsibility

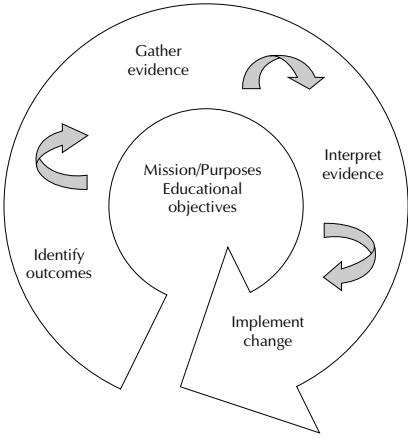
A. Interpret How Results Will Inform Teaching/Learning and Decision Making	B. Determine How and with Whom You Will Share Interpretations	C. Decide How Your Institution Will Follow Up on Implemented Changes
<p><i>For example:</i></p> <ul style="list-style-type: none"> • Revise pedagogy, curricula, or sequence of courses. • Ensure collective reinforcement of knowledge, abilities, habits of mind by establishing, for example, quantitative reasoning across the curriculum. • Design more effective student orientation. • Describe expected outcomes more effectively. • Increase connections between in-class and out-of-class learning. • Shape institutional decision making, planning, and allocation of resources. 	<p><i>For example:</i></p> <ul style="list-style-type: none"> • General education subcommittee of the curriculum committee through an annual report • Departments through a periodic report • Students through portfolio review day • College planning/budgeting groups through periodic reports • Board of trustees through periodic reports • Accreditors through self-studies 	<p>Repeat the assessment cycle after you have implemented changes or innovations:</p> <p style="text-align: center;">Assessment Cycle</p> 

FIGURE 1.3 Interpreting and Sharing Results to Enhance Institutional Effectiveness

These figures are not designed to prescribe a lock-step institution- or program-level strategy. Rather, they identify major tasks that occur in a sustainable process. Chapter 2 through Chapter 7 will elaborate on these major tasks, describe various strategies for carrying them out, and incorporate institutional examples that illustrate representative campus practices.

Figure 1.1 focuses on the collective tasks and decisions involved in describing major program- and institution-level outcomes, on developing methods to assess those outcomes, and on developing criteria and standards of judgment to assess student work. Figure 1.2 focuses on collective tasks and decisions related to identifying when to assess students' work to ascertain how well they are achieving or have achieved program- or institution-level outcomes. Two kinds of assessment are important for this process:

1. *Formative*, designed to capture students' progress toward institution- or program-level outcomes based on criteria and standards of judgment
2. *Summative*, designed to capture students' achievement at the end of their program of study and their undergraduate or graduate education based on criteria and standards of judgment

Figure 1.3 focuses on collective tasks and decisions related to interpreting and using the results of assessment methods to verify students' achievement or to identify patterns of weakness in their achievement. It also focuses on the importance of implementing changes to improve learning, an action that stimulates anew the inquiry process. Consisting of more than isolated cells of activity, assessment becomes an institutional way of behaving, an institutional rhythm involving educators within and outside of the institution in examining evidence of student learning at significant points in students' undergraduate and graduate programs.

A SHARED COMMITMENT: ROLES AND RESPONSIBILITIES

This commitment involves several constituencies. These are discussed in the following sections.

Presidents, Chancellors, and System Heads

Communicating the value of assessing student learning within an institution—learning about the

efficacy of our work through our students' work, for example—is a primary responsibility of presidents, chancellors, and system heads (see *A Collaborative Beginning: Principles of Commitment* later in this chapter). Situating assessment within an institution or system as a core process is also primarily an executive leader's responsibility. This responsibility also includes making sure that assessment is structured into the institution or system and that assessment results are channeled and embedded in institutional self-reflection, decision making, budgeting, and long- and short-range planning. Incorporating assessment results into institutional decisions and actions demonstrates institutional commitment to improving programs and services and to advancing student learning. Achieving this goal requires integrating interpretations and decisions based on assessment results into an institution's planning and decision-making timetables. Currently, this process remains a challenge to most colleges and universities because often institutional decision-making and planning calendars do not match those of assessment reporting cycles.

Finally, an executive leader's ability to create a neutral zone on a campus or across a system is essential for building an institutional commitment. Formal and informal times to share institution- and program-level results, good news and not-so-good news; to collectively reflect on results; and to propose innovations in practice or modifications in current practices define this neutral zone. Collective dialogue about how members of an academic community might address patterns of weakness in student learning, such as developing a progression of experiential opportunities within the co-curriculum that intentionally complement or build upon the progression of learning in a program, marks an institutional commitment to assessment.

Boards of Trustees

Learning about student achievement is a responsibility of boards of trustees. Beyond being fiscally responsible, board members are also champions of our colleges and universities, their educational quality, and students' achievement. Establishing structures and channels to learn about assessment results and interpretations, in collaboration with the chief executive officer, faculty, staff, administrators, and student representatives, assures that board members remain informed about students'

achievement. Through these relationships, assessment results can inform and shape board deliberations and decisions about institutional priorities, commitment of resources, allocation or reallocation of resources, fund-raising priorities, and strategic planning. Student learning becomes, then, a focus at the level of institutional decision making and planning, a focus that marks a serious commitment to improving programs and the quality of education.

Campus Leaders

Establishing structures, processes, and channels of communication at the institution and program levels is the responsibility of campus leaders—provosts, vice presidents, deans, chairs, and department heads. Provosts and vice presidents facilitate the establishment of an institution-level process and a central committee, such as an assessment committee, that consists of representatives from across an institution. This committee sets a timetable for receiving institution-level and program-level reports that present findings and interpretations based on cycles of assessing student learning. Results of these reports shape a chief academic officer's budgets and academic plans to improve student learning. Similarly, provosts, deans, chairs, and department heads assure that each of their schools, divisions, departments, programs, and services establishes an assessment process and cycles of inquiry. Results and interpretations of program-level assessment shape annual budgets, priorities, and plans to improve student learning.

Two other major responsibilities fall within the role of campus leaders in collaboration with faculty and staff:

1. Determining how an institution will value a commitment to assessing student learning as a core institutional process:
 - How will an institution recognize and reward this professional work?
 - Will such work be valued in promotion, tenure, and renewal processes as a form of scholarship? If so, under what criteria?
 - Will it also be valued in periodic reviews of staff?
 - How does this commitment translate into the ways in which people spend their professional time?
2. Identifying, establishing, or making available support and resources that initiate, build, and sustain this commitment as a core institutional process:
 - What kinds of human, financial, or technological resources will build and sustain program- and institution-level capacity?

Responses to these questions vary from institution to institution. The framework presented in this book, including the institutional examples, offers campus leaders a range of approaches to determine how they will develop, design, support, and sustain assessment as a core institutional process.

Faculty, Administrators, Staff, and Other Contributors to Student Learning, Including Students

Those who teach and those who learn form the fabric of the actual process of assessment. Thus, a collective institutional commitment to assessing student learning engages all who contribute to the educational process, including students themselves. Faculty, administrators, and staff design the curriculum, co-curriculum, sets of educational experiences and opportunities, and support services to provide multiple ways of learning. Individuals in local communities educate students as they participate in internships, service learning programs, and other experiential opportunities, thus extending learning opportunities beyond a campus environment. Teaching assistants and tutors bring fresh perspectives to the assessment process as both teachers and observers of student learning. Involving student representatives in institution- and program-level assessment brings learners' perspectives into this collective effort and encourages students to take responsibility for their learning. Beyond an act imposed on students, assessment is a process of learning about how students make meaning. Opportunities to engage students in this collective process abound: seeking their contributions to identifying or designing relevant assessment methods or developing criteria and standards to assess student work. Sharing and discussing results with them offer an opportunity to integrate students into institution- and program-level learning processes. Expanding the range of contributors brings different lenses to assessing student learning that broaden interpretations of student achievement.

A COLLABORATIVE BEGINNING: PRINCIPLES OF COMMITMENT

Establishing the principles of a collective commitment to assessment is a necessary foundation to signaling its institutional value within the context of a college or university. Identifying the purposefulness of this commitment also serves to engage individuals because they see the place of this work within their profession. Involving representatives from across an institution or system—as well as representatives from external stakeholders such as community leaders, legislators, or policy makers—signals the collaborative nature of this work at the outset. The following list identifies those who might work together to draft and circulate principles of commitment that provide an institutional context for this work:

- President, chancellor, or system head
- Board of trustees' representative
- Faculty, including those involved in governance
- Administrators
- Staff from student affairs, support services, and library and information resources
- Undergraduate and graduate students
- Alumni
- Employers
- Local community leaders
- Parents
- Other interested parties

ANCHORS FOR DEVELOPING INSTITUTIONAL PRINCIPLES OF COMMITMENT

Establishing assessment as a core institutional process that extends across a campus calls for a collaborative beginning. Drawing members of an educational community together to develop a statement of institutional principles of commitment signals the collaborative nature of assessment. Through collaborative authorship, a college's or university's principles of commitment statement anchors assessment within the mission, purposes, and values of an institution and, thereby, provides an institutionally meaningful context for this work. Eventually, the language of an institution's vision and mission statements may also contain these principles, indicating campus ownership of assessment as

a way of knowing, learning, and evolving. The following contexts may serve as anchors that ground, shape, and contribute to the language of an institution's principles of commitment.

The Science of Learning

Research on the complexity of learning is increasingly challenging educators to examine the assumptions underlying teaching and learning, as well as those underlying methods of assessment. Halpern and Hakel (2002) make the compelling case that it is, indeed, the business of educators to engage in research on teaching to promote students' long-term retention and recall or, at least, to draw upon existing research to inform educational practices. In *Applying the Science of Learning to University Teaching and Beyond*, they explore the effects of various pedagogies on long-term retention. Integral to this arena of work is assessment, a means to ascertain the effectiveness of different kinds of pedagogy or instructional tools in fostering desired learning.

Over the last several years, the National Research Council's publications on research on learning have stimulated deeper thinking about how we design for learning. That is, how do we design pedagogy, curricula, and learning environments; or how do we integrate educational practices or resources that foster what we intend our students to learn? How we assess our students is inextricably related to the answer to that question. If we layer assessment methods onto students as afterthoughts, as opposed to designing them based on dialogue about our educational philosophies, practices, and intentions, then we cannot learn about the efficacy of our designs, nor determine how to improve them. It is reasonable, then, that the National Research Council (2001, p. 3) calls for "a richer and more coherent set of assessment practices" that align with what and how students learn. Engaging in research on learning or drawing upon research on learning in the design of pedagogy, curricula, educational experiences, and methods of assessment may serve as a professional underpinning for an institutional commitment to assessment.

The Scholarship of Teaching and Learning

Since Ernest Boyer's 1990 landmark reconsideration of scholarship as four interrelated priorities for the professoriate—discovery, integration, application, and teaching—inquiry into teaching and learning has

become an avenue for scholarship (Boyer, 1990). In that inquiry, assessment, a means of providing evidence about the effectiveness of teaching practices, has received scholarly status as well. Shulman (1998) contributes to this status by describing the scholarship of teaching as entailing

a public account of some or all of the full act of teaching—vision, design, enactment, outcomes, and analysis—in a manner susceptible to critical review by the teacher’s professional peers and amenable to productive employment in future work by members of that same community. (p. 6)

A year later in their *Change* article, “The Scholarship of Teaching: New Elaborations, New Developments,” Hutchings and Shulman (1999) describe the stance that characterizes the Carnegie Academy for the Scholarship of Teaching and Learning’s (CASTL) approach to teaching:

It requires a kind of “going meta,” in which faculty frame and systematically investigate questions related to student learning—the conditions under which it occurs, what it looks like, how to deepen it, and so forth—and to do so with an eye not only to improving their own classroom but to advancing practice beyond it. (p. 13)

More recently, a 2002 collection of CASTL scholars’ essays notably advances dialogue about and inquiry into the scholarship of teaching and learning through ten disciplinary perspectives. Discussions of disciplinary styles of teaching necessarily raise questions about the relationship between methods of teaching and methods of assessing disciplinary learning. For example, among the pedagogical disciplinary questions Calder, Cutler, and Kelly raise in “Historians and the Scholarship of Teaching and Learning” are ones focused on identifying the “best ways to help students develop historical knowledge” and on identifying the kinds of assessment that “count as evidence for the understanding” they hope to build (Huber & Morreale, 2002, pp. 59–60).

Litterst and Tompkins’ (2001) article, “Assessment as a Scholarship of Teaching,” and Banta and Associates’ (2002) *Building a Scholarship of Assessment* represent two recent publications that make a compelling case for viewing assessment as scholarship. For Litterst and Tompkins, assessment “belongs to the scholarship of teaching” because it is a systematic study of “situated teaching practices . . . using par-

ticular forms of research and knowledge” (p. 10). Banta and Associates’ book, the most exhaustive collection of writings to date dedicated to exploring assessment as scholarship, draws together the writings of scholars, researchers, and practitioners that provide different disciplinary rationales for and perspectives on this approach to assessment, including the scholarly assessment of student development. For institutions that make the case that they value or intend to value a commitment to assessment as a form of scholarship, Banta and Associates’ book provides a rich resource on procedures and methods that define the scholarly parameters of this work.

Disciplinary and Professional Organizations’ Focus on Student Learning

Disciplinary and professional organizations are also advancing assessment as a means of upholding educational quality, as well as improving teaching and learning. In 1995 the National Council of Teachers of English, through its Conference on College Composition and Communication, developed a position statement on writing assessment that articulates principles of effective assessment design in relation to the pedagogy of teaching writing (www.ncte.org/about/over/positions/category/write/107610.htm). This position is particularly significant because it is rooted in research on writing as a process that led to developments in pedagogy on the teaching of writing. Thus, this public position on assessment practices is congruent with current pedagogy. The Council of Writing Program Administrators has also developed an “Outcomes Statement for First-Year Composition” that describes the “common knowledge, skills, and attitudes sought by first-year composition programs in American postsecondary education.” This statement also reflects research on how students learn to write, as well as reflects current practices in the teaching of writing (www.ilstu.edu/~ddhesse/wpa/positions/outcomes.htm).

Science, technology, engineering, and mathematics have demonstrated an impressive staying power in their commitment to advancing assessment as integral to teaching and learning. Project Kaleidoscope, an informal national alliance working to build learning environments for undergraduate students in mathematics, engineering, and various fields of science, has maintained a focus on assessing learning through its workshops, seminars, and

publications (www.pkal.org). Over the last decade, the Mathematical Association of America has consistently focused on assessing undergraduates' quantitative reasoning, best represented in *Quantitative Reasoning for College Graduates: A Complement to the Standards* (Sons, 1996).

Maintaining a consistently high profile in the advancement of teaching, learning, and assessment in the sciences, engineering, and medicine are the National Academies whose recent publications represent the Academies' commitment to improving education for future scientists and to promoting assessment as integral to teaching and learning (National Research Council, 2002a, 2002b, 2003). Sustained focus on assessment is also evident in funding opportunities supported by the National Science Foundation. Its Assessment of Student Achievement in Undergraduate Education supports the development of new assessment methods, adaptation of practices that have proven effective, and dissemination of effective assessment practices (www.ehr.nsf.gov/ehr/DUE/programs/asa).

The American Psychological Association (APA) has taken a leadership role in assessment in two ways:

1. It has developed undergraduate learning goals and outcomes for undergraduate psychology majors (www.apa.org/monitor/julaug02/psychmajors.html?CFID=2855600&CFTOKEN=20065970).
2. It has developed a robust resource Web site, a CyberGuide, to advance assessment methods in psychology programs (www.apa.org/ed/guide_outline.html).

Focus on assessment of graduate student learning is also receiving attention. Specifically, the Woodrow Wilson National Fellowship Foundation under its Responsive Ph.D. Program has developed a Ph.D. Professional Development Assessment Project that directs attention to "program assessment at the graduate level" (www.woodrow.org/responsivephd/activities.html).

The Carnegie Initiative on the Doctorate focuses on discipline-based conceptual work and design experiments in doctoral education in chemistry, education, English, history, mathematics, and neuroscience (www.carnegiefoundation.org/CID/index.htm). (Other representative national projects focusing on assessment are listed in the "Additional Resources" at the end of this chapter.)

The Book of Professional Standards for Higher Education in its "Standards Contextual Statement" describes the role of outcomes assessment and program evaluation for student affairs, student services, and student development programs (Miller, 2003). Included in this statement is a focus on the importance of "assessing individual and collective outcomes of programs and services" and "assessing the developmental impact of individual programs and the total collegiate experience" (p. 239). Among its recent publications, the National Association of Student Personnel Administrators (NASPA) lists several assessment resources that advance assessment practices in the co-curriculum (www.naspa.org/publications/index.cfm).

Institutional Focus on Learning-Centeredness

Increasingly, institutions across the country are characterizing themselves as learning-centered or student-centered, a term that appears in many college and university mission and purpose statements. Learning-centered institutions view students as active learners, creators of or contributors to knowledge and understanding, while at the same time reflecting on how well they are learning. Students are shaped by the contexts of their learning inside and outside of the classroom, just as they shape their own learning. Learning-centered institutions shift away from being what Barr and Tagg (1995, pp. 12–25) describe as providers of instruction to providers of learning. Faculty become designers of environments and tasks that foster student discovery and construction of meaning rather than predominantly transmitters of knowledge. Under this paradigm, the learning environment expands beyond the classroom to include, for example, face-to-face and online learning, interactive distance education, virtual studio classrooms, simulations accessed over the Internet, self-paced learning, peer-to-peer learning, cooperative learning, and service learning.

Learning-centered institutions also focus on how programs and services outside of the formal curriculum contribute to, support, and complement the curriculum and, thereby, achieve institutional mission and purposes. How do the programs and services of librarians and information resource staff, student affairs staff, learning support staff, and other professional staff or administrators contribute to student achievement? An institution that asserts it develops ethical decision making or civic responsi-

bility would wish to explore not only how these dispositions develop in the classroom but also how they develop or manifest themselves in residence life, athletics, governance, and work on and off campus. Students' participation in multiple social contexts or in communities within and outside of the academy offers opportunities for them to learn and opportunities for us to learn about the efficacy of our teaching or educational practices and experiences. Within this expanded learning environment, faculty, staff, administrators, students, teaching assistants, graduate assistants, alumni, community members, and community leaders contribute to student learning.

Exploring how different complementary relationships contribute to learning, as illustrated in Figure 1.4, enables an institution to understand the efficacy of these relationships in contributing to its students' education (Maki, 2002b). In this figure, the learner transfers, deepens, or affirms learning in social contexts with people in various roles and responsibilities. Relationships with one or more individuals contribute to students' learning in the following ways:

- Advancing, challenging, and building on new or previous learning
- Providing feedback that corrects misunderstandings
- Extending contexts for learning that illustrate the relevance or usefulness of new or previous learning
- Providing models of a particular behavior or ability

Faculty, staff, peers, mentors, advisors, administrators, internship supervisors, and community leaders, for example, assume teaching roles, offering diverse opportunities for students to apply or transfer knowledge, understanding, ways of knowing, and behaving. Consider the power of the following contexts in enabling students to deepen understanding:

- Observing how another peer or teaching assistant solves a chemistry problem
- Applying business principles to a student-run organization
- Applying principles of effective writing in preparing a proposal to undertake an independent study

- Serving as a resident assistant in a dormitory and wrestling with the ethical dimensions of a student complaint
- Challenging a decision made in a committee or group meeting that demonstrates a bias or violates agreed-upon working principles
- Applying principles of design to a community-based public art project

Directing professional energy and curiosity into what and how students learn, then, is an essential process in a learning-centered institution. Questioning how students develop understanding, professional, or disciplinary habits of mind; how they recall, use, and transfer what they have learned into new contexts; and how they move beyond long-held misconceptions to develop new understanding represents a challenging avenue of exploration in learning-centered institutions. What specific intellectual capacities or ways of understanding, for example, do problem-based collaborative projects, learning communities, and service learning experiences promote that other educational experiences may not? How different pedagogies or learning experiences contribute to students' behaviors or values represents still another line of inquiry.

Institutional Focus on Organizational Learning

The development of a collective commitment is an essential step in an institution's evolution toward becoming a learning organization. This commitment is reflected in the kinds of institutional structures, processes, and practices that evolve to answer and reflect on such questions about student learning as:

- How do institutions learn about research on the science of learning?
- How is this knowledge applied or translated into educational practices?
- How does an institution gather, store, and provide easy access to information about student learning that contributes to greater understanding about the efficacy of educational practices and experiences for cohorts of students?
- How do students, alumni, faculty, other campus professionals, and members of the surrounding community contribute to institutional discourse on teaching and learning?

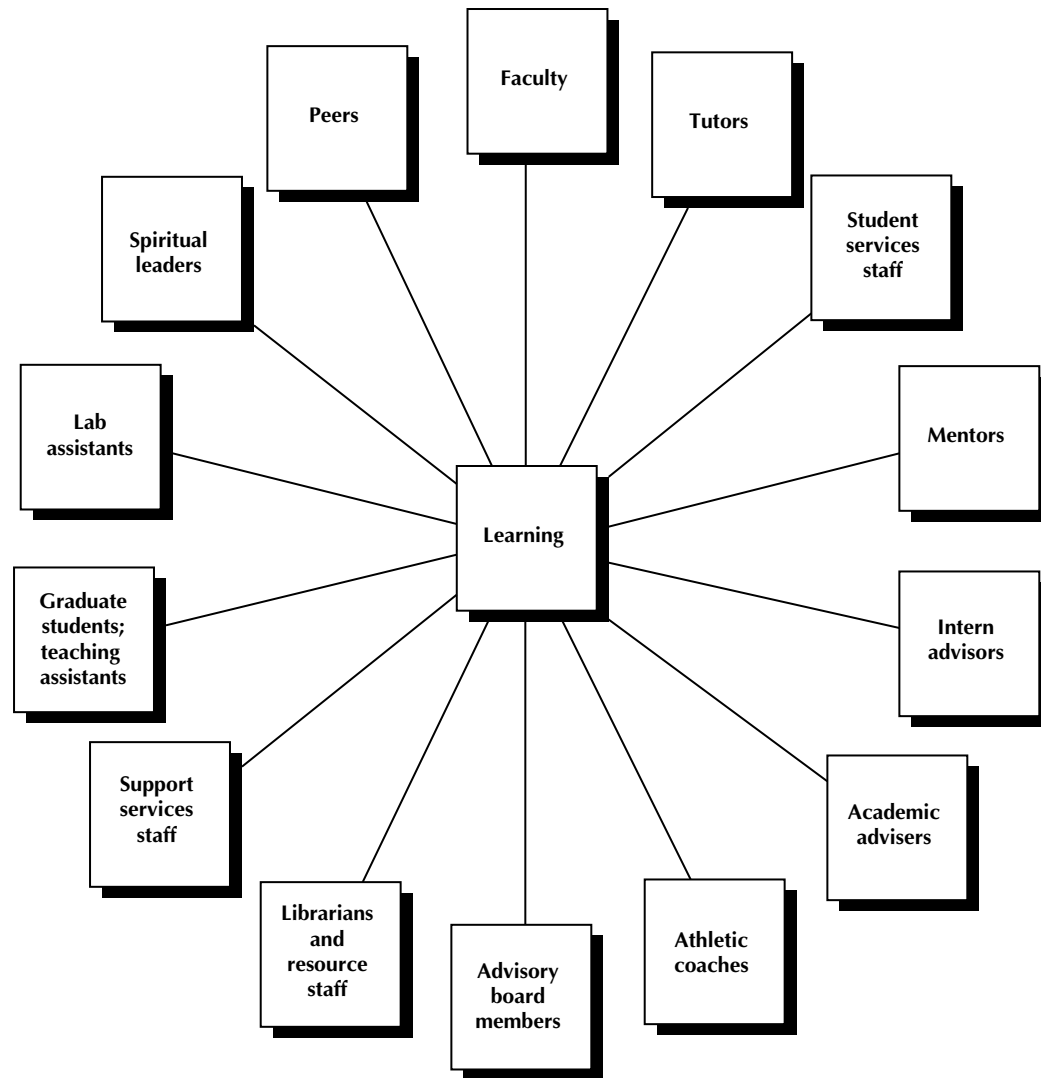


FIGURE 1.4 Some Contributors to Student Learning. *Source:* Adapted from P. Maki, *Learning contexts inside and outside of the academy* (AAHE Special Report). www.aahe.org/specialreports/part2.htm. Reproduced with permission.

Individuals and groups working across traditional boundaries to focus on student learning from multiple perspectives are indicative of a new behavior that defines an institution's commitment to learn about its work. In their learner-centered paradigm, Barr and Tagg (1995) envision the "institution itself as a learner—over time, it continuously learns how to produce more learning with each graduating class, each entering student" (p. 14). An institution may ground its principles of commitment within the context of becoming a learning organization dedicated to continuously exploring its educational effectiveness. Institutions may in this way decide to

view themselves as learners, shaped by what they learn from and about their students.

Accountability

Responding to federal, state, and regional calls for accountability provides another kind of impetus for an institution's commitment, especially when such demands have funding or accreditation implications. More than ever, accreditors, legislators, and policy makers are seeking evidence of student learning. New educational delivery systems, the heterogeneity of our student populations, and the learning histories

they bring with them challenge us to focus on our educational practices. Exploring students' learning within our educational practices—such as combinations of synchronous and asynchronous learning, the use of technology, self-paced learning, and accelerated learning courses and programs—provides an institution and higher education with evidence about the efficacy of these practices.

Given the heterogeneity of our students, how well do our diverse populations learn what we assert we teach? What do we know about our traditional- and nontraditional-aged students, historically underrepresented students, first generation students, international students, commuter students, transfer students, students who drop out and then return to higher education, working students, and students who weave together their education from several institutions? Johnstone, Ewell, and Paulson (2002) view students' ability to demonstrate their learning through assessment as a "new approach to 'accounting for' student achievement." Assessing student learning becomes an objective "academic currency" for evaluating contemporary education's impact on diverse student populations (p. 13).

Though legislators, policy makers, and accreditors become external drivers of an institutional commitment to assessment, it is important to shift from an externally driven process to an internally driven one. It is vital to position assessment as integral to our professional work and to a commitment to teaching and learning that is responsive to our students' needs. Developing a sustainable internally driven core process of inquiry to improve student learning, as opposed to an externally driven periodic activity, is, in fact, what accreditors aim to promote in higher education. Regional accreditors seek evidence of an institution's ability to build a systemic process from the inside out. National and specialized accreditors seek the same process with a focus at the level of a program or service. A few examples from several recently revised regional accrediting standards illustrate accreditors' focus on assessment as an institutionwide responsibility:

- Standard 2 of the standards of the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges, "Student Learning Programs and Services," requires that an institution demonstrate how instructional programs, as well as student development and

support services and learning support services, facilitate the achievement of an institution's stated student learning outcomes. Results need to become a part of "institution wide dialogue" focused on how well a campus achieves its mission and purposes (www.accjc.org/).

- Standard 4 of the standards of the Accrediting Commission for Senior Colleges and Universities of the Western Association of Schools and Colleges, "Creating an Organization Committed to Learning and Improvement," asks institutions to present evidence of their commitment to develop a climate of inquiry to learn about and improve student learning (wasweb.org/senior/handbook.pdf).
- Standard 7 of the standards of the Commission on Higher Education of the Middle States Association calls for faculty and administrators to "work together to implement a sound, institution wide program of outcomes assessment" to improve the overall educational quality and enhance the effectiveness of teaching and learning (www.msache.org/).
- Criterion 3, "Student Learning and Effective Teaching," under the accreditation standards of the Higher Learning Commission of the North Central Association of Schools and Colleges, calls for patterns of evidence documenting that "Faculty and administrators routinely review the effectiveness of the organization's programs to assess student learning" (www.ncahigherlearningcommission.org/restructuring).

Specialized and national accrediting bodies, as well, seek evidence of a sustained commitment to assessment at the program or service level—an indicator of program quality and a commitment to improving student learning. Some specialized accreditors, such as the Accrediting Board for Engineering and Technology (ABET), hold programs responsible for assessing learning outcomes that the institution values as well (www.abet.org/images/).

MEANINGFUL BEGINNINGS

Where and how an institution and its programs and services initially position an institutional commitment to assessing for learning are dependent on its

BOX 1.1 INSTITUTIONAL EXAMPLE: *University of Portland*

The University of Portland has anchored its institutional commitment in its definition of scholarly teaching. The following statement and descriptors provide the context within which assessment takes place. Significant are the ways in which the descriptors embed assessment within the broader scope of teaching and improving student learning:

Scholarly teaching is an intellectual activity designed to bring about documented improvements in student learning. Scholarly teaching reflects a thoughtful engagement and integration of ideas, examples, and resources, coupled with pedagogically informed strategies of course design and implementation to bring about more effective teaching and learning. Scholarly teaching documents the effectiveness of student learning in a manner that models or reflects disciplinary methods and values.

THE SCHOLARLY TEACHER

- exhibits curiosity about his/her students, student learning, and students' learning environments;
- identifies issues/questions (problems) related to some aspect of student learning;
- develops, plans, and implements strategies designed to address/enhance student learning;
- documents the outcomes of his/her strategies using methodology common to the discipline;
- reflects upon and shares with others his/her ideas, designs and strategies, and outcomes of his/her work;
- consistently and continually builds upon his/her work and that of others (i.e., process is iterative).

The desire to create a new core curriculum at the University of Portland became the opportunity to initiate an institutional commitment to assessing student learning. As faculty, staff, administrators, and students created the new core and articulated learning outcomes, they also simultaneously designed an assessment program. A governing body oversees the implementation of the core, as well as the assessment program that cuts across disciplines to ascertain how well students are able to address seven questions common to this curriculum.

Source: Statement developed by the University of Portland 2002 AAHE Summer Academy Team and contributed by Marlene Moore, Dean, College of Arts and Sciences. Reproduced with permission.

current context. There are no absolute places to start, but there are contexts, issues, or institutional developments that become opportunities to initiate the effort. (See Box 1.1.) The following occasions may initiate your institution's commitment:

- Developing a new mission statement or educational philosophy for the institution, an academic department, school, program, or service
- Embarking on institutional strategic planning
- Re-conceptualizing or revising faculty and staff roles and rewards
- Designing a new core curriculum or revising a core curriculum at the undergraduate or graduate level
- Developing new programs or services

- Selecting a new institutional leader
- Responding to voiced dissatisfaction about student learning, such as perceived weaknesses in quantitative reasoning or critical thinking
- Recognizing achievements in classroom-based assessment as a foundation for institution- and program-level assessment
- Preparing documentation to respond to legislators, accreditors, policy makers, or other public audiences.

HIGHER EDUCATION'S OWNERSHIP

How we situate assessment as a process of collective inquiry matters. Driven solely by external forces, such as legislators or accreditors, assessment typi-

cally resides on the margins of our institutions, eliciting periodic attention. This peripheral location divorces us from our institutional missions, values, and the educational practices that translate our intentions into multiple contexts for learning. Driven by internal curiosity about the nature of our work, assessment becomes a core institutional process, embedded into definable processes, decisions, structures, practices, forms of dialogue, channels of communication, and rewards.

By taking ownership of assessment and developing an internally driven core process, colleges and universities can profile their students' learning within institutional educational practices and intentions. Moreover, within this context, assessment becomes an institution's means to examine its educational intentions on its own terms within the complex ways that humans learn and within the populations an institution serves. Undertaken systematically, assessment can provide longitudinal documentation or profiles of student learning for external bodies, such as accreditors or legislators, demonstrating patterns of students' performance over time, as opposed to one point in time.

A dialogue that focuses on teaching and learning is a sign that the assessment process is developing and maturing. As you will read in the following chapters, this focus and collaboration are essential to establish and sustain a collective commitment to

- developing sustained dialogue about teaching and learning;
- identifying shared expectations for student learning;
- developing or designing methods to assess those expectations;
- developing criteria and standards of judgment to assess student work;
- analyzing and interpreting students' demonstration or representation of learning;
- modifying, changing, or designing educational practices to improve student learning based on analysis and collective interpretations of results.

Without a focus on teaching and learning, assessment runs the risk of remaining or becoming marginalized. Worse yet, it remains an empty and intellectually unfulfilling activity.

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ADDITIONAL RESOURCES

Assessment Glossaries and Handbooks Online

- American Association for Higher Education: www.aahe.org/assessment/web.htm#Assessment_glossaries.
- James Madison University (Dictionary of Student Outcome Assessment): people.jmu.edu/yangsx.
- Northern Illinois University Glossary: www.niu.edu/assessment/_resourc/gloss.shtml.
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National, Regional, and Specialized Accreditors

To locate regional, national, and specialized accreditors' standards and criteria for assessing student learning, search through the Council of Higher Education Association's (CHEA) directories Web site: www.chea.org/Directories/index.cfm.

Representative Professional and Disciplinary Organizations Focusing on Assessment

American Association for Higher Education (AAHE): www.aahe.org.

American Council on Education (ACE): www.acenet.edu/programs/international/current.cfm.

American Educational Research Association (AERA): www.aera.net/about/about.html.

American Psychological Association (APA): www.apa.org.

Association of American Colleges and Universities (AAC&U): www.aacu.org.

Association of College and Research Libraries (ACRL): www.ala.org/acrl/ilcomstan.html.

Association for Institutional Research (AIR): airweb.org.

Association for the Study of Higher Education (ASHE): www.ashe.ws.

The Carnegie Foundation for the Advancement of Teaching: www.carnegiefoundation.org/ourwork/index.htm.

Higher Education Research Institute (HERI): www.gseis.ucla.edu/heri/heri.html.

LibQUAL+: www.libqual.org.

The National Academies: www4.nas.edu/webcr.nsf/projectsearch/?searchview&query=assessment.

National Association of Student Personnel Administrators (NASPA): www.naspa.org.

National Council of Teachers of English (NCTE): www.ncte.org.

National Learning Infrastructure Initiative (NLII) of Educause: www.educause.edu/nlii.

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Meta-sites on the Scholarship of Teaching and Learning

The American Association for Higher Education's Fields of Inquiry, Partners in Learning, Learning about Learning, Organizing for Learning, and Assessing for Learning, provide information about and access to research on and practices in teaching and learning, as well as information about current projects focused on teaching and learning. AAHE's Fields of Inquiry are available at: aahe.org/newdirections/fieldsofinquiry.htm.

The Carnegie Center for the Advancement of Teaching offers a rich collection of print and online publications focused on the scholarship of teaching and learning:

1. Its elibrary contains downloadable and printable articles that may well serve to jumpstart dialogue about the philosophies, assumptions, theories, research or practices that underlie teaching in a discipline or that underlie how curricula are structured for learning. The elibrary is available at: www.carnegiefoundation.org/elibrary/index.htm.
2. Its publication archive is available at: www.carnegiefoundation.org/publications/publication_archive.htm.
3. Recent Carnegie publications on the scholarship of teaching and learning are available at: www.carnegiefoundation.org/Publications/index.htm.

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Some Meta-sites on the Science of Learning

Halpern, D. Halpern's site is dedicated to sharing research, publications, and other resources on developments in the science of learning and research on learning through assessment. An annotated bibliography and abstracts from current research are available on this frequently updated Web site: berger.research.claremontmckenna.edu/asl/tp.asp.

Huitt, B. Huitt's Homepage, Educational Psychology Interactive at Valdosta State University, provides a wealth of readings, Internet resources, articles, and books focused on teaching and learning, problem solving and decision making, systems theory applied to human behavior, and theories of learning: chiron.valdosta.edu/whuitt.

A Representative List of National Projects Focused on Assessing Student Learning

American Council on Education. Under its International Initiatives Program, the American Council on Education (ACE) is working on several funded projects that integrate assessment of student learning to advance educational practices in international programs: www.acenet.edu/programs/international/current.cfm.

American Association for Higher Education Projects.

1. The Building Engagement and Attainment of Minority Students (BEAMS) project, a partnership between AAHE and the National Survey of Student Engagement (NSSE) Institute, with support from the Lumina Foundation for Education, is a five-year initiative fostering ways in which Historically Black, Hispanic-serving, and Tribal colleges and universities can use

NSSE data for institutional improvement. This project serves up to 150 four-year colleges and universities from the Alliance for Equity in Higher Education. Each institution commits to analyzing the scope and character of its students' engagement in learning and to implementing well-designed action plans for improvement of engagement, learning, persistence, and success: www.aahe.org/BEAMS.

(See also Center for Postsecondary Research and Planning, Indiana University Bloomington.)

2. AAHE and the National Survey of Student Engagement (NSSE) Institute, with support from the *Lumina Foundation for Education*, are collaborating in the Documenting Effective Educational Practices (DEEP) project to explore ways in which campuses use NSSE data for institutional improvement. (See also Center for Postsecondary Research and Planning, Indiana University Bloomington.)
3. The Carnegie Academy Campus Program Clusters, representing institutions from across the United States, are focusing on specific themes in the scholarship of teaching and learning, such as active pedagogies. Though still in their first phase of planning, several of these clusters will be focusing on assessing student learning: webcenter.aahe.org.

Association of American Colleges and Universities' Projects.

1. The Association of American Colleges and Universities' Collaborative Project with the Carnegie Foundation for the Advancement of Teaching, *Integrative Learning: Opportunities to Connect*, is designed to engage campuses in developing comprehensive approaches aimed at providing students with "purposeful, progressively more challenging, integrated educational experiences." For information about this project, go to the following Web site: www.aacu.org/integrativelearning/index.cfm.
A background paper for this project, Huber, M., & Hutchings, P. "Integrative Learning: Mapping the Terrain," focuses on deliberate promotion of integrated learning in students' undergraduate studies. This background paper is available at: www.carnegiefoundation.org/LiberalEducation/Mapping_Terrain.pdf.
To trace developments in its commitment to general education initiatives, go to: www.aacu.org/issues/generaleducation.
2. The Association's Project on Accreditation and Assessment, a component of the Association's national initiative, *Greater Expectations: The Commitment to Quality as A Nation Goes to*

College, focuses on identifying and assessing the outcomes of liberal education. Specifically, this project aims to develop a "shared understanding of the desired outcomes of a liberal education"; to identify "the curricular design principles that help students reach these outcomes"; and to identify the "criteria for 'good practice' in assessing liberal education as collaborative and integrative": www.aacu-edu.org/paa/index.cfm.

Center for Postsecondary Research and Planning, Indiana University Bloomington.

1. The National Survey of Student Engagement (NSSE) and the Community College Survey on Student Engagement (CCSSE) ask students to respond to their college and university experiences under five benchmarks of effective educational practices that foster student learning: level of academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences, and supportive campus environment: www.iub.edu/~nsse.

The importance of relating these results to other sources of student performance is discussed in Kuh, G. W. (2003, March/April). What we're learning about student engagement from NSSE: Benchmarks for effective educational practices. *Change*, 24–32. See, especially, page 31.

2. The NSSE Institute for Effective Educational Practice brings together faculty, administrators, and others to identify and link information about student experiences to efforts to improve academic programs and support services. One of these efforts is the DEEP Project, Documenting Effective Educational Practices. In collaboration with AAHE, this project is identifying promising practices at 20 colleges and universities that have higher-than-predicted scores on the NSSE benchmarks and higher-than-predicted graduation rates: www.iub.edu/~nsse/html/deep/main.htm; www.aahe.org/DEEP.
3. The NSSE Institute is also working with AAHE and the Alliance for Equity in Higher Education on the Beams Project (www.aahe.org/BEAMS; www.iub.edu/~nsse/html/beams_feature.htm), designed to reduce the national gap in educational attainment for African-Americans, Hispanics, and Native Americans by increasing the number of these students who earn bachelor's degrees.

Council on Social Work Education. The Quality in Social Work Education Committee of this council is inviting bachelor of social work and masters of social

work programs to conduct a systematic empirical study of the effectiveness of their students with clients. The purpose of this study is to determine the feasibility of implementing such an evaluation plan within the context of social work practice, and to undertake a preliminary appraisal of the actual outcomes of practice conducted by social work students: www.cswe.org.

First College Year Project. Some two hundred institutions are collaborating to establish aspirational models for the first year of college that are appropriate for various sectors of higher education. The Hallmarks of Excellence in the First Year of College Project, funded by the Lumina Foundation for Education and The Atlantic Philanthropies, is producing research-based statements of what constitutes excellence in first-year programs and how institutions could measure their own accomplishment of these hallmarks: www.brevard.edu/fyfoundations.

The Mathematical Association of America. Supporting Assessment in Undergraduate Mathematics (SAUM) is an association project supported by a grant from the National Science Foundation. This project is designed to help departments effectively assess one or more goals common to undergraduate mathematics departments in the major, in preparing future teachers, in college placement programs, in mathematics-intensive programs, and in general education courses: www.maa.org/features/fourAs.html.

Quality in Undergraduate Education. With support from the Education Program of the Pew Charitable Trusts, the Quality in Undergraduate Education (QUE) program has brought together two- and four-year institutions to develop learning outcomes and performance level descriptors in five disciplines: biology, chemistry, English, history, and mathematics. In addition, those involved will develop methods of assessment the results of which will be used to help students achieve agreed upon standards: www.pewundergradforum.org/project9.html.

Visible Knowledge Project. This five-year project is aimed "at improving the quality of college and university teaching through a focus on both student learning and faculty development in technology-enhanced environments." The Project involves over 70 faculty from 21 campuses nationwide. Assessment of student learning in technology-enhanced environments is built into many of these projects: crossroads.georgetown.edu/vkp.

Washington State University. With funding from the Fund for Innovation in Quality Undergraduate Education, in 1999 Washington State University developed a critical thinking rubric to assess students' higher-order thinking skills and use those results to inform educational practices. More recently it has received a grant from the U.S. Department of Education FIPSE Comprehensive Program to integrate assessment with instruction in general education to promote higher-order thinking. This project will be in collaboration with two- and four-year institutions in the State of Washington: wsuctproject.wsu.edu/ph.htm.

For a list of other national projects, go to the project list found under the Pew Forum: www.pewundergradforum.org/project_list.html.

A Representative List of Research Projects that Integrate Assessment

Research on teaching and learning is contributing to our understanding of the effectiveness of pedagogy, educational tools, and practices in developing disciplinary habits of mind and problem-solving abilities. Some representative projects that are incorporating assessment are the following:

Center for Innovative Learning Technologies. Founded in 1997 with a grant from the National Science Foundation, this center focuses its work on developing and studying technology-enabled solutions to teaching science, mathematics, engineering, and technology in K-14. In its commitment to assessing for learning, CILT develops methods of assessment that enable educators to "see qualities of student achievement that are invisible on traditional, standardized tests": www.cilt.org/themes/assessments.html.

Knowledge Media Lab of the Carnegie Foundation for the Advancement of Teaching. Focused on advancing teaching and learning through the use of media and new technologies, this lab shares faculty research on teaching. Assessment is providing evidence of the effects and limitations of these educational practices: kml2.carnegiefoundation.org/html/gallery.php.

Massachusetts Institute of Technology. A part of the Office of the Dean for Undergraduate Education, Massachusetts Institute of Technology's (MIT) Teaching and Learning Laboratory (TLL) increases campus understanding about the process of learning in science and engineering. It achieves this goal by conducting research that can be applied to the classroom and by developing innovative educational

curricula, pedagogy, technologies, and methods of assessment. Allied with several programs and centers across the institution, the laboratory disseminates its work on campus as well as nationally and internationally: web.mit.edu/tll/about_tll.htm.

Vanderbilt University, Northwestern University, the University of Texas at Austin, and the Health Science and Technology Program of Harvard and MIT. Bioengineering and learning sciences faculties from these

institutions, with support from the National Science Foundation, have established a center to conduct research on bioengineering educational technologies within the various domains of this science. In conjunction with developing new learning materials that relate to the structure of knowledge in bioengineering domains, the center is developing assessment methods to determine the effectiveness of these new materials: www.vanth.org.

Purchasers of this book may reproduce these exercises without prior permission on the condition that such copies are restricted solely to members of the purchaser's institution and are used only for the purposes of faculty, administrator, and staff workshops and training. Use in course packs for students requires the publisher's prior permission. Reproducible pdf files of these exercises are also available at: <http://www.styluspub.com/resources/assessingforlearning>.

WORKSHEETS, GUIDES, AND EXERCISES

The following worksheets, guides, and exercises are designed to anchor assessing for learning as a core institutional process.

1. *Principles of Commitment.* Developing a principles of commitment statement positions assessment within an institution or system and establishes a context for collective engagement. As an institutional or system leader, draw from the following list of possible individuals who might work together to draft that document within the context of your institution's or system's mission, purposes, and values:

- Administrators
- Alumni
- Board of trustees members
- Faculty—full- and part-time
- Librarians and information resource staff
- Local community members, including advisory committee members
- Other staff
- Parents
- Representative employers
- Representatives from professions or professional organizations
- Students
- Student affairs and support staff
- Other stakeholders inside or outside of the institution

2. *Principles of Commitment.* As an institutional or system leader, once you have identified a cross-representation of individuals to draft a principles of commitment document, you may want to ask the authoring group to read one or more of the following documents before they collaboratively draft a statement and then send it out for wider review. Focused on principles of learning and assessment, these documents may inform your institution's or system's discussion and resulting statement.

- a. Chickering, A. W., & Gamson, Z. F. (1987). Seven principles of good practice in undergraduate education. *AAHE Bulletin*, 39(7), 3–7. These principles appear in summary on numerous institutional Web sites, such as the following:
www.rochester.edu/ITS/edtech/documentation/Pedagogy/7principles.pdf.
- b. The American Association for Higher Education's "9 Principles of Good Practice for Assessing Student Learning," which follows:

American Association for Higher Education

9 Principles of Good Practice for Assessing Student Learning

1. **The assessment of student learning begins with educational values.** Assessment is not an end in itself but a vehicle for educational improvement. Its effective practice, then, begins with and enacts a vision of the kinds of learning we most value for students and strive to help them achieve. Educational values should drive not only *what* we choose to assess but also *how* we do so. Where questions about educational mission and values are skipped over, assessment threatens to be an exercise in measuring what's easy, rather than a process of improving what we really care about.
2. **Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.** Learning is a complex process. It entails not only what students know but what they can do with what they know; it involves not only knowledge and abilities but values, attitudes, and habits of mind that affect both academic success and performance beyond the classroom. Assessment should reflect these understandings by employing a diverse array of methods, including those that call for actual performance, using them over time so as to reveal change, growth, and increasing degrees of integration. Such an approach aims for a more complete and accurate picture of learning and, therefore, firmer bases for improving our students' educational experience.
3. **Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.** Assessment is a goal-oriented process. It entails comparing educational performance with educational purposes and expectations—those derived from the institution's mission, from faculty intentions in program and course design, and from knowledge of students' own goals. Where program purposes lack specificity or agreement, assessment as a process pushes a campus toward clarity about where to aim and what standards to apply; assessment also prompts attention to where and how program goals will be taught and learned. Clear, shared, implementable goals are the cornerstone for assessment that is focused and useful.
4. **Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.** Information about outcomes is of high importance; where students "end up" matters greatly. But to improve outcomes, we need to know about student experience along the way—about the curricula, teaching, and kind of student effort that lead to particular outcomes. Assessment can help us understand which students learn best under what conditions; with such knowledge comes the capacity to improve the whole of their learning.

5. **Assessment works best when it is ongoing, not episodic.** Assessment is a process whose power is cumulative. Though isolated, “one-shot” assessment can be better than none, improvement is best fostered when assessment entails a linked series of activities undertaken over time. This may mean tracking the process of individual students or of cohorts of students; it may mean collecting the same examples of student performance or using the same instrument semester after semester. The point is to monitor progress toward intended goals in a spirit of continuous improvement. Along the way, the assessment process itself should be evaluated and refined in light of emerging insights.
6. **Assessment fosters wider improvement when representatives from across the educational community are involved.** Student learning is a campus-wide responsibility, and assessment is a way of enacting that responsibility. Thus, while assessment efforts may start small, the aim over time is to involve people from across the educational community. Faculty play an especially important role, but assessment’s questions can’t be fully addressed without participation by student-affairs educators, librarians, administrators, and students. Assessment may also involve individuals from beyond the campus (alumni, trustees, employers) whose experience can enrich the sense of appropriate aims and standards for learning. Thus understood, assessment is not a task for small groups of experts but a collaborative activity; its aim is wider, better-informed attention to student learning by all parties with a stake in its improvement.
7. **Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.** Assessment recognizes the value of information in the process of improvement. But to be useful, information must be connected to issues or questions that people really care about. This implies assessment approaches that produce evidence that relevant parties will find credible, suggestive, and applicable to decisions that need to be made. It means thinking in advance about how the information will be used, and by whom. The point of assessment is not to gather data and return “results”; it is a process that starts with the questions of decision makers, that involves them in the gathering and interpreting of data, and that informs and helps guide continuous improvement.
8. **Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.** Assessment alone changes little. Its greatest contribution comes on campuses where the quality of teaching and learning is visibly valued and worked at. On such campuses, the push to improve educational performance is a visible and primary goal of leadership; improving the quality of undergraduate education is central to the institution’s planning, budgeting, and personnel decisions. On such campuses, information about learning outcomes is seen as an integral part of decision making and is avidly sought.
9. **Through assessment, educators meet responsibilities to students and to the public.** There is a compelling public stake in education. As educators, we have a responsibility to the publics that support or depend on us to provide information about the ways in which our students meet goals and expectations. But that responsibility goes beyond the reporting of such information; our deeper obligation—to ourselves, our students, and society—is to improve. Those to whom educators are accountable have a corresponding obligation to support such attempts at improvement.

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- c. The collaborative document, "Powerful Partnerships: A Shared Responsibility for Learning," written by a joint task force consisting of representatives from the American Association for Higher Education, the American College Personnel Association, and the National Association of Student Personnel Administrators, June 1998: www.aahe.org/teaching/tsk_frce.htm
This document presents ten principles for learning drawn from research and practice. Two other American College Personnel Association documents, "The Student Learning Imperative: Implications for Student Affairs" (www.acpa.nche.edu/sli/sli.htm) (1996), and "Principles of Good Practice for Student Affairs" (www.acpa.nche.edu/pgp/principle.htm) focus on principles and practices to promote discussion about ways to intentionally enhance student learning, including collaborating with others across a campus.
- d. Angelo, T. (1999, May). Doing assessment as if learning matters most. *AAHE Bulletin*: www.aahebulletin.com/public/archive/angelomay99.asp.
- e. Maki, P. (2002, May). Moving from paperwork to pedagogy: Channeling intellectual curiosity into a commitment to assessment. *AAHE Bulletin*: aahebulletin.com/public/archive/paperwork.asp.

3. Principles of Commitment. Another way to draft a principles of commitment statement is to ask representatives from across your institution to identify institutional anchors that link assessment to mission, values, and vision. North Carolina State University has anchored its commitment to assessment within four contexts. Read the summary of the university's approach in Box 1.2.

To address institution- or program-level readiness for a collective commitment to assessing student learning, ask individuals to explain how one or more of the following principles might anchor your institution's shared commitment to assessing student learning. Ask individuals to fill out the following chart as a way to stimulate discussion leading to a draft.

Possible Anchors for an Institutional Commitment

Research on learning or the integration of research on learning into educational practices	
Scholarship of teaching and learning	
Responsiveness to developments in disciplinary and professional organizations' work focused on assessment	
Focus on learning-centeredness	
Focus on organizational learning	
Responsiveness to accountability	
Other	

4. *Meaningful Beginnings.* Having authored a draft principles of commitment statement, ask individuals of that authoring group to list meaningful ways in which the institution (or a program) can launch a shared commitment to assessing student learning. Use the scenario in Box 1.3 from Rochester Community and Technical College as a way to think about how your institution will initiate a meaningful and shared commitment.

BOX 1.2 INSTITUTIONAL EXAMPLE: *North Carolina State University*

North Carolina State University, a premier research-extensive institution, has anchored its commitment to assessment in four ways: (1) responsiveness to professional and public accountability, including its primary constituents: students; (2) clarity about its institutional descriptors, “high quality programming,” “institutional excellence,” and “effectiveness,” and its status as a premier research-extensive institution focused on learner-centeredness; (3) desire to provide evidence of student learning to better inform decision makers and planners as they direct and allocate resources that support the institution’s work; (4) desire to promote dialogue across the institution about student learning. The meaningful beginning point for the university has been its decision to focus annually on student outcomes within programs across the institution and to integrate this work as part of program review. Thus, assessment at the program level is a continuous process of raising and answering a significant question or questions about student learning that each program chooses to assess each year. Program review, then, characterizes the university’s meaningful beginning.

Source: Contributed by Jo Allen, James A. Anderson, and Marilee J. Bresciani, North Carolina State University. Reproduced with permission.

BOX 1.3 INSTITUTIONAL EXAMPLE: *Rochester Community and Technical College*

Rochester Community and Technical College (RCTC), the oldest of the community colleges in Minnesota, established in 1915, began its institutional commitment to assessing student learning by linking institution wide planning, a commitment to assuring quality throughout the institution, and accreditation. It has realigned its mission and vision for the 21st Century, identified design criteria and academic performance indicators to determine points of reference for assessing quality performance, and has begun to implement comprehensive assessment of student learning. The college’s focus on performance indicators at all levels of its work has provided an institutional context within which the community now works. RCTC established a college wide assessment committee consisting of representatives from across the institution that has established broad commitment. The college launched its initial commitment to assessment through pilot projects in general education and in certain programs, including connecting its work to a larger statewide system office project that is piloting a data software program designed to track student learning results. Key to the institution’s sustained commitment was the president’s recognition that a budget line needed to be established in the institutional budget, a clear recognition that this work is recognized and valued. An institutional Web site provides descriptions of assessment work in departments and programs, highlights work faculty are undertaking, provides resources on assessment, and provides committee meeting minutes (www.acd.roch.edu/asl).

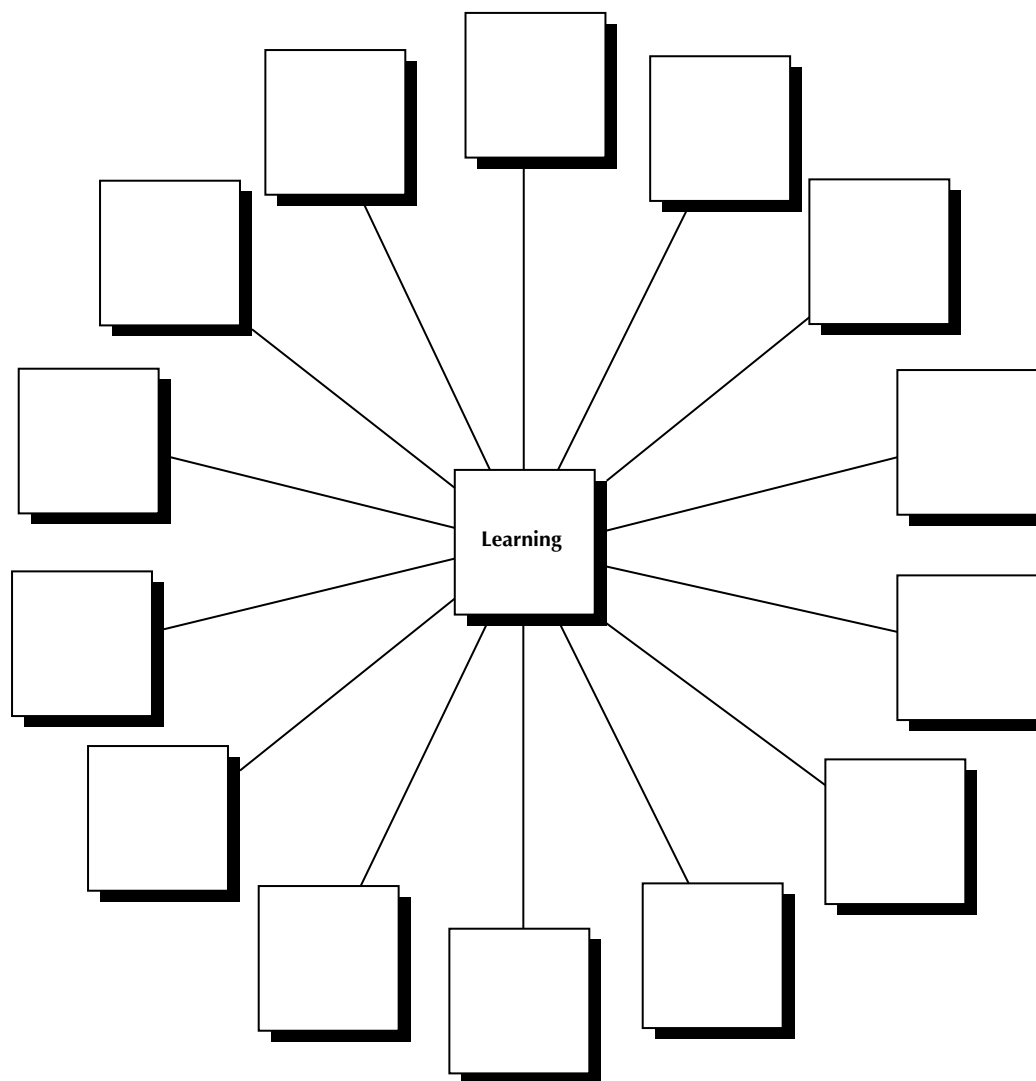
Source: Contributed by Anne M. High, RDH, MS, Director of Dental Hygiene, Co-coordinator of Assessment, and Tammy J. Lee, MBA, EdD., Business Instructor, Co-coordinator of Assessment, Rochester Community and Technical College. Reproduced with permission.

5. *Meaningful Beginnings*. Another way to develop a meaningful beginning is to reach consensus with representatives across the campus about ways to initiate institution- and program-level assessment. Ask members of this group to discuss the possibilities listed in the following chart or to generate other approaches that may be more appropriate for your institutional context.

Meaningful Beginnings

Development of a new mission statement or educational philosophy for the institution, an academic department, school, program, or service	
Initiation of strategic planning	
Re-conceptualization or revision of faculty and staff roles and rewards	
Design or revision of a core curriculum	
Development of a new program or service	
Selection of a new institutional leader	
Response to voiced dissatisfaction about student learning	
Recognition of classroom-based assessment as a foundation for institution- and program-level assessment focus	
Preparation of documentation to respond to legislators, accreditors, policy makers, or other public audiences	

6. *Relationships to Explore Compelling Questions.* As institution- and program-level groups begin to identify collective questions that initiate inquiry, such as those listed on page 2, identify constituencies within and outside of your institution who contribute to students' learning, using the figure that follows. Determine how representatives from some of these constituencies might become involved in assessing institution- or program-level compelling questions. For example, if your institution or program wants to inquire into how well students integrate interdisciplinary perspectives into problem solving, which of those constituencies might become involved in exploring how and how well students develop these perspectives over the continuum of their studies? What new kinds of working relationships might you develop to assess the development of this kind of perspective taking?



Contributors to Student Learning

