

University of Pittsburgh

*Using a University-wide
Culture of Assessment for
Continuous Improvement*

**A SELF-STUDY SUBMITTED
TO THE MIDDLE STATES
COMMISSION ON HIGHER
EDUCATION**

APRIL 2012



University of Pittsburgh

MIDDLE STATES SELF-STUDY REPORT 2012

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University of Pittsburgh

MIDDLE STATES SELF-STUDY REPORT 2012

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Executive Summary

STANDARDS WHOLLY OR PARTIALLY COVERED IN THE SELF-STUDY:

The standards wholly addressed in this self-study include Standard 7: Institutional Assessment and Standard 14: Assessment of Student Learning.

The standards partially covered in this self-study include the following:

Standard 2: Planning, Resource Allocation, and Institutional Renewal

Fundamental Element 2.6: Periodic assessment of the effectiveness of planning, resource allocation, and institutional renewal processes

Standard 8: Student Admissions and Retention

Fundamental Element 8.8: Ongoing assessment of student success, including but not necessarily limited to retention, that evaluates the match between the attributes of admitted students and the institution's mission and programs and reflects its findings in its admissions, remediation, and other related policies

Standard 9: Student Support Services

Fundamental Element 9.10: Ongoing assessment of student support services and the utilization of assessment results for improvement

Standard 11: Educational Offerings

Fundamental Element 11.13: Assessment of student learning and program outcomes relative to the goals and objectives of the undergraduate programs and the use of the results to improve student learning and program effectiveness

Standard 12: General Education

Fundamental Element 12.6: Assessment of general education outcomes within the institution's overall plan for assessing student learning and evidence that such assessment results are utilized for curricular improvement



I Introduction

HISTORY AND OVERVIEW OF THE UNIVERSITY OF PITTSBURGH

SUMMARY OF MAJOR ACCOMPLISHMENTS

CHALLENGES AND OPPORTUNITIES

WHY THE UNIVERSITY CHOSE THE TOPIC OF ASSESSMENT

ASSESSMENT AS A STRATEGIC TOOL TO ADVANCE THE UNIVERSITY

LEADERSHIP IN ASSESSMENT OF STUDENT LEARNING OUTCOMES

EXPECTED OUTCOMES OF THE SELF-STUDY

DESCRIPTION OF THE SELF-STUDY PROCESS

GENERAL SUMMARY OF CONCLUSIONS AND SUGGESTIONS

I Introduction

HISTORY AND OVERVIEW OF THE UNIVERSITY OF PITTSBURGH

The University of Pittsburgh of the Commonwealth System of Higher Education is a nonsectarian, coeducational, state-related public research university made up of five campuses located throughout Western Pennsylvania. The Pittsburgh campus, located in the cultural and medical center of the city of Pittsburgh, is within a one-hour commuting distance of the metropolitan area's 2.4 million people. The Johnstown campus, a four-year undergraduate college in Cambria County, serves the region at the foothills of the Allegheny Mountains. The Bradford campus, a four-year undergraduate college located in the Allegheny Mountains at the Pennsylvania/New York border, serves the predominantly rural areas of Western Pennsylvania and western New York. The Greensburg campus is a four-year undergraduate college located east of Pittsburgh that serves Westmoreland County and the eastern Pittsburgh areas. The Titusville campus is a two-year college located in northwestern Pennsylvania.

The University was founded in 1787 as a small private school named the Pittsburgh Academy. In 1819, it was renamed the Western University of Pennsylvania and then renamed again, in 1908, as the University of Pittsburgh. The Johnstown campus was established in 1927, while the Bradford, Greensburg, and Titusville campuses were established in 1963. The University of Pittsburgh remained private until 1966, when it became a public state-related institution and was renamed the University of Pittsburgh of the Commonwealth System of Higher Education.

The University is the most comprehensive educational institution in Western

Pennsylvania, enrolling approximately 36,000 students. Through its five campuses, the University is able to fulfill its commitment to student access by offering an excellent undergraduate experience across a range of aspirations, abilities, and interests. The Pittsburgh campus, located in Allegheny County, offers certificate, baccalaureate, master's, first professional, and doctoral programs. The campuses in Johnstown and Bradford offer certificate, associate's, and baccalaureate programs. The Greensburg campus offers certificate and baccalaureate programs, while the Titusville campus offers certificate and associate's degree programs. In total, the University offers more than 440 distinct degree programs and numerous dual, joint, and cooperative degree programs.

The University Board of Trustees is responsible for advancing the purposes of the University; promoting and protecting its independence, academic freedom, and integrity; and enhancing and preserving its assets for the benefit of future generations of students and society at large. The complete membership of the board includes the Chancellor and four categories of trustees—term (17), special (15), alumni (six), and commonwealth (12)—for a total of 51 members. The governor of Pennsylvania, the commonwealth secretary of education, the chief executive of Allegheny County, and the mayor of the City of Pittsburgh serve as ex officio members without vote.

The Board of Trustees delegates general administrative, academic, and managerial authority to the Chancellor of the University. The Provost and Senior Vice Chancellor is responsible for general academic policies and standards and for overall academic matters in all schools and colleges, regional campuses, and centers. Schools of the health sciences

report to the Senior Vice Chancellor for the health sciences.

Based on a total enrollment of approximately 36,000 students, more than 25,000 are undergraduate students and approximately 10,000 are graduate and professional students. The University employs a total of more than 4,000 full-time and about 900 part-time faculty members, more than 7,000 staff members, and approximately 1,000 research associates and postdoctoral associates.

SUMMARY OF MAJOR ACCOMPLISHMENTS

During the past 15 years, the University of Pittsburgh's progress and reputation as a world-class public research university have been steadily advancing. The ranking of Pitt among public research universities in *U.S. News & World Report* increased from the second tier (51st–115th) in 1995 to 19th tied with three others in the most recent ranking in 2011. For four consecutive recent years, Pitt ranked in the very top cluster of U.S. public research universities in the assessment independently produced each year by the Center for Measuring University Performance. In international rankings in 2012, Pitt ranked 35th among U.S. universities (16th among public universities in the United States) and 59th worldwide, according to the *Times Higher Education World University Rankings*.

The University of Pittsburgh enhanced its position as the institution of choice for many students during this period, drawing from an increasingly talented and accomplished applicant pool and thereby profoundly changing the profile of undergraduate students enrolling on all campuses. On the Pittsburgh campus, for example, the midpoint of freshman SAT scores rose from 1100 in 1995 to 1280 in 2011, and the freshmen in the top 10 percent of their high school graduating class increased from 22 percent to 54 percent in that same period.

Pitt's educational programs have regularly produced students earning the very highest forms of national and international recognition in this period, including four Rhodes Scholarships,

a Gates Cambridge Scholarship, a Churchill Scholarship, five Udall Scholarships, six Marshall Scholarships, five Truman Scholarships, and 34 Goldwater Scholarships. On the alumni side, Pitt graduates have been recognized with such prestigious awards as the Nobel Peace Prize, the Nobel Prize in Medicine, the National Medal of Science, and the Pulitzer Prize.

Pitt's reputation for offering excellent undergraduate experiences that keep students at the University has been growing as well. While graduation rates fell for one-third of U.S. four-year colleges over a five-year period from 2003 to 2008, Pitt had the fifth highest increase, according to a 2010 ranking in *The Chronicle of Higher Education*.

Pitt's research expenditures totaled \$5.33 billion in the past 10 years, a level of funding that not only drives pioneering research but also serves as a sign of institutional stature. Pitt now ranks among the top five universities in funding that its faculty attracts from the National Institutes of Health—in 2008 joining Harvard University; Johns Hopkins University; the University of Pennsylvania; and the University of California, San Francisco—and is among the nation's top 10 universities in total federal science and engineering research and development obligations¹, joining such others on the list as the University of Michigan; the University of California, Los Angeles; Duke University; Penn; and Harvard.

The University consistently ranks in the top 20 among research universities in the number of national awards and honors bestowed on its faculty, according to the Center for Measuring University Performance, referenced earlier. In the most recent rankings of the National Research Council, Pitt had a number of programs that had substantially advanced from where they were in 1995, including molecular pharmacology, microbiology, nursing, bioengineering, biostatistics, neuroscience, epidemiology, psychology, computer science, mathematics, and political science. These, among others, are developing in the tradition of

¹ www.nsf.gov/statistics/infbrief/nsf09313/nsf09313.pdf

historically leading programs, such as philosophy and the history and philosophy of science.

Construction, renovation, and restoration on all five campuses have elevated the Pitt environment in instruction, research, recreation, student life, campus living, and virtually every other area in which people of the University are engaged. Working from a long-term facilities plan (see Facilities section in Institutional Effectiveness), the University made capital investments in many areas of critical importance. Deferred maintenance was dramatically reduced, existing facilities were significantly renovated to support new programs, campus utility and network infrastructures were modernized, much-needed new facilities were constructed, and additional student housing and recreational facilities were added to all campuses.

CHALLENGES AND OPPORTUNITIES

While the academic reputation of the University has been advancing, state support has been diminishing. In fiscal year 2001, the commonwealth appropriation was approximately 16 percent of Pitt's annual budget, and by fiscal year 2011, it was less than 10 percent. In response to this situation, the University had already made operational efficiency a long-term priority, which is reflected in staged actions over recent years such as budget cuts, the redesign of benefits plans, cost-reduction initiatives, successful efforts to increase productivity, and the imposition of University-wide salary freezes.

Following this decade of diminishing support, on March 8, 2011, the governor proposed cuts totaling more than \$100 million, or 52 percent of the appropriation. Negotiations within the legislature resulted in a partial restoration of these funds and a net decline in the commonwealth appropriation of more than \$40 million or 22 percent.

The University has benefited from stable leadership, flourishing under the guidance of Chancellor Mark A. Nordenberg and former Provost James Maher, who retired in 2010. The Chancellor and most of his senior staff have been in place for a full decade, and the average tenure of deans and campus presidents is about nine years.



The University made a smooth transition to a new Provost and Senior Vice Chancellor when Dr. Patricia E. Beeson, the former vice provost for undergraduate and graduate studies at the University of Pittsburgh, was appointed Provost in June 2010. In her first year as Provost, Dr. Beeson developed a vision for building on the University's continuing momentum, including a plan to guide Pitt's global and international initiatives. A national leader on assessment and an early proponent of its implementation on the Pitt campuses, the Provost was the coordinator of University-wide academic assessment in her previous role.

Despite the present fiscal realities, University leaders are confident that Pitt will advance and are committed to investing in the programmatic excellence that has come to distinguish the University of Pittsburgh. This confidence is based on the strong role that planning, budgeting, and assessment have played throughout these past decades and because of the good practices now in place that will enable the University to build on its momentum in a focused and purposeful manner.

WHY THE UNIVERSITY CHOSE THE TOPIC OF ASSESSMENT

For its self-study, the University of Pittsburgh chose the topic of "Using a University-wide Culture of Assessment for Continuous Improvement." By primarily addressing the standards of institutional assessment and assessment of student learning, this self-study provides the University with the opportunity to look in depth at a strategy to which it has been deeply committed for some time. The standards addressed

Mission Statement of the University of Pittsburgh Approved by the Board of Trustees on February 16, 1995

The University of Pittsburgh, founded in 1787, is one of the oldest institutions of higher education in the United States. As one of the nation's distinguished comprehensive universities, the resources of the University constitute an invaluable asset for the intellectual, economic, and social enrichment of Pennsylvania, while the international prestige of the University enhances the image of Pennsylvania throughout the world.

The University's mission is to:

- provide high-quality undergraduate programs in the arts and sciences and professional fields, with emphasis upon those of special benefit to the citizens of Pennsylvania;
- offer superior graduate programs in the arts and sciences and the professions that respond to the needs of Pennsylvania as well as to the broader needs of the nation and the world;
- engage in research, artistic, and scholarly activities that advance learning through the extension of the frontiers of knowledge and creative endeavor;
- cooperate with industrial and governmental institutions to transfer knowledge in science, technology, and health care;
- offer continuing education programs adapted to the personal enrichment, professional upgrading, and career advancement interests and needs of adult Pennsylvanians; and
- make available to local communities and public agencies the expertise of the University in ways that are consistent with the primary teaching and research functions and contribute to social, intellectual, and economic development in the commonwealth, the nation, and the world.

in this study include Standard 7: Institutional Assessment; Standard 14: Assessment of Student Learning; portions of Standard 2: Planning, Resource Allocation, and Institutional Renewal; Standard 8: Student Admissions and Retention; Standard 9: Student Support Services; Standard 11: Educational Offerings; and Standard 12: General Education.

The foundation for developing a systematic approach to planning, setting goals, and assessing and achieving those goals was established more than 20 years ago. In 1992, the University instituted its Planning and Budgeting System (PBS) to promote transparency, cooperation, and coordination among members of the University community; to increase accountability; and to improve planning and budgeting decision making. PBS incorporates long-range planning and budgeting, operational planning and budgeting, and ongoing assessment of all University programs and responsibility centers.

In the mid-1990s, the University set forth its new vision of becoming one of the nation's preeminent research universities, and the formal mission statement, as adopted in 1995, articulates that aspiration.

Building on that foundation, in 1996 and again in 2000, the Board of Trustees approved resolutions that set the strategy and tone for all future goals and successes:

1996 Resolution (in part): *To fulfill its institutional mission and increase its overall stature, it is essential that the University place special emphasis on undergraduate education in the months and years ahead devoted to increasing the academic standards for its undergraduate programs; ensuring that all undergraduates achieve quantitative and communicative skills and are well prepared for their chosen life path; improving the quality of student life; and attracting, retaining, and graduating a more diverse (multicultural, racial, geographic, etc.) undergraduate student body.* (Appendix A1)

2000 Resolution (in part): *Our overarching goal is to be among the best in all that we do. We will add—significantly, measurably, and*

visibly—to institutional quality and reputation through the accomplishments of our people; the strength of our programs; and the regional, national, and international impact of our work ... becoming among the country's most selective public universities in the credentials and commitment of students; striving continuously and creatively to ensure that the opportunities for learning and growth offered to undergraduates are second to none; enhancing existing strengths in graduate and professional education; [and] increasing the scope, quality, and visibility of our exceptional research programs. (Appendix A2)

In alignment with these board resolutions and the University's mission and in consultation with the faculty and administration, the Provost developed a set of long-range academic goals:

1. Become one of the nation's top 25 research universities.
2. Offer truly superb undergraduate experiences in a research university of nationally recognized stature.
3. Nurture a world-class environment that results in increased sponsored research and scholarly and creative output.
4. Strategically develop areas of excellence in collaborative research scholarship.
5. Take advantage of academic opportunities available in an urban environment.
6. Become engaged with external constituencies with whom the University has common goals and interests.
7. Expand the University's global focus by increasing international study and research opportunities.

Over an extended period of time, the Provost presented and discussed these strategic academic goals with many groups of faculty, administrators, and staff—both within and outside the traditional academic areas—with the aim of focusing the University community's attention on the academic priorities of the institution. During this period of presentations and

discussions, not only were the academic goals of the University extensively communicated, but the framework through which progress toward these goals would be assessed was made clear (Appendix A3).

The University also developed and refined the processes it would use to evaluate its effectiveness in achieving its mission and goals, to ensure that students and graduates achieve the appropriate learning and other outcomes, and to make efficient use of available resources. The institutionalization of these processes organized the University's thinking about assessment into major objectives consistent with institutional goals, presented areas where critical success factors could be identified and used to gauge the success of the University's efforts, and determined how the results of assessment could most effectively be both analyzed and used to effect change.

This combination of sustained and integrated activities—the statement of mission and strategic goals by the Board of Trustees, the institutional Planning and Budgeting System, the identification of academic goals supported by an annual planning system for academic units, and an overall system of processes for institutional assessment—constitute the framework of the comprehensive model in place at the University of Pittsburgh. It is a model for planning; setting goals; assessing progress toward those goals; and, ultimately, for using a University-wide culture of assessment for continuous improvement.

ASSESSMENT AS A STRATEGIC TOOL TO ADVANCE THE UNIVERSITY

Today, assessment is valued throughout the University and is integrated at both the programmatic and operational levels. Rather than having a separate office of assessment, each unit is responsible for assessing outcomes and progress toward the goals for which the unit has responsibility. Accountability is ensured through documented reporting processes and the linking of planning, assessment, and budgeting. In some cases, activities are further coordinated through

campus- or school-level committees. Each school and campus reports annually on its assessment of progress toward goals as part of the annual planning and budgeting cycle.

Oversight responsibility at the institutional level depends upon the category of assessment. Institutional effectiveness responsibilities are assigned to appropriate levels within the institution with ultimate oversight and responsibility by the corresponding vice chancellors and the Chancellor. Oversight for the assessment of student experiences is provided by the Enrollment Management Committee on the Pittsburgh campus, and other campuses have similar structures all ultimately reporting to the Provost. The faculty of each program is responsible for the assessment of student learning with oversight by the appropriate dean, president, and vice provost and, ultimately, the Provost.

The progress of the University of Pittsburgh over the past 15 years has been driven significantly by the effective use of assessment as a guide to planning and budgeting and as a tool for making change. During this time, there has been a notable increase University-wide in the use of assessment to help measure progress toward the stated goals and in the degree to which faculty, staff, and administrators recognize the importance of assessment in helping the University to attain these goals.

Institutional planning, driven by the University's Planning and Budgeting System, combines long-range planning and budgeting; operational plans and budgets; personnel, capital, and financial budgets; and the assessment of University programs and responsibility centers. This self-study report demonstrates how assessment has led to many institutional advancements in operational efficiency and effectiveness and how the University has used assessment to make decisions about institution-wide infrastructure investment. These include the critical areas of information technology, facilities, and the library system (Institutional Effectiveness section II D).

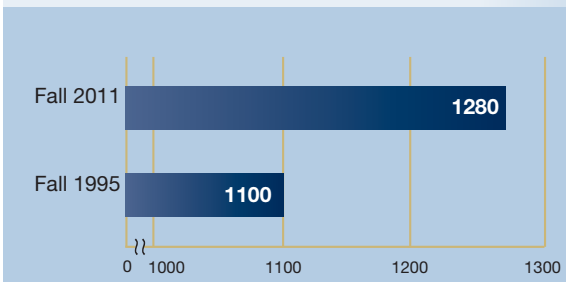
The successful use of assessment in planning, program development, and resource

allocation within the academic units also is demonstrated in this report. The academic planning process provides for resource allocation based on the stated long-term goals of the unit. The plans include strategies and actions, targeted outcomes, and methods of assessment that can include reviews of planning and budgeting documents, examination of a wide range of data collected by various units, and evaluations of proposals for new programs, to name a few. Resources are reallocated based on the consistent application of a variety of assessment practices followed by thoughtful reflection that indicates a change of strategy is warranted. This report provides examples of how assessment became the decision-making tool that led to revisions in academic programs and majors, reallocations of faculty lines, and improvements in student services (Institutional Effectiveness section II C).

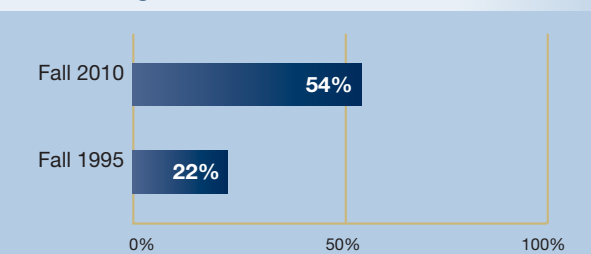
Major developments in data collection and evaluation methods have included the benchmarking of performance indicators relative to peer and aspirational institutions (see Figures 1 and 2 in the Institutional Effectiveness section), which serves an important function in planning and resource allocation, and in the systematic collection of data used in making assessments that result in improvements in the student experience. These include retention and graduation rates, student satisfaction surveys, participation in national student surveys, graduation and alumni surveys, and many others (Student Experience section III D).

The regular review of this information has provided senior administrators with important feedback on the progress of the institution in achieving its stated mission and goals as well as in identifying areas of challenge and opportunity for future investigation and emphasis. Using internal benchmarks and student surveys, for example, the University has been able to demonstrate progress on a number of key criteria and answer the question "Is the University of Pittsburgh getting better?" The following charts show progress over time on some of these key indicators:

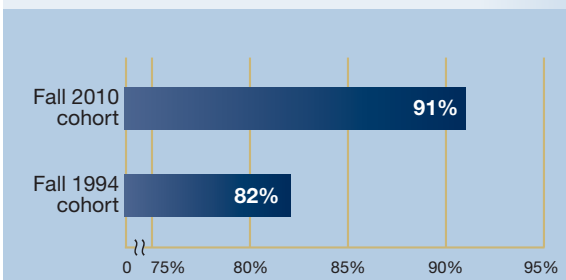
Midpoint of Freshman SAT Scores



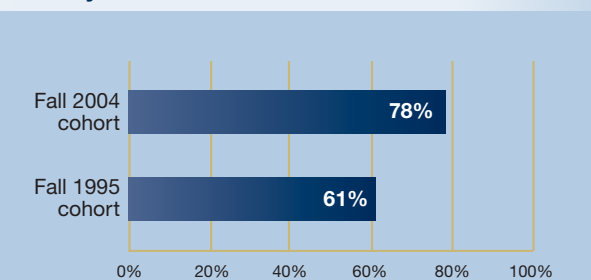
Freshmen in the Top 10 Percent of Their High School Class



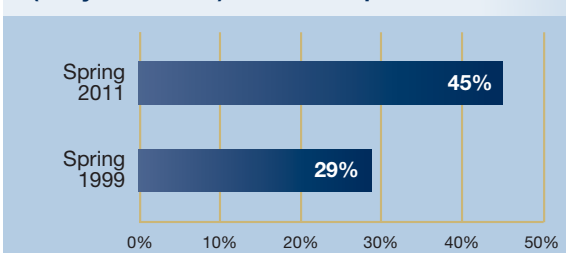
Freshman-to-Sophomore Retention Rates



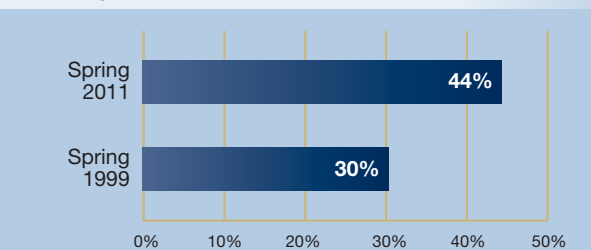
Six-year Graduation Rates



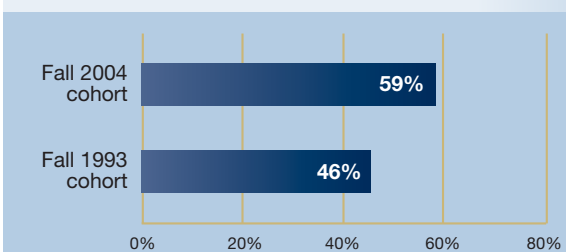
Overall Student Satisfaction (Very Satisfied) on a Five-point Scale



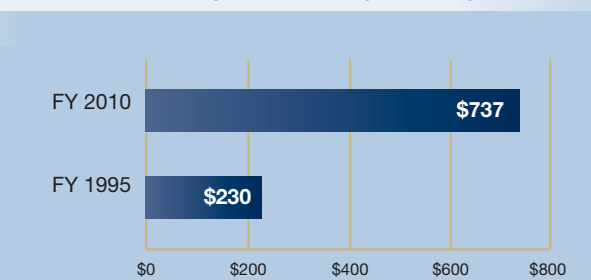
Student Satisfaction with the Social Environment (Very Satisfied) on a Five-point Scale



African American Six-year Graduation Rates



Total R&D Expenditures (Millions)



LEADERSHIP IN ASSESSMENT OF STUDENT LEARNING OUTCOMES

As noted in this self-study report, another area in which there has been considerable development at the University is in assessing student learning outcomes (Student Experience section III B). Because the University has had a long-standing tradition of ongoing and periodic evaluation of academic programs, program evaluations and reaccreditation reviews increasingly included the assessment of student learning as a critical component of the program evaluation. In 2006, the Council of Deans (COD) formalized the process by which the assessment of student learning occurred, guided by the belief that assessment will be effective in helping to shape the University's academic programs only if the effort is led by the program's faculty, as long as that faculty is held accountable. The COD also believed that to be effective, the assessment of student learning must be an integral part of the planning efforts of the individual units, schools, and campuses.

The formal assessment process of student learning has been in place for five years now, and the University can document renewed energy in the curriculum as faculty regularly review and assess whether or not the curriculum is helping students to learn what the University expects them to learn. The process of assessing student learning is now part of the culture of the University, with virtually all programs having meaningful assessment processes in place (see extensive discussion in the Student Experience section on Assessment of Student Learning Outcomes).

The University of Pittsburgh has not only taken an early leadership position on assessment of student learning on its own campuses, but many schools and campuses of the University are recognized for their assessment leadership on a national basis, reinforcing the success that can come from a decentralized model of assessment. Following are a few of the many examples.

Faculty members from the Swanson School of Engineering have earned a national reputation in the field of engineering education

assessment. They first achieved national recognition 16 years ago with the development of the Pittsburgh Freshman Engineering Attitude Survey, an instrument that has been used by more than 30 schools and continues to be used today. This led to a succession of grants funded primarily by the National Science Foundation focused on engineering education assessment, as well as a series of papers, 11 of which have been published in the *Journal of Engineering Education*.

The School of Medicine is recognized for its expertise in evaluation of program effectiveness, including innovative approaches to gathering information about student experiences and the development of systematic methods for analysis of evaluation data. One approach to providing in-depth evaluation consultations to each course and clerkship resulted in a detailed, synthetic report of how the course is performing, opportunities for improvement, and identification of resources that would support that improvement. The methodology was presented at the Innovations in Medical Education conference of the Association of American Medical Colleges.

The School of Law has been recognized for its leadership within the legal academy for its initiatives related to the assessment of student outcomes. Presentations include those made at a legal education conference on assessment in 2009, to the American Bar Association in 2010, and to the McGeorge School of Law at the University of the Pacific in 2011. Pitt faculty published on assessment in the *University of Toledo Law Review's* Leadership in Legal Education symposium series.

In the most recent accreditation team visit to the Joseph M. Katz Graduate School of Business, the team cited the assessment of learning approach in the business school as a best practice. Katz was recognized for its comprehensive and innovative approach that included "concept inventories" developed by faculty interest groups, which were used to assess the students' awareness and understanding of core concepts in each of the business disciplines,



and the development of a detailed instrument and the statistical tools to assess the extent to which each student possessed the knowledge and skills that every graduate of an effective MBA program should possess.

The School of Pharmacy also was recognized by its accrediting body in the 2009 evaluation team report that identified its assessment process as a "noteworthy practice." As a result, the American Association of Colleges of Pharmacy invited school faculty in 2010 and 2011 to present at annual and interim meetings. The school also has been recognized for its use of a mastery scale to assist students in self-assessing and mapping their learning as they progress through the didactic and experiential components of the curriculum.

The School of Dental Medicine was twice asked to present its innovations related to the assessment of teaching and learning. The Systematic Course Evaluation Policy was presented to the American Dental Education Association's Commission on Change and Innovation in Dental Education—a think tank composed of leaders in dental education from across the United States and Canada. The school's Curriculum Management Tool, a Web-based application that provides a link to the required competencies for each course, was

presented to the American Dental Education Association.

EXPECTED OUTCOMES OF THE SELF-STUDY

Because assessment is an ongoing process and should lead to continuous improvement, the self-study is expected to help the University to develop a deeper understanding of the current methods of assessment and the degree to which those methods are supporting improvements. The University expects to further its understanding of the ways in which campuses, schools, and units have integrated assessment into their planning and how the assessment of student learning is driving curricular change. The self-study can help to determine the degree to which an assessment mind-set and assessment practices have taken hold at Pitt, reflecting a cultural shift over time toward stronger accountability and a platform for communicating and raising awareness of accomplishments to the University community. The University anticipates that analyses, deliberations, and final recommendations from the self-study will provide a foundation for subsequent groups to address existing challenges and to implement any changes that will foster continuous improvement.

DESCRIPTION OF THE SELF-STUDY PROCESS

A 20-person steering committee—which included faculty, senior administrators, staff, and students—and two working groups reporting to the steering committee examined assessment practices at the University, and their reports form the basis of this self-study. A third group was formed to demonstrate compliance with those standards and fundamental elements not covered in this self-study by developing the Document Road Map (Appendix A4).

Working Group I—Using Assessment to Improve the Student Experience—was charged with examining the extent to which assessment of programs, activities, and plans has assisted the institution in improving the student experience, both within and outside the classroom, on all five campuses.

Working Group II—Using Assessment to Improve Institutional Effectiveness—was charged with examining the extent to which assessment of programs, activities, plans, and processes has contributed to

the advancement of the University's academic goals.

Working Group III was to prepare a document road map that listed all the primary supporting documentation and an annotation for each standard.

Different approaches were taken by the three working groups. The group on institutional effectiveness interviewed the key leaders in each review area. In the student experience group, the composition of the committee itself was designed to include the necessary expertise on the topic. The third group's members were chosen based on their experience with specialized accreditations that gave them familiarity with the process but not necessarily the University of Pittsburgh approach.

The working groups met numerous times over the course of a year and prepared detailed reports of their findings and recommendations, providing the basis for the final development of the self-study, which was overseen by the steering committee. During the extended period of the development of the self-study, a number of presentations were made and discussions were

held with a variety of University groups and organizations, including the Council of Deans, Faculty Assembly, University Senate Educational Policies Committee, Academic Affairs and Libraries Committee of the Board of Trustees, and various Boards of Visitors.

In the fall of 2011, the leaders of constituency groups—including faculty, staff, and students as well as senior administrators—were sent a draft of the self-study, asked to share the document with appropriate members of their units, and asked to submit comments and revisions. The self-study was made available in January 2012 to the entire University community on all campuses through the University portal in the self-study community prior to the Middle States Commission on Higher Education visitation. Several articles in the *University Times* and the *Pitt Chronicle* covered accreditation during this period (Appendix A5).

GENERAL SUMMARY OF CONCLUSIONS AND SUGGESTIONS

In general, the working groups report the evolution of a culture of assessment that has resulted in ongoing improvements and advancement of the University of Pittsburgh. The working group reports—*Using Assessment to Improve Institutional Effectiveness* and *Using Assessment to Improve the Student Experience*—both include a section on findings that are summarized at the end of the two main chapters in this self-study document and in a final section that reiterates all conclusions. Some broad suggestions are recounted below:

- **Timeliness of Benchmarking Information:** For some schools and departments, the Kenneth P. Dietrich School of Arts and Sciences in particular, it has been traditionally difficult to get peer institution data in a timely fashion. Recent initiatives by the Office of the Provost to deal with the situation include becoming engaged through a consortium to obtain access to Student Experience in
- **Continuing to Focus on Outcomes:** Because assessment is an ongoing process that should lead to continuous improvement, the annual plans will become even more streamlined in the future, facilitating more focused goals tied to results against which progress can be more easily measured. The University also will review the timing cycle of planning to determine if it is appropriately synchronized with the availability of data.

the Research University (SERU) data and providing extensive, detailed information on a departmental basis through the purchase of a program called Academic Analytics, a comprehensive and well-tested method for the assessment of faculty productivity. The University intends to continue to identify additional solutions of this type to deliver more timely information.

- **Making Information More Widely Available:** The Office of the Provost—which already runs a number of student surveys, including the Senior Survey, Student Satisfaction Survey, and Freshman Survey—intends to put more processes in place to distribute that information more broadly and in more meaningful ways. The creation of the data warehouse and the Management Information Center intranet are two successful examples of this more expansive distribution. This information, in turn, can be used more widely in planning and assessment.

The University is finding new ways to access its own internal data that will enable individual units to do ongoing assessment. Recent examples include incorporating such solutions as the PeopleSoft Student Information System and purchasing Dashboard tools, looking at more user-friendly approaches such as Cognos interface and portal communities, and making regular reports to key groups such as the Enrollment Management Committee.



II Using Assessment to Improve Institutional Effectiveness

INTRODUCTION

USING ASSESSMENT IN UNIVERSITY-LEVEL PLANNING AND BUDGETING, ANNUAL PLANNING, AND BENCHMARKING

USING ASSESSMENT IN UNIT-LEVEL PLANNING AND BUDGETING, ANNUAL PLANNING, AND BENCHMARKING, SELECTED SCHOOLS

USING ASSESSMENT TO IMPROVE INSTITUTION-WIDE INFRASTRUCTURE INVESTMENT

SUMMARY OF FINDINGS AND SUGGESTIONS

II Using Assessment to Improve Institutional Effectiveness

INTRODUCTION

The following sections report on the findings of the Working Group on Using Assessment to Improve Institutional Effectiveness (WGIE)². WGIE's charge was to examine how the University uses assessment to improve the institution in areas that are **not** related to the student experience but that are instead related to planning and budgeting, benchmarking, and infrastructure.

The first section of this chapter presents an overview of the University-level planning and budgeting system, annual planning, and benchmarking. This section describes the systems and processes and indicates how the University uses assessment to help achieve its goals. The second section offers four examples of unit-level planning, budgeting, and benchmarking processes. Highlighted within this section are linkages between unit-level and institutional goals; the use of assessment to guide planning, program development, and resource allocation; the role of benchmarking in the assessment process; and the sustainability of the assessment process. The final section explores how the University has used assessment to improve institutional effectiveness in relation to infrastructure.

USING ASSESSMENT IN UNIVERSITY-LEVEL PLANNING AND BUDGETING, ANNUAL PLANNING, AND BENCHMARKING

The University of Pittsburgh is a complex, decentralized organization composed of a wide range of schools, programs, campuses,

and administrative units. Planning, budgeting, and benchmarking activities are designed to foster alignment between individual units and the University while allowing sufficient flexibility to recognize individual needs and requirements of the units. The activities encourage assessment at every level of the University, and they are themselves reviewed on a regular basis to seek improvements in the process. The resulting processes reflect the diversity of the units while at the same time encouraging them to advance the overall goals and mission of the University. An in-depth examination of the planning, budgeting, and benchmarking for the Provost-area schools is provided in this report to illustrate the impact of assessment on planning, resource allocation, programming, and decision making across the University.

The responsibility for planning and budgeting at the University of Pittsburgh is shared among administrators, faculty, staff, students, and trustees. The Chancellor develops the vision for the University and has final authority for planning and budgeting, subject to appropriate action by the Board of Trustees. Other participants in planning and budgeting include the Provost, who, as the senior academic officer, is responsible for the academic mission of the University. The Council of Deans and University Senate provide advice to the Chancellor and Provost on all aspects of planning and budgeting. The University Planning and Budgeting Committee (PBC), chaired by the Provost, acts in an advisory capacity to the Chancellor. The senior vice chancellors and the chairs and heads of responsibility centers, with

² Appendix B1

the participation of their planning and budgeting committees, develop unit-level plans and budgets. Thus, each unit has an individualized planning and budgeting process that fits into the overall structure of the University's Planning and Budgeting System.

The University's Planning and Budgeting System

The University adopted its Planning and Budgeting System (PBS)³ in 1992, replacing the earlier Planning and Resource Management System. PBS combines long-range planning and budgeting; operational plans and budgets based on performance, personnel, capital, and financial budgets; budget modifications and augmentations; facilities management and development; and evaluation of all University programs and responsibility centers.

PBS was intended to promote transparency, cooperation, and coordination among members of the University community; to increase accountability; and to improve planning and budgeting decision making.

Since its creation in 1992, PBS has been reviewed and revised twice. In 1995, the Ad Hoc Planning and Budgeting System Review Committee was charged with evaluating PBS and recommending modifications for its improvement. After significant research and analysis, the committee noted in its 1996 report that "PBS has made a difference in the quality and effectiveness of planning and budgeting activities and can continue to do so" (see Institutional Effectiveness Working Group Report). Nonetheless, the committee developed 12 specific recommendations to address PBS's shortcomings or areas identified for improvement, which can be summarized as follows:

- PBS has not yet fully achieved its goals but has the potential to evolve into a process that will change the management culture of the University.
- The PBS guidelines should continue to steer, in the short term, University planning and

budgeting activities. The guidelines should provide adequate flexibility to recognize differences among units and the role of other governance structures. A future review should consider reformulating the guidelines as the University gains more experience with PBS.

- University leaders should support and be comfortable with PBS and shared governance and make effective use of unit-level planning and budgeting committees (PBC) to improve decision making.
- Widespread dissemination of PBC activities will promote transparency and the effectiveness of the planning and budgeting process and will enhance unit accountability.

The committee's recommendations were adopted in a subsequent revision of PBS. Consistent with one of the recommendations, a second Ad Hoc Planning and Budgeting System Evaluation Committee was charged in 2002. Based on assessment results, this committee made seven recommendations, all of which were adopted into a revised PBS in 2003. The recommendations further clarified the roles of key stakeholders, including the Faculty Assembly, Staff Association Council, Senate Council, deans, department chairs, and the Provost, and encouraged regular reporting and assessment of plans and budgets at all levels of the University.

As a result of accrued experience using PBS and the recommendations provided by two ad hoc review committees, PBS itself has improved markedly over time, facilitating the University's efforts to achieve its mission by promoting the articulation of clear and measurable goals, transparency, and open dialogue and communication.

The University Senate also facilitates assessment of PBS. The Senate Budget Policies Committee (SBPC) monitors planning and budgeting processes, fosters broad participation across the University, ensures transparency, and considers benchmarking data in its recommendations. The senate can affect University-level goals and decisions by highlighting University policies and processes (see PBS Document, section

1.3.3). Where there are major policy differences with the administration, SBPC raises those issues. SBPC uses benchmarking data in forming its recommendations. For example, benchmarking data about compensation levels at member institutions of the Association of American Universities informed its salary increase recommendations. SBPC also surveys responsibility centers to ascertain whether unit-level PBCs are operating, and, in the spirit of transparency and benchmarking, it ensures that information about average salaries at the University of Pittsburgh and peer group comparisons is disseminated to the University community.

Annual Planning at the University of Pittsburgh

The annual planning process for the Provost's area responsibility centers begins in December, when the Provost sends a letter to deans, directors, and campus presidents with instructions for the upcoming fiscal year annual plan. Each school and unit develops a 5–10-year strategic plan, annually assesses progress against the goals in the strategic plan, and adjusts strategies as necessary for the following year. The annual plans are first reviewed by the planning and budget committees within each school or unit. The responsibility centers then submit their annual plans to the Provost in March. In April, the Provost's Area Planning and Budgeting Committee (PAPBC), which comprises members of the unit-level PBCs, assesses the annual plans, the processes used for their development and review, and how well the plans align with University-level goals and strategies. The annual plans also are assessed by senior staff members in the Office of the Provost. When both groups have completed their reviews and communicated their findings to the Provost, typically in May, the Provost sends a letter to each dean, director, and campus president providing detailed feedback on his/her annual plans and guidance for continued improvement along with a copy of PAPBC's review.

Retrospective analysis of the last 12 years of this planning and assessment process

demonstrates improvements in the planning process that are partly based on increased use of additional assessment tools and strategies. For example, Provost Maher commented in his review of annual plans for fiscal year 2001 that responsibility centers should not embark on a massive reformulation of plans each year:

"Rather, our planning should foster a culture of continuous improvement wherein an annual reflection on the successes and failures of the past year and on changes in the national and international scene that carry implications for the unit's priorities combine to form a midcourse correction to improve the plan."

The Provost continued to encourage a commitment to continuous improvement in subsequent annual instructions to the responsibility centers, stating in 2002 that "We have now moved into a culture of continuous improvement, looking to build upon the strengths of our identified priorities toward improvements beyond our realized successes." In 2005, he requested "consideration of what you have learned about your unit and how that knowledge can help you improve further."

In 2007, the Provost convened an ad hoc working group to formulate instructions for improving planning, charging it with developing new annual planning instructions "that would be responsive to the urgency that we [the University] continually better ourselves, clearly show results of the previous year's activities in terms of the goals articulated in the previous year's plans, and commit to goals for the coming year in support of the longer range goals for improvement of the school or unit, as well as the University." The ad hoc working group recommended improving the alignment of the responsibility centers' activities with the University mission and the key goals of the Provost's area and recommended that annual plans develop more specific short- and long-term goals and use metrics to measure incremental progress toward longer-term goals. This recommendation resulted in the creation of a new template model for annual plans. By using the

³ www.academic.pitt.edu/pb/index.htm

template, schools and units would submit plans with better-defined strategic priorities, more clearly described goals, specific continuing actions that will lead to those goals, and specific measurable outcomes to assess success in reaching each goal. These recommendations became the basis of instructions for the fiscal year 2009 plans. The fiscal year 2010 and fiscal year 2011 plans expanded on and emphasized the need to include quantitative metrics to measure progress and document success.

University of Pittsburgh Benchmarking Activities

In 2003, the University adopted its current set of peer and aspirational peer institutions as well as metrics against which it would measure progress toward key goals. Based on similarity of mission, student characteristics, academic program offerings, geographic location, and rankings on key metrics, the peer institutions were selected. Aspirational peer institutions were universities similar in scope to the University of Pittsburgh but were superior on key university benchmarks (see Figure 1, University Benchmarks 2002–11).

These metrics were chosen because they are useful indicators of performance among American research universities. In addition, relevant data for peer and aspirational peer institutions could be readily obtained, making it possible to gauge performance at any given point in time and rates of change over time across institutions. Similar benchmarking strategies were adopted by the regional campuses, which identified separate peer and aspirational peer institutions and metrics relevant to their unique missions and scopes. Over time, this strategy has been implemented at all levels of the University.

In 2006, the benchmarking process was refined to generate an annual “academic scorecard,” which summarizes the University’s standing relative to peer and aspirational peer institutions and explicitly highlights annual progress on 41 key strategic indicators organized under six goals linked to the mission of the University (see Figure 2, Academic Scorecard

2011). These annual scorecards provide a valuable snapshot of the University’s most recent performance and also indicate how it is progressing from year to year in comparison with its identified peer and aspirational peer institutions. This information, used reflectively, can point out areas in which the University is doing well and areas in which it needs to work for improvement.

Data generated through the benchmarking process serve important functions for planning and resource allocation purposes. They provide operational measures for assessing progress toward achieving University goals, provide the information for communication of the University’s criteria for success to the University community and external constituents, and serve as checkpoints for strategic planning. Each year, these data are disseminated in a variety of forms to University administrators; faculty; and external constituents, such as University alumni. The University Planning and Budgeting Committee annually reviews these data to identify key areas for financial investment.

Benchmarking data have provided the raw materials that helped to shape University policies. For example, it was recognized that annual total research dollars provided an important measure for gauging the University’s progress toward becoming a leading research institution. In fiscal year 2001, total research and development (R&D) expenditures were \$349 million, compared to a mean amount of \$418 million reported by our aspirational peers. By fiscal year 2009, however, R&D expenditures had increased to \$623 million, ranking only slightly below the mean of the University’s aspirational peers. Achieving success in obtaining external funding requires both talented faculty members and a state-of-the-art research infrastructure to support their work. New policies were promoted to ensure an appropriate faculty talent pool, including recruitment strategies that emphasize both teaching and research potential, tenure and promotion guidelines that reward a faculty member’s ability to generate external research support, support for developing the ability to identify funding sources and secure funding, and

Figure 1: University Benchmarks 2002–11

Student Characteristics

- Fall First-time, Full-time Freshman Test Scores, SAT/ACT 25th and 75th Percentiles
- Freshmen in the Top 10 Percent and Top 25 Percent of Their High School Graduating Class
- Total First-time, First-year Applications
- Percent of First-time, First-year Applicants Accepted
- Percent and Number of First-time, First-year Accepted Applicants Who Matriculated
- Percent of Undergraduate Student Body by Race/Ethnicity, Sex, and Residency
- Freshman-to-Sophomore Retention Rate
- Four-year and Six-year Graduation Rate
- Graduate and First Professional Enrollment as a Percentage of Total Head Count Enrollment

Research and Intellectual Activity

- Total Faculty Who Are National Academy Members
- Total Volumes Held in the Library
- Rank in the Association of Research Libraries Index
- Total Library Expenditures per Teaching Faculty and per Full-time Student
- Total R&D Expenditures and Federally Financed R&D Expenditures
- Distribution of Total R&D Expenditures by Source and by Field
- National Science Foundation Ranking among Universities
- Invention Disclosures Received
- Total U.S. Patent Applications Filed and Issued
- Licenses and Options Executed
- Gross License Income Received per License/Option Yielding License Income

Finance

- Total Voluntary Support
- Alumni Donors as a Percentage of Alumni of Record
- Average Amount Given per Alumni Donor
- National Ranking in Annual Giving
- Distribution of Voluntary Support by Source
- University Endowment as of June 30
- Average Salaries of Professors, Associate Professors, and Assistant Professors

Instruction

- Percent of Top Three Faculty Ranks with Tenure
- Percent of Faculty Who Are Full Time
- Percent of Full-time Faculty with Highest Terminal Degree
- Student:Faculty Ratio
- Total Degrees Granted
- Bachelor’s Degrees as a Percentage of Total Degrees Granted
- Percent of Bachelor’s Degrees Awarded in the Arts and Sciences
- Total Doctoral Degrees Granted
- Percent of Undergraduate Class Sections with Fewer than 20 Students
- Percent of Undergraduate Class Sections of 50 Students or More

Figure 2: Academic Scorecard 2011

Selected Strategic Indicators	Pitt	Peers	Aspirational Peers
Become recognized as a top 25 research university			
1. Faculty Academic Honors and Awards	33	17	31
2. The Center Ranking Among All Research Universities	25	46	18
3. The Center Ranking Among Public Universities	8	21	5
4. <i>U.S. News & World Report</i> Academic Reputation Peer Assessment Score	70	71	82
5. <i>U.S. News</i> Arts and Sciences PhD Programs among Top 25	1	3	9
6. <i>U.S. News</i> Professional Colleges among Top 25	7	2	8
7. <i>U.S. News</i> Professional College PhD Programs among Top 25	7	5	8
Offer a superb undergraduate experience of nationally recognized stature			
1. Percent of Freshmen in Top 10 Percent of High School Class	51%	47%	69%
2. Average Freshman SAT Score	1270	1214	1293
3. Percent of Seniors Satisfied with Quality of Academic Experience	69%	64%	-
4. Percent of Seniors Satisfied with Access to Small Classes	60%	53%	-
5. Percent of Seniors Satisfied with Quality of Faculty Instruction	72%	70%	-
6. Percent of Seniors Who Know Two or More Professors Enough to Ask for a Letter of Recommendation	79%	71%	-
7. Freshman Retention Rate	91%	92%	94%
8. Four-year Graduation Rate	61%	55%	66%
9. Six-year Graduation Rate	78%	77%	85%
Nurture a world-class research/scholarly and creative output environment			
1. Total Research Dollars (Millions)	\$623	\$451	\$695
2. Federal Research Dollars (Millions)	\$463	\$238	\$412
3. Doctoral Degrees Granted	400	488	640
4. Postdoctoral Appointees	831	335	728
5. Average GMAT Score for First-year Full-time Graduate Students	608	638	683
6. Average LSAT Score for Law Students	160	160	167
7. Average Combined GRE Score for Graduate Students	1121	1110	
8. Faculty Salary Ranking among AAU Publics—Professor	15	12	14
9. Faculty Salary Ranking among AAU Publics—Associate	13	9	14
10. Faculty Salary Ranking among AAU Publics—Assistant	28	13	13
Create a diverse University community			
1. Percent of Female Full-time Faculty	41%	36%	37%
2. Percent of Minority Full-time Faculty	16%	19%	20%
3. Percent of Minority Staff	17%	20%	18%
4. Percent of Minority Freshmen	17%	30%	28%
5. African American Freshman Retention Rate	91%	89%	91%
6. African American Six-year Graduation Rate	59%	71%	71%

Figure 2: Academic Scorecard 2011 *continued*

Selected Strategic Indicators	Pitt	Peers	Aspirational Peers
Become engaged with external constituencies			
1. Alumni Giving Rate	10%	12%	13%
2. Inventions Disclosed (Three-year Average)	248	144	260
3. Patents Awarded (Three-year Average)	30	29	54
4. License/Options Executed (Three-year Average)	52	37	67
Expand our global focus by increasing international study and research			
1. Percent of Freshmen Who Plan to Study Abroad	37%	35%	
2. Percent of Undergraduate Students Who Study Abroad (Estimated)	28%	20%	26%
3. Title VI National Resource Centers	3	1	4

Key: (*The Center*) *The Center for Measuring University Performance*; (*AAU*) *Association of American Universities*

financial incentives for obtaining external funding in those academic areas in which research is driven by external resources.

Although efforts to close the gap between Pitt and aspirational peers with respect to research funding have been largely successful, the benchmarking process also highlighted areas in which Pitt could improve. One important area the University has been focusing on is overall diversity. Benchmarking shows that domestic diverse and international students combined constitute 17 percent of the undergraduate population on the Pittsburgh campus, a level the University would like to increase. While Pitt has been competitive with Association of American Universities institutions in African American recruitment, it has not been as successful in a broader diversity effort, due in part to the demographics of Western Pennsylvania. In response to this challenge, the University has instituted a number of programs to expand recruitment and retention of other demographic groups on its campuses. For example, on the recruitment side, the Pittsburgh campus set a goal of doubling its international student enrollment, and one strategy will be to use the International Student Barometer to benchmark information about international students' perceptions and expectations. The campus also created

Global Links, which is a program to support integration, retention, and academic success of international students. Other new retention programs for underrepresented undergraduates on the Pittsburgh campus include Partners in Progress in the Kenneth P. Dietrich School of Arts and Sciences and the Pitt EXCEL Program in the Swanson School of Engineering.

USING ASSESSMENT IN UNIT-LEVEL PLANNING AND BUDGETING, ANNUAL PLANNING, AND BENCHMARKING, SELECTED SCHOOLS

The self-study Working Group on Using Assessment to Improve Institutional Effectiveness (WGIE) studied the past and present planning, budgeting, and benchmarking processes at both the University level and the unit or responsibility center level (for a list of responsibility centers, see Appendix A of the PBS document⁴). WGIE also conducted a detailed review of processes in place at the University level and within a representative sampling of units that reflect a diversity of missions, disciplines, and organizational structures.

WGIE said that its review of the University's Planning and Budgeting System,

⁴ www.academic.pitt.edu/pb/index.htm#APPENDIXA

annual planning processes, and benchmarking activities revealed a culture of assessment that has grown in strength over time. The assessment processes embedded in planning and budgeting have themselves been assessed and adapted in response to identified issues and opportunities. The four units included in the in-depth examination—the Kenneth P. Dietrich School of Arts and Sciences, School of Social Work, School of Nursing, and University of Pittsburgh at Bradford—represent a cross-section of the University in terms of size, mission, and structure, yet all four are illustrative of how data are collected and used to make decisions and further the goals of the unit and the University as a whole. While only four units are presented in depth, other schools and units of the University also have very strong planning documents, as evidenced by information in the appendices to this section and in the document room.

WGIE chose the Dietrich School due to its size, complexity, and important role as the liberal arts core of the University. The Dietrich School dominates the other schools in terms of enrollment and number of degree programs offered. According to the *2011 University of Pittsburgh Fact Book*, 12,484 (43 percent) of the 28,823 students on the Pittsburgh campus were enrolled in the Dietrich School. Similarly, 142 (32 percent) of the 444 degree programs at the University of Pittsburgh (all schools and all campuses) are offered by the Dietrich School. WGIE selected the School of Social Work and the School of Nursing as examples of graduate and professional schools. They are midsized schools in terms of enrollment (721 and 1,120, respectively) and offer degrees at the bachelor's, master's, and doctoral levels. The School of Social Work is a Provost-area school, while the School of Nursing is a health sciences school. WGIE included Pitt-Bradford as an example of a regional campus. With its enrollment of 1,629 students, Pitt-Bradford is neither the largest regional campus (Johnstown is, with 2,965 students) nor the smallest (Titusville is, with 514 students). Pitt-Bradford offers both associate's and bachelor's degrees. (See Appendix B2 for more detailed profiles about the four units.)

The WGIE report is based on a review of planning, budgeting, benchmarking, and other relevant documents compiled from fiscal year 2000 through fiscal year 2011. WGIE also drew upon the responses of selected administrators and faculty who have been involved in planning and assessment (see the WGIE report for more details). The balance of the material throughout this chapter is taken from the WGIE report.

Kenneth P. Dietrich School of Arts and Sciences

The Dietrich School of Arts and Sciences is a very large component of the University, comprising 31 academic departments and offering instruction to more than 12,000 undergraduate and graduate students. According to Bettye J. and Ralph E. Bailey Dean of Arts and Sciences N. John Cooper, the overall long-term goal of the Dietrich School is excellence in scholarship, undergraduate education, and graduate education that drives the University's reputation as a world-class institution of higher education.

Planning, Assessment, and Links to Institutional Goals

The dean presides over the Dietrich School's Planning and Budgeting Committee (PBC). PBC reviews the Provost's response to the previous year's plan, which includes feedback from the Provost and the Provost's Area Planning and Budgeting Committee (PAPBC). The annual cycle of reporting, receiving feedback, and reviewing that feedback provides the framework for continuous assessment for improvement, which has become part of the academic culture within the Dietrich School.

While the Dietrich School adopted the new annual planning template when preparing its fiscal year 2008 annual plan, in that first year, the Provost was not satisfied that the school had taken advantage of the strengths of the template format. The PAPBC review of the fiscal year 2008 plan indicated that the plan included too much information about accomplishments from previous years, few clear goals within each strategic priority for the coming year, and few measurable outcome indices for many goals.

The Dietrich School was responsive to this feedback, as reflected in the Provost's response to the plan submitted for fiscal year 2009: "Your fiscal year 2009 plan is a wonderful follow-up to the vastly improved plan submitted for fiscal year 2008. Your goals, strategic priorities, and activities match those from fiscal year 2008, and each is updated to indicate actions accomplished."

Despite steady improvement of the Dietrich School in using the new template matrix for its annual plans, the PAPBC review of the fiscal year 2010 plan indicated a continued need to identify specific and measurable targets, separate long-term planning from annual planning, indicate which goals were being met, and speculate on the implications of not meeting certain goals. The following year, the PBC review committee commented that compliance on these points was much improved in the fiscal year 2011 plan.

Using Assessment in Planning, Program Development, and Resource Allocation

While the format of assessment has been evolving, the culture of planning and assessment also has been growing in the Dietrich School. The following examples illustrate how the Dietrich School has used planning and assessment for sustained and effective change.

Central to recent developments in the Dietrich School has been the consistent control of faculty numbers through a system of target numbers for tenured/tenure-stream faculty in each department, based originally on a PBC analysis in the mid-1990s, as adjusted subsequently through four major routes: rightsizing of the faculty for fiscal year 1998 based on an agreed target enrollment of undergraduates, an expansion of the faculty for fiscal year 2005 based on an agreed increase in the target enrollment of undergraduates, academic initiative funding to build on/modernize scholarly strengths in alignment with University strategic



goals, and a budget reduction for fiscal year 2010 positioning the University to deal with instability and reduction in the commonwealth appropriation.

Because one consistent goal for the Dietrich School has been to have a larger number of departments ranked more highly in peer evaluations, such as the 1995 National Research Council (NRC) evaluations of doctoral programs, changes in faculty targets for departments have been keyed to that goal. Almost all new faculty positions have been investments in target departments that include anthropology, biological sciences, chemistry, economics, English, history of art and architecture, Hispanic languages and literatures, history, history and philosophy of science, mathematics, music, neuroscience, physics and astronomy, political science, and psychology.

In 2010, when the NRC rankings were released, most of the targeted programs in the Dietrich School had advanced from where they were in 1995, some showing marked improvement even in comparison to the very different system used in the previous study. This study reflected an unprecedented collection of data on research doctorate programs using a very complex, and somewhat controversial methodology, and the University has been sorting through, interpreting, and

incorporating some of this information into its own benchmarking processes.

Further evidence of the success of this strategic approach to assessment and faculty hiring is the Dietrich School component of the Provost's nanoscience initiative. In this initiative, six new positions, three each in chemistry and in physics and astronomy, were coordinated with then current and projected investments in research laboratory modernization and renovation under the University's 12-year facilities plan to optimize the faculty profiles in these core sciences and to take advantage of scientific and funding opportunities in nanoscience. Assessment of success in sciences with access to competitive federal research sponsorship can be tracked through sponsored research expenditures, which in the Dietrich School have increased from \$31.1 million in fiscal year 2000 to about \$50 million in fiscal year 2011.

To cite another case, the Dietrich School has been committed to improving advising, particularly because academic advising plays such a critical role in the lives of undergraduates. In the late 1990s, the Provost's office began administering a student satisfaction survey to assess all aspects of the undergraduate experience on the Pittsburgh campus. Results of the first round of surveys showed low satisfaction with academic advising, particularly the advising provided to freshmen and undeclared majors through the central Advising Center. In addition, a review of the administrative data indicated that too many students were being advised through the Advising Center for three or four years because they had not declared a major.

In June 2000, the Dietrich School completed an external review of its advising function that identified areas for improvement. The Advising Center was restructured, and the Dietrich School devoted several years of successful efforts to professionalizing its Advising Center, including an annual review and assessment. In subsequent years, student satisfaction increased and more students declared majors at the appropriate time. In the late 2000s, improvements in student satisfaction with

advising started to slow at the same time that the University was converting to a new student data system (PeopleSoft) that allowed for student self-registration. At this time, the Dietrich School recognized that the role of the academic advisor would change in an era of student self-registration and sought to take advantage of this administrative change to further strengthen advising. The Dietrich School again engaged external experts to conduct a comprehensive review of the Advising Center that resulted in a number of improvements that were adopted in 2010 (Appendix C25).

The impact of assessment on planning, programs, and resource allocation also is evident in department-level processes. In response to feedback from the Provost, the Dietrich School now asks departments to formulate plans that are aligned with the overall Dietrich School plan. In conjunction with Organization Development in the Office of Human Resources, Dietrich School administrators worked to develop a departmental strategic planning process in 2007–08 that included extensive data reporting. This process is being fully integrated with an external review process that occurs every 10 years and involves three or four faculty members from outside institutions who perform a site visit. The internal process expects departments to use comments from external reviewers as input for constructions of five-year plans explicating a mission statement consistent with the missions of the Dietrich School and the University, short- and long-term goals for improvement, metrics for assessing outcomes, and a detailed timeline for implementation.

Each discipline in the Dietrich School can interpret assessment within its own framework, but some common tools include capstone course evaluations, course-embedded assessment, standardized tests, portfolio assessment, and surveys. A professor in the Department of History of Art and Architecture noted that, in the gateway courses, assessment changed her approach to “a fluid, dynamic one that is responsive every year to assessment; the syllabi and assessment rubric are amended every year.”

Using the outcomes-based assessment approach, the political science department totally revised its major and its honors program and instituted rigorous capstone seminars. The result was a significant increase in the number of political science majors. (See the expanded discussion in the Assessment of Student Learning Outcomes section starting on page 58.)

Benchmarking Data in the Assessment Process

Benchmarking against other institutions has been a challenge for the Dietrich School because, unlike the professional schools, the composition of disciplines that make up colleges and schools of arts and sciences are different at each institution, and there is no formal association through which they share data.

While the Dietrich School regularly collects, analyzes, and uses internal benchmarking data, the collection and use of external benchmarking data have been less systematic. In its fiscal year 2001 annual plan, the Dietrich School described a plan to benchmark against peer and aspirational peer institutions. However, the fiscal year 2002 plan reported a lack of available external benchmarking data from comparable arts and sciences programs at peer or aspirational peer institutions and proposed instead a continued reliance on internal data. In his response, the Provost suggested that the Dietrich School work more diligently to find a way to obtain and use external benchmarking. This pattern—reports of little external benchmarking data availability followed by the Provost's recommendation to strengthen external benchmarking—continued for several years.

Despite this situation, the Dietrich School has made strides in obtaining and using external benchmarking data to drive its decision making. As part of the strategic planning process, departments are asked to obtain external benchmarking data at peer and aspirational peer departments and programs. These data are incorporated into the departmental self-study and provided to external reviewers. For example, the Department of History of Art and Architecture used external

benchmarking to develop an improved plan for managing the University Art Gallery.

Benchmarking data also are being used at the school level. For example, a 2005–06 review of cross-institutional benchmarking data included an “endowed chair” analysis. As reported in the Dietrich School's fiscal year 2007 annual plan, the University of Pittsburgh needed to create at least 20 new endowed chairs in order to compete with its aspirational peer institutions. The Dietrich School has secured support for five new endowed chairs as part of the University's capital campaign and has the goal of targeting 10 more endowed chair positions over the next five years. In this example, benchmarking data led to the development of a strategic plan to increase targets for voluntary support, and a portion of that increased support was earmarked for creation of additional endowed chair positions.

Improving and Refining a Sustainable Assessment Process

The Dietrich School has improved its external and self-assessment processes over the last 10 years. Annual plans now more clearly articulate specific goals and more carefully assess progress toward those goals. The plans are more focused and are more consistent with a continuous improvement model. Department-level planning is becoming more formalized. Data provided by departments and programs within their annual reports to the dean are used to help allocate resources across Dietrich School departments. These departmental and program data are presented in summarized form within the Dietrich School annual plan submitted to the Provost. Further, the departmental strategic planning process itself was assessed in 2010, resulting in a more streamlined and focused process.

The Dietrich School has increased its use of internal benchmarking data over time and has made progress toward better use of external benchmarking data. Nevertheless, there is room for improvement. For example, the Provost's feedback to the Dietrich School after reviewing the fiscal year 2009 plan indicated a continued need for more accurate and interpretable



measures of progress. To this end, the University has purchased a national database, Academic Analytics, which provides objective measures of productivity for faculty and PhD-granting departments. This database will augment and enhance existing self-assessment capabilities at the department level as the departments learn to use it well.

In summary, the Dietrich School—the largest and most complex of the representative sampling of units chosen—has built a culture of assessment that has had an observable and sustained effect at the school level and that increasingly is being embraced by departments, which are using it as an opportunity to strengthen their programs.

School of Social Work

The mission of the School of Social Work is to advance knowledge and to apply that knowledge to fulfill human potential through the prevention and amelioration of social problems. The school dedicates itself through education, research, and public service to advocate for society while respecting the dignity and achievement of all persons.

Since 2002, the dean of the School of Social Work has worked to improve the school's performance nationally in terms of its three

programs—Bachelor of Arts in Social Work (BASW), Master of Social Work (MSW), and Doctor of Philosophy (PhD)—its research, and its commitment to the community. Both the dean and the associate dean for research see the strategic plan and assessment as key factors in the school's success.

Planning, Assessment, and Links to Institutional Goals

To meet its annual and long-term goals, the School of Social Work adopted a specific model to drive improvements. The school focuses on both process and outcome objectives for the following

areas: educational content, educational environment/culture, faculty productivity, resource allocation/commitment, and student learning/competence. Depending on the results of the assessment, the school focuses its improvement strategies on fixing areas that need major improvement, maintaining areas in which performance is acceptable, and capitalizing on strong achievements. As a result, improvement activities cover all aspects of the school.

For fiscal year 2008, the school adopted the Provost's recommended template to monitor its progress along each of its major goals. To reach those goals, the school shaped strategies, defined assessment criteria, measured impact, planned evaluations, and forged connections between its annual plans and the goals of the University. The goals, analysis, and findings are reviewed by faculty on various committees and at retreats, by students, and by advisory committees (i.e., the Board of Visitors and the Executive Council). The school's process and outcome objectives, resource allocation to achieve the goals, and evidence feedback system (i.e., outcome data collection, analysis, and evaluation protocol) lead to evidence-based planning for the next fiscal cycle.

The dean and associate deans have acknowledged the time and commitment of faculty and staff in this process. Administrators

believe that this process has built a culture of assessment by effectively reminding the school community of its goals, empowering faculty and staff to actively contribute to change and improvement, and providing a foundation for mutual respect at all levels.

Using Assessment in Planning, Program Development, and Resource Allocation

Because the process is transparent and all individuals are involved in the process, the School of Social Work has seen change over the past decade. For example, not only have faculty publications increased, but the involvement of PhD students in contributing to refereed articles has substantially increased, too, leading the school to be ranked fourth in the nation in publications as of 2009 (from 42nd a decade ago).

The school has found that its focus on assessment and improvement has shifted over the past decade from addressing serious deficits to maintaining good practices (e.g., offering pilot study funding, proposal development consultation, and rigorous hiring of faculty) and advancing good work to the next level (e.g., providing feedback regarding achievements to all faculty, maintaining scholarship support, and continuous discussion of the school's vision).

In terms of resource allocation, the plan has been effective in ensuring that the school hires new faculty members who will contribute to the goals of the school (i.e., publishing, doing research, securing external funding, and teaching effectively). Because of this approach, the school is ranked 14th among the 177 graduate schools in social work (as reported by *U.S. News & World Report*, 2012). The dean and associate deans believe that the school should be ranked higher, given the high productivity of its faculty. They intend to see that the school achieves its desired top 10 ranking. For the past eight years, the school has focused primarily on improving faculty and the PhD program as well as starting the school's Center on Race and Social Problems. The dean has noted that now that deficits in these areas have been successfully addressed, the next area of heavy emphasis will involve enhancing undergraduate enrollment.

Benchmarking Data in the Assessment Process

For the School of Social Work, it has been more of a challenge to provide strong benchmarking data compared to other schools (e.g., business, law, engineering, medicine). In fiscal year 2002, the school made an initial attempt to benchmark against two aspirational peer schools and three peer schools, specifically in faculty workload, field instruction, and advising. Notably, the Provost indicated a need to develop more useful benchmarks. In fiscal year 2003, the school provided initial benchmarking data for eight to 10 highly ranked schools for diversity, selectivity into programs, journal publication, and sponsored research.

However, for several fiscal years (fiscal years 2003–06) afterward, benchmarking data was limited to internal trends of the school. This internal tracking was helpful to the school, as it emphasized a need to continue to increase journal publications by 10 percent annually.

Under annual insistence by the Provost, in fiscal year 2007, the school began to provide not only its internal tracking data but also national benchmarking data for admission rates, diversity, and scholarship. Beginning in fiscal year 2008, the school procured a service offered by its accrediting organization (Council on Social Work Education) to provide information on its benchmark schools. This benchmarking service has allowed the school to see and demonstrate its achievement, particularly in the area of refereed journal publications over the past decade as well as its ratings overall to include the number of tenure-track faculty among the top 10 schools in the country. This service shows that the school has the second fewest tenure-track faculty of the top 10 schools; regardless of its size, the school has improved its rankings according to benchmark data.

Improving and Refining a Sustainable Assessment Process

The School of Social Work is confident in the accuracy of its findings because measurement is triangulated and major outcome findings are stable. For example, the school has verified its publication rate to match the accrediting

agency's benchmarking service. The school also conducts assessments to look at student sub-groups when evaluating data for improvements. Specifically, assessment is viewed through multiple lenses of gender, race, age distribution, and full- or part-time status as well as concentration and major. This secondary cut on data analysis further strengthens the meaning of the results.

The school's quality assurance system includes all levels of the school, involves several assessment instruments to triangulate student data, and investigates and maintains the non-student-related data. As a result, the school has streamlined most of its instruments over the past few years. For example, the alumni questionnaire is currently six pages long. Not all the questions have been used in the feedback process, so the school is reducing the questionnaire to two pages to improve response rates. Because the school is achieving success for many of its goals, it is considering staggering the years of assessment of successful ventures to emphasize the development and assessment of new ventures.

School of Nursing

The School of Nursing was established in 1939 and is one of six health sciences schools at the University. The School of Nursing offers a Bachelor of Science in Nursing (BSN), a Master of Science in Nursing (MSN), a Doctor of Nursing Practice (DNP), and a Doctor of Philosophy (PhD).

The school is committed to the tripartite mission of the University through excellence in teaching, research, and service. While the mission of the school remains fairly static, the strategic planning used to meet the goals of the school is dynamic.

Planning, Assessment, and Links to Institutional Goals

The School of Nursing Planning and Budget Committee develops the strategic plan that informs the assessment process. This committee meets monthly, and the majority of its members are elected. The School of Nursing uses assessment to evaluate its plan and progress

toward its goals. Its planning template clearly identifies the school's overarching goals, which are consistent with the University's goals.

For each overarching goal, specific, focused goals are identified, along with strategies and metrics. Because the current plan is in year five of a five-year plan, the metrics include the baseline assessment along with results from years one through four.

The School of Nursing strategic plan and annual report reflect how the assessment process is linked to the University's goals. For example, one University goal is to increase funded research activity. A related School of Nursing goal is to have 75 percent of the faculty actively involved in research. To achieve this goal, the school uses several strategies. The research infrastructure provides support through pilot funding, workload relief, and statistical support to accomplish this goal. The school emphasizes cutting-edge and high-impact research activities, with a focus on building five major areas within and beyond the School of Nursing: behavioral management of chronic disorders, patient management during hospitalization, informatics to improve health outcomes, genetics, and technology applications. In addition, the school is broadening the funding base for research in light of reduced funding from the National Institutes of Health (NIH). The school continues to have as a goal the maintenance of NIH funding ranking in the top five and advancement toward the top three. The five-year plan shows how assessment has helped the School of Nursing to make progress toward the goal of research involvement.

Using Assessment in Planning, Program Development, and Resource Allocation

The School of Nursing uses assessment processes to support planning and goal setting, improve programs, adjust program offerings, and direct resources. For example, in support of the University's efforts to raise the standards of education and research, the School of Nursing has articulated several goals. One is to increase the proportion of full-time faculty members who hold a doctoral degree (PhD or DNP) to 100

percent. Over the past several years, the School of Nursing has identified specific strategies to achieve this goal and has evaluated its progress and identified new strategies in response. For the most recent year, this has resulted in the decision to hire only candidates with a PhD or DNP for open full-time positions. In addition, resources have been reallocated to give current faculty members workload relief so that they can pursue a doctoral degree.

The culture of assessment in the School of Nursing also has increased the focus on admitting highly qualified students and ensuring that they graduate. The school has been successful in attracting and graduating some of the best students in the University, which is reflected in average SAT scores and retention rates. Currently at 93 percent, the freshman-to-sophomore retention rate in the School of Nursing is already close to the University goal of 94 percent.

Benchmarking Data in the Assessment Process

The School of Nursing uses several sources of benchmarking data, including data provided by NIH and the National Research Council. In addition, the School of Nursing benchmarks itself against aspirational peer schools and peer schools selected based on NIH rankings as well as university rankings. These benchmarking data have informed many decisions, including establishing faculty workloads and determining realistic research goals. The Provost's response to the strategic plan progress report provides an official institutional assessment of school-specific goals along with an assessment of the School of Nursing's success in benchmarking against University goals.

Market data also are used for benchmarking purposes. In response to the market, the school is expanding its PhD and postdoctoral training capacity to emphasize preparation for academic/



research careers. The school also is opening and expanding the professional doctorate (DNP) for advanced practice nurses, including nurse practitioners, clinical specialists, administrators, and nurse anesthetists. Another goal is to market and expand the generalist MSN program (clinical nurse leader), focusing on recent graduates and RN/BSN completion students both in and outside the Pittsburgh area.

Improving and Refining a Sustainable Assessment Process

The School of Nursing has clearly developed an organized and systematic process of assessment. The five-year plan identifies overarching goals consistent with University goals as well as specific, actionable goals for the school. For each goal, strategies are identified and adjusted over the five-year period in response to measured progress.

Over time, the assessment process has been adapted and refined to improve its effectiveness. This is perhaps most clearly seen in the articulation of goals. In the past, goals were stated in broad terms that were not useful in assessing progress. For example, one goal in the five-year plan was stated as follows:

Sustain an active and involved development effort, focusing on increasing the numbers and sizes of scholarships, supporting research initiatives, supporting community service, supporting education initiatives, and attracting funding for endowed chairs and professorships.

Recognizing that such a broad goal was not useful for monitoring progress and driving decisions, the school revised that particular goal:

Sustain an active and involved development effort, focusing on raising \$1.8 million annually toward the School of Nursing's capital campaign goal, increasing participation by 5 percent and money raised by 5 percent as part of the school's internal campaign, increasing the numbers and sizes of scholarships (five new scholarships per year focusing on doctoral and international education), supporting research initiatives (annually supporting five faculty members seeking funding from corporations and foundations for their research projects), and supporting education initiatives funding for the Nancy Glunt Hoffman Memorial Fund and additional endowed chairs and professorships.

According to the Working Group on Using Assessment to Improve Institutional Effectiveness (WGIE), the School of Nursing has taken a thoughtful and comprehensive approach to assessment, and WGIE cannot identify any short- or long-term goals of the school for which an assessment process is not being used to evaluate progress. The school has completed its current five-year plan and is in the process of generating its next five-year strategic plan.

University of Pittsburgh at Bradford

The University of Pittsburgh at Bradford is a four-year college of the University of Pittsburgh. Pitt-Bradford's major goals are new levels of academic excellence, student enrollment and academic success, human resources and diversity, rural engagement and outreach, reputation and

identity, financial and material resources, and campus ambience and sustainability.

Planning, Assessment, and Links to Institutional Goals

The overall assessment process is articulated in a document titled *Timeline for Planning and Budgeting Process* (Appendix B3). The document outlines the steps taken to ensure that the planning process is transparent and accessible to the campus community, that strategic initiatives are prioritized, and that budgetary resources are reviewed in light of institutional priorities.

The Pitt-Bradford Planning and Budgeting Committee, composed of faculty, staff, and student representatives, meets regularly during the academic year. Responsibility centers provide reports on the progress of all strategic initiatives, and a summative report is presented to the president regarding goals that have been met and those initiatives needing additional time, effort, or resources. In addition, the president holds an annual two-day summer planning retreat with the campus leadership team. Using data collected during the previous academic year, decisions are made regarding adjustments to the campus' strategic plan.

A review of planning documents reveals an assessment conversation taking place over a 10-year period among the various campus constituencies at Pitt-Bradford as well as a corresponding dialogue between the Provost and the Pitt-Bradford campus planners.

For example, each annual strategic planning report lays out campus-specific challenges and priorities—including enrollment planning, academic program development, and scholarship management—and describes initiatives designed to address those challenges. Reports in subsequent years record the varying degrees of success achieved, including enrollment targets met or not, new academic programs introduced, resource reallocation implemented, and requests for additional resources articulated. Beyond that, the report outlines a continued commitment to particular strategies and the abandonment of failed strategies.

At the same time, the campus-specific plan is framed within the broader University-wide context. The Provost's response to the strategic plan progress report submitted each spring provides an official institutional reaction to the assessment of movement toward campus-specific goals along with an assessment of Pitt-Bradford's success in dovetailing its plans with particular University goals. The comments of the members of the Provost's Area Planning and Budgeting Committee (PAPBC) who read the plan, included with the Provost's letter, often provide a candid set of observations, questions, and recommendations.

Using Assessment in Planning, Program Development, and Resource Allocation

The Provost's yearly letters of response to planning documents and the comments of PAPBC are discussed in the president's cabinet meetings and then shared as appropriate by cabinet members with their respective units, which implement actions as needed. For example, this process identified the need to adjust general education components to accommodate the global competency requirement discussed in the Provost's planning letter.

In the case of Pitt-Bradford, the area of enrollment management provides a good microcosm of this assessment dialogue process in action over a sustained period of time. For all of the regional campuses, given the primacy of their focus on undergraduate education, the practice of setting and meeting enrollment targets constitutes a fundamental activity in the strategic planning process. Furthermore, the issue of enrollment includes institutional characteristics beyond the number of full-time equivalent (FTE) students. To assess enrollment, Pitt-Bradford considers admissions criteria and new student profiles; retention rates; the mix of full-time and part-time students; the proportion of traditional to nontraditional students; student diversity; the use of scholarship assistance to discount tuition; the link between enrollment and campus housing occupancy; and, of course, the connection of budget and resources to all of these areas.

The critical need to reach ambitious FTE enrollment targets shows up in the plans early in this 10-year cycle, including references to the potential incentives for increased enrollment. In fiscal year 2002, for instance, the Pitt-Bradford plan details the Integrated Enrollment Initiative (IEI), launched in response to an assessment of recruiting and retention conditions. The fiscal year 2003 plan provides an update on IEI, reaffirms enrollment as a "number-one priority," and adds an additional level of assessment via a market research plan. The fiscal year 2004 document reports on data from the market research project and deepens the assessment process with a consultant's study on pricing strategies.

Pitt-Bradford reviewed inquiry and application pools, yields, and high school and college fair visits from previous years. The information was coded using geodemographic classifications and then compared to population and sociodemographic projections based on U.S. Census data. This analysis led Pitt-Bradford to develop a marketing campaign that targeted Erie and the surrounding region in 2006 and Wilkes-Barre and Scranton in 2008. Following the Erie campaign, inquiries from that region nearly tripled and applications more than doubled. Inquiries and applications from the Wilkes-Barre/Scranton region nearly doubled.

Benchmarking Data in the Assessment Process

Like the Pittsburgh campus of the University, Pitt-Bradford, along with each of the other regional campuses, identified a set of peer and aspirational peer institutions relevant to their missions. Comparative benchmarking data are collected annually, including indicators such as enrollment totals, retention rates, graduation rates, freshman SAT scores, class size, and student-to-faculty ratios. These data, along with information relevant to each campus' unique strategic goals, are intended to respond to the Provost's fiscal year 2003 request for programmatic and consistent use of benchmarking data and are integral to the annual planning process.

Pitt-Bradford's response to the need for programmatic benchmarking involved the use

of data compiled by the Education Trust and focused on data related to institutional objectives that had been discussed throughout the planning process over the years, such as the admissions profile and retention rates. The fiscal year 2006 document introduces the benchmarking data into the planning process. In the following year's document, Pitt–Bradford planners note how the approach to benchmarking is being incorporated into the overall assessment process, becoming a useful component of the campus culture of assessment.

Eventually, Pitt–Bradford planners determined that the size and diversity of the original group of benchmarked institutions limited its value, and they sought a smaller group more focused on institutional similarities or competitive market position. A smaller group of peer institutions and aspirational peer institutions is now being used to further refine benchmarking efforts by comparing data on select critical success factors.

Improving and Refining a Sustainable Assessment Process

In general, a look at this cycle of planning processes shows a continuum of assessment in which the evaluation efforts are refined and made more consistent over a period of years. The ongoing process of using accurate data and carefully analyzing trends to formulate enrollment strategies is a good example. The effort to use consistent benchmarking data to establish baseline levels so that improvement can be measured is another illustration of the effective implementation of assessment.

The assessment of student learning outcomes is documented in the Using Assessment to Improve the Student Experience section. A comprehensive list of curricular improvements, including new courses and course content, raised standards, changes in teaching assignments, and restructured advising, is provided in Appendices C9 and C16.

USING ASSESSMENT TO IMPROVE INSTITUTION-WIDE INFRASTRUCTURE INVESTMENT

The University has used assessment to improve institution-wide infrastructure investment. The areas explored in this section of the report are significantly different in their missions, their institutional history and location, and their relation to the academic mission and vision of the University of Pittsburgh. This very diversity makes them useful examples for understanding the general culture of assessment at Pitt.

In all cases, a committee at the Provost level or above sets fairly general goals and fiscal guidelines, while the particular means of realizing these goals devolve upon specified interested parties and stakeholders. The relevant oversight committee then reviews on a regular basis what has been proposed or accomplished and approves or adjusts the next stage of the strategic plan in the appropriate area. Within this common framework of assessment, there is significant variation in the kind and frequency of review, the period covered by each articulation of a strategic plan, and the ongoing participation of different groups of interested stakeholders in the planning and review process. Such variation seems appropriate due to the intrinsic differences of these areas as well as a general institutional commitment to assign immediate responsibility to the most knowledgeable and interested parties.

Information Technology

In the late 1990s and early 2000s, Pitt put into place the basic components for planning and reviewing information technology (IT) at the University; these included centralizing authority for academic computing in the newly hired head of Computing Services and Systems Development (CSSD); regularizing the financial support system; and developing the strategic plan of May 2000, *An Information Technology Foundation for the 21st Century* (Appendix B4). This plan set fairly ambitious goals (near cutting-edge state-of-the-art technology for networking systems; reliable, high-speed,

easy-to-use network; cost-effective high-quality access; full range of voice, data, and multimedia services) while also making detailed proposals for changing or implementing particular technical systems. Updates to this plan in 2003 and 2005 and a 2008 executive summary on CSSD by the Provost⁵ reaffirmed its large-scale goals, reported on progress on individual proposals, and outlined some new goals while stressing the need for flexibility in ongoing IT implementations.

Planning, Assessment, and Links to Institutional Goals

In May 2000, the Information Technology Steering Committee (ITSC), which had been charged by the Chancellor to recommend policies to address the University's growing needs in computing and information technology, submitted the University's first comprehensive IT plan. The plan had as one of its most important elements a framework for decision making that clarified the responsibilities of the central University budget to provide the necessary environment for the operation of the University's programs; the responsibilities of the schools and other units of the University to meet the special needs of their individual missions; and the responsibilities of individual faculty members, staff members, and students as they planned to use University resources in their work. With this clarity of responsibility and the placement of resources at correct levels, it was for the first time possible for individuals and units of the University to react confidently to opportunities, to make the best choices in allocating scarce resources, and to form cooperative consortia as needs arose. With the implementation of this plan and its updated versions, the University was able, for the first time, to fully integrate computing and IT into the ongoing development of its programs.

ITSC, composed mainly of upper-level academic administrators and staff and chaired by the Provost, reviews IT performances and sets goals for each year. The most significant mid- and long-range strategic planning takes place

through this committee. A standing committee of the University Senate receives regular reports on new developments and is primarily a means for interested stakeholders to stay informed about current issues. The Provost-level Council on Academic Computing explores emerging trends and issues in computing and provides feedback to the Provost.

IT poses some special challenges for long-term strategic planning and assessment because of the pace of change across the field, with cycles of rapid innovation and quick obsolescence, hard-to-predict emergent uses with uneven uptake across various academic units, and complex correlations between specific developments in IT's technological infrastructure and capacities and the larger and quite varied academic and institutional missions IT serves. Even more than in other academic areas, strategic planning in IT is necessarily provisional and concerned with large-scale changes. At the same time, the very nature of information technology makes possible low-cost, real-time feedback about patterns of use, emerging problems, and the effectiveness of various remedies at both local and systemic levels.

Examples of Assessment Used to Improve Infrastructure

CSSD has implemented a rich array of varied forms of assessment throughout its systems as well as regular reviews of its capacities and future directions. A few examples follow:

- Each week, the Help Desk compiles the top 10 questions/problems in order to resolve them more holistically. This practice exemplifies the low-cost, continuous, and effective self-assessment that is a distinguishing feature of CSSD.
- More generally, IT staff conduct an ongoing analysis of systemic problems and means of resolving them. More than 130 strategic metrics are currently collected on a regular basis. Most routine problems with the efficient operation of the computing environment are effectively identified and addressed through these protocols.

⁵ technology.pitt.edu/about/it-plan.html

- Focus groups and surveys provide regular user feedback. A selection of survey results from April 2009 to September 2010 is included in the working group report.
- Pitt's IT systems are benchmarked against peer and aspirational peer institutions. For example, a report on alumni e-mail service situates Pitt's services against a total of seven peer and aspirational peer universities.

Several case studies provide clear evidence of the ways that CSSD incorporates a culture of assessment in its regular operations. For example, the review of proposed changes to e-mail kiosks demonstrates careful attention to costs, benefits, and changes in technology. The report details the number and location of existing kiosks as well as the average logins per kiosk per day over a three-year period (academic years 2007–09). It proposes a reduction based on actual usage and informed by recognition of the evolving technological and social environment of e-mail use.

Both the security plan of 2004–06 and the Web portal design proposal of 2010 reveal similar modes of careful planning with attention to technical issues as well as user interfaces. It is interesting to compare the two reports to note the appropriate differences in focus—from system architecture in relation to security to user responses through surveys in relation to the portal design—that demonstrate the flexibility of CSSD personnel in identifying appropriate forms of assessing ongoing plans.

Improving and Defining a Sustainable Assessment Practice

CSSD has articulated a low-cost, real-time, and systematic culture of assessment within its regular operations. There is effective oversight and review, especially by ITSC. When completed, the new strategic plan under development within ITSC will be distributed to the larger University community.

Facilities

In the mid-1990s, the University initiated long-term strategic planning for its facilities. It has issued two facilities plans, the first for

1998–2007 and the second for 2007–18⁶. There are slight changes in emphasis between the two, but the core principles or strategies have remained the same. They include, most importantly, that:

- academic priorities guide capital expenditure;
- preservation and renovation have precedence over new construction;
- instructional spaces need to be modernized/renewed;
- student housing, support services, and recreation/athletic spaces and other facilities relevant to student recruitment and retention have high priorities; and
- rental properties are used within clearly defined guidelines.

By focusing on these priorities and on the goals of its comprehensive facilities plans, the University has been highly successful in implementing its capital development strategies, which in turn helped to accelerate improvements in the overall quality of its academic programs.

Planning, Assessment, and Links to Institutional Goals

Both plans insist on fiscal discipline and offer realistic estimates of costs and resources, both rely on fine-grained analysis of existing buildings by outside experts to identify problems and opportunities, and both establish clear priorities and a careful sequencing of projects to support ongoing academic endeavors. For various reasons—including costs, difficulties of construction in an urban environment, and the need to minimize disruption of academic activities—the plans are built around detailed long-term timetables, but they also must address emergent opportunities and academic initiatives within the academic and student support priorities established by the plans. Such changes can occur only within anticipated fiscal constraints.

Because of the clear principles and goals articulated in the plans, there was significant



expansion in the projects announced in the first plan. Increased capital support from the commonwealth, savings in borrowing costs, and increased revenues from research and auxiliary services supported a significant expansion in projected construction and renovation while actually reducing debt service pressures on the operating budget (see the University of Pittsburgh Facilities Plan, fiscal year 2007–18).

A facilities planning committee appointed by the Chancellor; chaired by the Provost and the executive vice chancellor; and drawn from administration staff, faculty, and students, reviewed the materials developed by outside consultants and recommended the plan for the Chancellor's ultimate submission to the Board of Trustees. Significant revisions or additions to the plans are reviewed by the higher administration and both University Senate and trustee committees.

Examples of Assessment Used to Improve Infrastructure

Following are some specific examples of the use of assessment as a tool in the planning and decision-making process and examples of how the results from certain types of assessments continue to be used, analyzed, and updated. Although there are numerous examples where the use of assessment in facility planning has been a very helpful tool, there are some that better illustrate how assessment is used for continuous improvement and how the use has created a culture of assessment within a specific area.

In 2004, the University engaged Affiliated Building Services (ABS) to perform a study of its housing department maintenance organization and operating methods to identify areas for performance improvements and cost savings. Information was obtained over several months using various methods, including interviews, observations, and a review of operating records. Using its professional experience, ABS was able to analyze and assess the information gathered, compare it with facility management practices and methods employed successfully elsewhere, and arrive at a set of conclusions and recommendations.

The study led to a total change in management philosophy and a new organizational structure that continue to be successfully employed. The operating philosophy is focused on accountability and active measurement and management of performance. A state-of-the-art computerized maintenance management software system was justified and implemented to manage work and assets.

Service standards are now clearly defined, and key performance indicators such as response time, staff productivity, preventive maintenance, and customer satisfaction are reviewed on a regular basis and measured and rated against specific targets. Work orders are now prioritized, and management can schedule and allocate resources more efficiently.

Significantly, feedback and evaluation are now part of the overall culture. The housing department surveys students submitting work requests and employees. Housing also surveys residents and former residents about quality-of-life matters to assist with planning renovations and future buildings.

This process, which is defined by continuous assessment, has resulted in very strong customer satisfaction and improved employee morale. It also has resulted in well-maintained and clean facilities that are much improved and would yield very different results from those resulting from the 1999 Comprehensive Facilities Assessment. (See the ABS Operation and Maintenance

⁶ www.provost.pitt.edu/documents/Facilities_Plan.pdf

Study along with various ongoing survey results in Appendix B5.)

To cite another example, in 2007, the University retained Sebesta Blomberg to assess the adequacy of the lower campus chilled water systems and make recommendations for system improvements. Prior to the assessment, it was believed that additional chiller capacity and larger distribution system piping would be required to meet existing campus needs and to provide capacity for future expansion. This was a very expensive and complicated utility enhancement and upgrade that required greater analysis.

Through hydraulic system modeling, Sebesta Blomberg determined that the University's chilled water production capacity and distribution system piping were adequate. The system distribution problems came primarily from inadequate temperature differential in the various building systems. The study recommended improvements to building pumps, valves, and control sequences, which were much less expensive than installing additional chillers.

The positive recommendations based upon this initial assessment led to an expansion of the scope. The professionals were asked to generate a plan for implementing the

necessary improvements in campus buildings to support better operation of the chilled water distribution systems. Priority was given to those modifications that would provide the greatest improvement to system performance. These improvements were estimated to cost only a fraction of the cost of installing additional chiller capacity, thus avoiding significant capital expense. An additional benefit was that the annual energy savings through the implementation of the modifications were projected to be on the order of 1 million kilowatt hours per year. Recommendations resulting from this assessment and study will continue to be implemented in the future.

Improving and Defining a Sustainable Assessment Practice

The University has effectively used assessment as a tool in its facility planning for a number of years. The use of assessment is apparent in the formal facility planning documents, both past and present, and their implementation in a sustained process that can be seen all the way through to activities and initiatives that are currently under way.

The University Library System

The University Library System (ULS)⁷ is used by students, faculty, and staff of the University of Pittsburgh and, through collaboration with organizations and institutions worldwide, the global research community. ULS is focused on becoming even more centered on users' needs.

ULS has been challenged over the past decade by massive changes in the relationship between users and information. These changes have stimulated deliberation about the system's ability to address internal and external user needs by creating new initiatives for better communication; organizational agility; and, most importantly, assessment. Consequently, ULS has undergone a radical transformation, especially in its approach to assessment.

⁷ www.library.pitt.edu

Planning, Assessment, and Links to Institutional Goals

Formerly, ULS assessment focused on counting quantities, such as the number of patrons who entered the library and the number of books lent, in addition to statistics on database and electronic journal usage. This was a traditional form of assessment upon which many libraries have relied. ULS has come to realize, however, that assessment must qualify what these quantities mean to ULS. The evidence of the evolution of this approach can be traced through the ULS planning and budgeting report outcomes, which are on file from 2000 to 2011 (available on the DVD and in the document room).

Annual departmental goals will include measurable goals for each step in a project cycle. These new assessment standards represent a major shift from previous ULS planning, which tended to be more insular and at times in conflict with the larger goals of the University. The many departments of ULS had many different objectives that needed to be streamlined into an organization-wide culture of assessment that would allow the organization to create goals to complement the University's mission. The ULS planning and budgeting report for fiscal year 2011 provides a clear matrix demonstrating the relationship of these.

Given the broad mission of ULS, the first step in creating a culture of assessment was the retention of a librarian who would be responsible for assessment. This assessment librarian now acts as a consultant for all assessment practices as the ULS-wide assessment plan is being formed. This plan also includes assessment requirements for the departmental goals of each area of ULS. To strengthen the inclusivity of this new assessment culture, the assessment librarian and associate directors met with every department head and any staff members who wished to be included in the meetings. During this time, goals were reassessed for the effect they had on the ULS mission and how assessment could be further retooled. These meetings also informed the creation of the new long-term ULS plan.

Examples of Assessment Used to Improve Infrastructure

Several new and continuing projects demonstrate the ongoing commitment to assessment. For example, in addition to library holdings, ULS's assessment practices naturally include library services. In the past two years, the analysis of transactions at various libraries on campus showed that the circulation (use) of the Graduate School of Public and International Affairs (GSPIA) collection decreased 64 percent from 2004 to 2010, and the use of electronic resources increased by 67 percent from 2004 to 2009. As a result, the GSPIA Economics Library was moved to Hillman Library. This consolidation has resulted in new, much-needed space for academic purposes and in more efficient service to the University community. During the same time period, ULS also was implementing a greater focus toward online or virtual reference services. Through the use of instant messaging software, any user could contact a librarian from any location with a computer or cellular device. Yet, ULS needed to ensure that users would continue to receive the same level of quality offered at the face-to-face reference desk. A methodology for collecting user transactions was implemented, and those data allowed for a new set of best practices for the virtual reference transactions. This assessment will become part of the ULS ongoing plan so that users enjoy a consistent level of service in all reference transactions.

Another assessment project is related to information literacy, one of the learning objectives of the University (see Assessment of Student Learning Outcomes section in the Using Assessment to Improve the Student Experience chapter for a more comprehensive discussion of this subject). To create an assessment methodology, ULS began by using the Standard Assessment of Information Literacy Skills project, which was developed at Kent State University. ULS measured the information literacy aptitudes of incoming freshmen for several years; these data were then compared to a national standard and divided up into multiple categories. The first seniors who were tested as



freshmen also have been reanalyzed for comparison. Initial results have been promising and have led to a retooling of information literacy instruction sessions for ULS. However, this project cannot ensure that the same students were directly tested, leaving a clear deviation in the results. ULS is currently analyzing additional assessment possibilities for information literacy, including the development of an immersion program that can be integrated into all academic departments.

Improving and Defining a Sustainable Assessment Practice

ULS assessment efforts have become much more active in the past few years, as the recent long-term plan attests. The ULS director elaborates:

Whether we are analyzing library catalog searches, gate traffic, or statistics of digital downloads or simply making sure that users have a comfortable place to sit and read, ULS makes assessment a priority. We have taken key initiatives and focused them into measurable objectives that are based on our principles of developing innovative, user-centric services; the ability to adapt to the fast-paced technological changes facing the future of academic libraries with our organizational agility; and, most importantly, we are learning that our qualitative analysis, rather than quantitative, has encouraged dynamic change and the ability to keep up with technology, rather than stagnation. This dynamism is essential to the future success of ULS.

There is an explicit commitment to assessment at every level of the ULS organization as well as the recognition that mining assessment data is critical to the future relevance and ability of ULS to execute its mission. The ULS operation demonstrates a high level of sophistication in planning and is poised to continue in an organized, systematized, and sustained effort that generates useful results.

International Activities

More than 50 years ago, the University of Pittsburgh began to foster international research and education and created in 1968 the University Center for International Studies (UCIS) as the encompassing framework for the University's multidisciplinary international programs. Over time, UCIS became home to area studies centers that were designated National Resource Centers by the U.S. Department of Education's Title VI Program, and eventually it added one of only 10 European Union Centers of Excellence in the United States.

Planning, Assessment, and Links to Institutional Goals

UCIS regularly assessed its impact by using benchmarking and external reviews to look at its regionally defined centers and other programs. Benchmarking assessment against other institutions compared such categories as number of centers, percentage of students studying abroad, percentage of international students, and other subject areas that helped to shape the goals of the unit.

As shown in its benchmarking reports, Pitt has long been one of the most internationally focused universities in the country. Success in consistently obtaining Title VI funding, for example, provided a national benchmark for Pitt's standing in international studies. Pitt has won Title VI National Resource Center and Center for International Business Education and Research competitions 24 times in the past 15 years. Only 10 other U.S. universities, both public and private, have won more of those designations than Pitt during that time. Another example from the most recent data available for undergraduates who study abroad shows Pitt at 28 percent, well above its comparison peers at 20 percent and above its aspirational peers at 26 percent.

In the last decade or two, the increasing importance of international dimensions for the University as a whole became more evident as research and teaching recognized the

phenomenon of globalization. The University acknowledged that an international perspective was critical to its mission; a 1996 resolution of the Board of Trustees talked about the skills "essential to success in our modern global society" and emphasized the importance of "encouraging more Pitt students to include study abroad experiences in their own undergraduate planning." University leaders also recognized that, in order to be successful, they needed more than just the engagement of UCIS; they needed the engagement of all of the schools and units. To foster expanded thinking about the international dimension of the University's offerings, in the early 2000s, the Provost requested that each of the Pittsburgh campus schools and units, as well as regional campuses, include an international component in their strategic and annual plans.

Despite the willing and effective inclusion of international programs into the plans of the individual schools, it was recognized that many opportunities can be realized only by cooperative efforts of multiple University units. For this reason, the Provost in 2004 reconvened the International Coordinating Council (ICC), a group chaired by the Provost that includes all major stakeholders. Similar in approach to his creation of the Information Technology Steering Committee to develop a long-range technology plan, the Provost brought together the members of ICC primarily to develop a long-range strategic plan for the University's international efforts.

For the first few years of its new life, ICC worked to coordinate school planning. After many schools had made progress in cooperation with each other, in April 2009, the Provost requested that a subcommittee of ICC, led by the senior director of UCIS, develop a University-wide international plan for consideration. The result of the work of the subcommittee is *The University of Pittsburgh International Plan Framework*⁸, which can be considered the strategic plan for international activities at the University. The plan has three goals, which support the University's long-term goals: improve

the global competence of Pitt students; increase international and interdisciplinary research opportunities for Pitt faculty; and help to fulfill the University's obligations to its city, region, and nation and to the world.

Improving and Defining a Sustainable Assessment Practice

Soon after the approval of the plan by ICC, a retreat of the Council of Deans in early 2010 was devoted entirely to a discussion of the *International Plan Framework*. The agenda included four panels that addressed the following topics: (1) how to be more strategic about choices of programs, partners, locations, and activities; (2) developing priorities, policies, and procedures and a clearly understood decision structure to facilitate institutional decision making; (3) improving communications about University international programs and activities by improving information access both inside and outside the University; and (4) agreeing on a process for assessing progress toward the international plan's three terminal goals.

Some of the discussion for implementation of the international plan centered on setting the criteria for new partnerships; leveraging locations with an existing Pitt or University of Pittsburgh Medical Center presence, including a strong alumni base; developing meaningful policies and procedures that would enable various initiatives to be reviewed at different levels; and developing new policies for health, safety, and security abroad.

One full session of the meeting was devoted to assessment. One segment focused on how the schools and units could articulate appropriate goals and strategies for their units, align assessment with those goals, and measure their progress. Examples of goals included recruiting students who can contribute to international goals, exposing students to other cultures and global issues, graduating students who can engage in a global society, and increasing faculty engagement with international research. Examples of appropriate assessments for units' international goals included identifying useful instruments, inventories, and surveys, such as

⁸ www.provost.pitt.edu/documents/International%20Plan%20Framework.pdf

the Global Competence Aptitude Assessment and the Intercultural Development Inventory; documenting the number of dissertations and master's projects that have an international focus; identifying faculty publications, grants, presentations, and collaborations on international projects; and tracking alumni who are working in international settings, organizations, or positions.

Another segment on assessment, presided over by the president of a regional campus, focused on how that campus will assess global competence, progress in applied international research, and service obligations. A final segment on assessment was from the point of view of the head of one of the professional schools. The discussion focused on how the schools of the health sciences, subject to specialized professional accreditation, should approach the question "What should be our process of assessing progress toward internationalization?"

A final outcome of the Council of Deans retreat was a commitment to two actions going forward: a reaffirmation that every annual plan will include a section on international goals with a system of assessment in order to gauge progress toward those goals and an agreement that all undergraduate programs will have global competence as a learning outcome with an assessment component.

When the planning instructions were sent out in fall 2010 by the vice provost for budget and planning, they stated that "the Provost has encouraged that particular attention be paid this year to continued progress in the international area." A review of the plans in spring 2011 revealed that almost all schools and campuses had included both international goals and global competence (with measurements) in their plans, that strong targets had been set, and that some schools were already starting to show results. At the University level, the international plan implementation also included increasing the proportion of international undergraduates on the Pittsburgh campus; developing more strategic partnerships and relationships in priority regions of the world; opening an office in

Beijing, China; and strengthening policies and operations to support international efforts.

While it is too early to accurately assess the progress of all components of the international plan, the annual goals and measurements are now in place to provide meaningful evaluations of the University's progress in this area. Acknowledging that the University's international plan is relatively new and still in development, Working Group on Using Assessment to Improve Institutional Effectiveness (WGIE) supported the idea that the University should continue to explore ways to assess faculty interest and involvement in research and other partnerships outside the United States, as noted in the *International Plan Framework, 2009*. Such assessments would help the University to increase its support and coordination of international research activities.

Budget and Finance

Budget and finance at the University of Pittsburgh is a well-defined and robust organization with seven departments under the chief financial officer (CFO); (see *University of Pittsburgh Fact Book 2011, University Organization, Chief Financial Officer*⁹). It is overseen directly by the Board of Trustees and the Chancellor and reports to a number of University Senate committees.

This section will focus on assessment in four functions that represent the budget and finance area and that most directly relate to the support of the University's academic mission and goals: budget monitoring, asset allocation, internal financial controls, and procurement.

Financial controls fall under the responsibility of the associate vice chancellor of financial information, whose area also is responsible for budgeting and financial reporting, general accounting, research grant accounting, and fringe benefits.

All financial transactions and budgeting data for the University of Pittsburgh come through the CFO's organization, which provides

financial assessments and benchmarking data to the Chancellor and the Provost. The Board of Trustees, largely corporate executives, are comfortable with financial data and constantly challenge the CFO and his staff on their projections and reports. The trustees also expect the University to use benchmarking data and to generate "what if" financial analyses. This relationship between the University and its board has promoted a culture of assessment in the finance and budget area. An example of this relationship is seen in a resolution approved by the board at its February 24, 2000, meeting, in which high-level University goals are articulated along with expectations for measurement and evaluation of those goals. Specifically, the resolution notes:

Our overarching goal is to be among the best in all that we do. We will add—significantly, measurably, and visibly—to institutional quality and reputation through the accomplishments of our people; the strength of our programs; and the regional, national, and international impact of our work.

During its February 22, 1996, meeting, the board identified specific goals with respect to pursuing excellence in undergraduate education, maintaining excellence in research, ensuring operational efficiency and effectiveness, securing an adequate resource base, and partnering in community development. The board passed a number of resolutions, including one related to operational efficiency and effectiveness, which is pertinent to the subgroup's charge:

The board requests that the interim Chancellor immediately initiate an in-depth review and analysis of the organizational structure, staffing levels, and capital assets of the entire University of Pittsburgh system. ... No later than the time of its October 1996 meeting, the Chancellor should report to the board on steps that can be taken to improve the efficiency and effectiveness of the administrative areas to [be] the "best of the best" within American colleges, universities, and businesses. That report should include a comprehensive assessment

of the onetime costs and ongoing savings that would result from the implementation of these recommendations.

This resolution suggests that a culture of assessment in the finance and budget area of the University starts at the top of the organization; it also suggests that a culture of assessment has been in place for many years. This culture also is evident in the individual departments and units. An in-depth examination of budget monitoring, the asset allocation plan, internal financial controls, and procurement—all of which are integral to protecting, securing, and increasing the University's assets and resources—illustrates how assessment is embedded in the University's finance and budget area (see WGIE report).

Budget Monitoring

As recently as the late 1990s, there was little short-term monitoring of the budget across the University. Only after the end of the fiscal year, when the books were closed, was it possible for a central office to determine how closely actual costs and revenues corresponded to the projected budget. For more than a decade now, however, various forms of highly detailed reports monitoring projected-to-actual budgets are produced on shorter schedules. The Budget Committee of the Board of Trustees, for example, receives a quarterly report of budget to actuals, which is



⁹ www.ir.pitt.edu/factbook/documents/fb11.pdf

common in the for-profit sector but apparently highly unusual in higher education.

Planning, Assessment, and Links to Institutional Goals

The most substantive form of budget review and assessment occurs on a monthly basis through a report titled *Analyses, Ratios, Trends*, or the *ART* book (see Appendix B6). This document compiles in tabular form data for more than 30 categories of revenues and expenses, typically broken down month by month, and in some cases as a comparison of current to previous fiscal year. It reports on such topics as annual salaries broken down by various schools or areas; health insurance payments; tuition by schools, both in and out of state; and sponsored research, with revenues broken out over the life of the grant. The tabular mode of presentation makes readily visible monthly or yearly variances. Footnotes annotate unusually large variances and sometimes offer brief explanations of the likely causes.

The *ART* book has evolved continually in the past decade to improve monitoring. For example:

- Cash flows were added to the *ART* book in the past eight years, which has allowed for a better understanding of cash flow needs, trends, sources, and uses.
- Analysis of tuition data has expanded to include analysis by term, vs. budget, and retention. Enrollment data [headcount and full-time equivalent (FTE)] also have been added on a school-by-school basis.
- Backlog schedules provide insight into the amount of research “in the pipeline” to make visible how a disruption in research funding may impact the University. The analysis measures the amount of unspent research funding awarded to the University broken out by responsibility center and principal investigator (PI). The analysis helps to identify key researchers by listing the backlog of the top 50 PIs.

Examples of Assessment Used to Improve Infrastructure Investment

The CFO reviews the *ART* book and further questions the rationale for specific variances or notes emergent trends. Examples of inquiry and action taken as a result of reviewing this document include the following:

- Cash flow schedules and the monthly analysis of the general University quasi-endowment provide support for determining the amount and timing of additional transfers of funds from the operating fund to the endowment.
- Adding the review of unspent endowment earnings by responsibility center has helped the Office of Admissions and Financial Aid and the schools to better use these funds, particularly to support financial aid needs.
- By analyzing monthly health care cost data, it is now possible to develop an IBNR (incurred but not reported) liability estimate rather than paying a third party, such as Mercer, to do so.

Much of the information compiled in the *ART* book needs to be collected for yearly audits and various federal and state requirements, but collecting this information on a monthly basis has several useful consequences for establishing a culture of assessment. Monthly snapshots allow for a quick identification of emerging trends or problems and make possible timely attention to the underlying issues. They support data-based planning for the next fiscal year by providing realistic projections of tuition, endowment returns, and grants, and they facilitate modeling responses to various scenarios of changes in revenue and cost streams.

As they become more normative practices, constant monitoring and assessment have become efficient and cost-effective features of budget and finance. Over the last decade, for example, the number of people in research accounting has remained fairly stable (17–19 FTE) even as the grants for which they are responsible have nearly tripled, from \$240 million

to more than \$700 million. Additional efficiencies and capabilities will result from the implementation of the Cognos system and further evolution of the financial data warehouse.

Improving and Defining a Sustainable Assessment Practice

WGIE found that assessment in the budget monitoring area fully meets the applicable elements of Standard 7: It is clearly useful, cost-effective, reasonably accurate, truthful, planned, ongoing, organized, and sustained. It also is documented, is integrated with the institution’s overarching goals, is systematic and sustained, is interfaced with academic and administrative areas, uses appropriate resources, is sufficiently practical, and is periodically evaluated.

The University should continue on its path of developing a robust financial data warehouse and using of advanced analytical tools that ultimately will provide additional efficiency and speed for the administration as well as the unit levels. However, such endeavors require resources, and the University will need to channel its resources to the most exigent needs given pending budget constraints.

Asset Allocation Plan

There are three basic forms of assessment used in managing the University of Pittsburgh’s endowment:

- ongoing review of the endowment’s asset allocation, or the percentage of the endowment invested in different classes of assets;
- identifying appropriate financial managers to oversee particular investments; and
- regular monitoring of the performance of all financial managers.

This work is done both in house and with outside consultants and is presented quarterly to the Board of Trustees, whose Investment Committee actively participates in policy decisions and reviews.

Planning, Assessment, and Links to Institutional Goals

The endowment is divided into eight broad investment categories: domestic equity,

international equity, emerging markets, fixed income, marketable alternatives, nonmarketable alternative, real assets, and cash and equivalents. The Office of Finance staff regularly reviews the current mix of asset allocation across these categories and makes recommendations to the Board of Trustees Investment Committee based on statistical analyses of past performance, comparisons with peer institutions, consultant recommendations, and assessment of current market risks and opportunities. The Investment Committee may then direct an adjustment in the overall allocation mix.

In the past, there have been significant changes in asset allocation based on assessment. Around 2000, for example, the University had a simpler allocation plan. The Office of Finance benchmarked allocation in various ways, including the NACUBO (National Association of College and University Business Officers) study and a peer benchmark study of endowments of similar size. As a result, the endowment entered some new major areas of investment and diversified its holdings in others.

Currently, the allocation mix is set approximately once a year. The staff prepares various scenarios of risk and return in relation to current conditions. Outside consultants (e.g., Cambridge) provide a broader perspective on the entire market as well as offer access to additional information that can influence specific investment decisions. Because the endowment is constructed for long-term growth, changes in asset allocation may not be made every year in response to short-term considerations. Allocation patterns are benchmarked against peer institutions, and the current mix is broadly similar to them, though there is no effort made to match them exactly.

When broad patterns of allocation have been set, the Office of Finance finds appropriate managers to conduct the specific investments. How this occurs with hedge funds, probably the most complex category of asset management, offers a useful example of the kind of reviews regularly undertaken. Here, the office hires an outside consultant, Albourne Partners Limited,



there has been a quarterly assessment of every manager, which includes an overall review of the performance of the category of investment, summary assessment of managers in that area, notes from meetings of individual managers, and analysis and review of the quarterly reports provided by each manager.

Again, because the endowment is constructed for long-term growth, a single bad quarter or two may not have immediate consequences, but in-house staff are

particularly alert for instances in which unusual risks are being assumed or key personnel in the firm leave. Additionally, the Office of Finance uses various resources made available by its consultants. For example, a Cambridge report on custodial fees (what banks charge for holding assets) provided the impetus for the University to negotiate a lower fee for one of the University's custodial services.

There is no one-size-fits-all method of assessing managers of different kinds of assets, and there is always a tension between prudent review and micromanagement. The Office of Finance does look at a confidential peer benchmark report for a general comparative overview of its practices, but it's difficult to make finely detailed judgments on this basis because the goals, values, or institutional commitments of endowments can differ significantly. The office demonstrates a judicious awareness of the necessity for different kinds of reviews and assessments for different kinds of assets. It seeks to provide alternative, complementary perspectives on its decisions by employing, for example, several outside consultants (e.g., both Cambridge and Albourne). It seeks to build long-term professional relationships with a range of managers but evaluates everyone by reviewing data on actual performance. It seeks to make data-driven decisions but necessarily relies on the professional judgment of its long-term staff, who are

because of its exhaustive database of virtually all hedge funds, with each given a rating on nine distinct indicators. Highly rated firms are then interviewed in house to evaluate the investment team, its strategy, and its process and to see if it is compatible with the University's institutional practices and values. In-house staff members review a variety of documents, such as audited financials, compliance manuals, codes of ethics, and various legal contracts. They grade each firm on elements such as process, risk control, personnel, and strategy.

The review process seems carefully conceived and executed, but the exigencies of financial management always introduce some risk. In response to a recent instance of fraud by one hedge fund manager, the Office of Finance now double checks to ensure that the recommending consultant has expert knowledge in the particular field in which a fund operates; it documents the entire selection process, listing who was interviewed and what documents were provided; and all engagement letters are reviewed by outside counsel. More generally, the entire review process is constantly evolving, with the questions used in the assessment of financial managers themselves being assessed when they did not produce useful information (e.g., led to standard pro forma answers).

The third form of assessment is the ongoing monitoring of financial managers currently involved with the endowment. Since 2003–04,

well informed of, and deeply committed to, the values, goals, and mission of the University.

One outside measure of the effectiveness of the University's endowment managers and policies is that Pitt is consistently ranked highly in the College and University Endowments Table published annually by *The Chronicle of Higher Education*. In the 2009–10 table, Pitt ranked seventh among all U.S. public universities in the market value of its endowment and had tied for the seventh highest one-year percentage rise among the top 28 universities.

Internal Systems of Financial Controls

Financial controls are an integral part of an effective overall management control system. A financial control system establishes goals for financial resources, monitors the use of the resources, and measures the effectiveness with which resources are being used. Specific objectives of the University of Pittsburgh's internal financial control system include safeguarding assets, promoting operational efficiency, encouraging adherence to policies and procedures, and ensuring accurate and reliable financial records.

Examples of Assessment Used to Improve Infrastructure Investment

Internal financial control is at the heart of the Sarbanes-Oxley Act of 2002, which identifies a set of mandatory requirements related to financial practices and corporate governance of public corporations in the United States. The original intent of Sarbanes-Oxley (SOX) was to restore confidence in the financial markets and to protect investors by improving the accuracy and reliability of corporate disclosures related to their financial practices. SOX is arranged into 11 titles or sections, with aspects of the regulation aimed at public accounting firm requirements, audit committees (expected levels of expertise, roles, and responsibilities), and internal financial control systems.

Because SOX was directed at publicly traded corporations, few universities initially considered implementing procedures to comply with the new legislation. However, both the Board of Trustees, whose members from publicly

traded corporations are steeped in SOX, and the University senior leadership felt that implementing some aspects of SOX would further improve the transparency and effectiveness of the University's finance and budget area. In addition, if and when nonprofits are required to adopt SOX, the University of Pittsburgh would have already established procedures and mechanisms for compliance.

Though benchmarking revealed no other universities were readily adopting SOX, in 2005, the University of Pittsburgh voluntarily adopted provisions of Sections 302 and 404 of SOX as a means of ensuring the effectiveness of financial controls in its business processes, both centrally and at the departmental level. Section 302¹⁰ requires that the chief financial officer (CFO) and the chief executive officer (CEO) certify that financial statements have no material misstatements or omissions and that both the CFO and CEO have evaluated the internal controls. Section 404¹¹ requires that information about the scope and effectiveness of internal controls is published in annual reports and that the effectiveness of those controls is attested to by the firm's auditors.

The implementation of SOX at the University of Pittsburgh was done in a deliberate fashion: Specific resources were allocated, including a permanent SOX project management department and a steering committee. The SOX project management department reports on its progress to the steering committee, which in turn reports to the Audit Committee of the Board of Trustees.

Several forms of assessment were developed to comply with SOX. For example, one assessment process (representing the bulk of the SOX project management team's effort) is devoted to Section 404 of the legislation: documenting and assessing the design and effectiveness of internal controls. The core of the compliance effort examines internal financial controls for 18 major central business processes, identified by "reverse mapping" primary financial reporting numbers

¹⁰ www.soxlaw.com/s302.htm

¹¹ www.soxlaw.com/s404.htm

to the business elements and associated processes that drive the numbers. The 18 business processes include payroll, payment processing, financial aid, fundraising, and purchasing.

The SOX team developed a specific methodology for assessing the internal controls for each business process. The initial step in the methodology is an introductory meeting with the business process owner during which the SOX team explains the process. The team then develops an overview of the business process and detailed flowcharts. Based on an understanding of the business process, the SOX team develops a risk control matrix, which identifies potential and specified areas of risk, the likelihood that the risk will occur, and the seriousness of the impact should the risky event happen. In addition, the risk control matrix identifies the key controls associated with each risk, and the SOX team tests the effectiveness of key controls. Following this information gathering and testing, the team identifies deficiencies (e.g., controls that are not functioning, are poorly designed, or are nonexistent) and develops recommendations for remediation. The SOX team then has a closing meeting with the business process owner to present its results.

Over the past five years (2005–10), the SOX project management team has reviewed all 18 business processes. From these reviews, the SOX team identified approximately 180 potential risks across the business processes that fall into four broad categories: insufficient documentation; reconciliation issues, especially the lack of escalation procedures if errors in data or large or past due reconciling items are found; insufficient controls in spreadsheets used by departments or areas (e.g., not limiting access to sensitive data or not testing spreadsheets when significant structural changes are made); and access to data that was inappropriate or not needed for specific individuals.

The results of the SOX team efforts—including the detailed documentation of the business process, the risk control matrix, and specific controls—are preserved in a thick binder (called the Book of Findings) for each business process (see Appendix B7 for an excerpt). The

Book of Findings is reviewed by the SOX team, the internal audit department, and the Audit Committee of the Board of Trustees.

The SOX team is now beginning to reassess each business process. It estimates that it will take two years to review all 18 business processes again (i.e., reviewing some number of units each year). Because the methodology for assessment is now established and because the business processes have been mapped, risks identified, and controls reviewed, the assessment process should be more efficient going forward.

Improving and Defining a Sustainable Assessment Practice

A culture of assessment is clearly evident within the internal financial controls function at the University of Pittsburgh, as exemplified in the adoption of provisions of Sections 302 and 404 of SOX. Moreover, the fundamental elements of Standard 7 have been satisfied. Assessment goals have been articulated, specific processes have been developed and implemented, and resources have been devoted to assessment. The assessment process has been carefully planned and appears to be sustainable over time, as suggested by the reassessment of the 18 business processes now under way. The assessment process has provided accurate data that have proved to be quite useful, resulting in standard documentation across business processes, careful analysis of potential financial risks, and identification of remediation steps when necessary. The successful implementation of these provisions of SOX is seen as a cost-effective way to avoid serious fraud issues within the University of Pittsburgh.

Procurement Process

Three areas constitute the procurement process at the University of Pittsburgh (also known as Buy to Pay). These areas work closely together to manage policies and procedures involved in overseeing a large proportion of total University expenses—e.g., \$480 million in fiscal year 2010. The procurement system develops strategies to manage the entire purchasing process, from the initial decision to buy through the final steps of payment and accounting. The goal

is to obtain the overall best value for purchased goods and services by taking into consideration life cycle cost; quality; supplier service; and efficient ordering, payment, and regulatory compliance processes.

The first area within procurement is Strategic Sourcing and PantherBuy Solutions. This area analyzes patterns of spending, evaluates the current market commodity trends, institutes University-wide contracts for major purchase categories (e.g., office supplies, laboratory supplies, etc.), and evaluates opportunities to participate in various purchasing cooperatives. The goal of this area is to identify opportunities to realize savings and improve quality for purchased goods and services.

The second area of the system is Purchasing Services, an area that is staffed by professional buyers. The purpose of this area is to manage relationships between the various University responsibility centers and their suppliers. The buyers provide assistance for special and complex purchases (such as unique or high-end scientific equipment) and help departments to meet regulatory requirements such as the federal export regulations, federal acquisition regulations, and minority- and women-owned business purchasing requirements under Public Law 95-507. This area also provides guidance to University purchasers on environmentally preferable practices for the entire product life cycle.

The third area of the system is Payment Processing and Compliance. This area receives and processes all invoices and other requests for disbursement, processes all payments, conducts payment audits, and ensures compliance with state and federal tax regulations.

Planning, Assessment, and Links to Institutional Goals

The procurement areas were initially reorganized approximately 12 years ago in order to maximize cost savings, increase efficiency and utility, and improve data management and accountability. Subsequent organizational changes, including another significant reorganization in fiscal year 2010, have been made in response to technology improvements and to improve customer service and internal

communications. Overall, the departments work to articulate a mission and strategies that support the University's goals. An initial set of key measures was drawn up and then modified in subsequent years based on data analysis and assessment of outcomes. Thus, the currently implemented version is the result of years of assessment-based fine-tuning.

A recent major step in this fine-tuning was achieved in February 2010, when the University received a report from the outside consulting firm (Huron Consulting Group Inc.) that was hired to provide an in-depth review of the system, including benchmarking analyses to compare procedures and outcomes at the University of Pittsburgh with those of other selected Association of American Universities member institutions.

The current mission of the procurement system is to obtain the overall best value for purchased goods and services; reduce operational, financial, and regulatory compliance risks associated with the purchase of goods and services; identify and develop opportunities for qualified diversity suppliers, and promote sustainable purchasing (new for fiscal year 2010).

Examples of Assessment Used to Improve Infrastructure Investment

There are many examples of how assessment has improved procurement processes. For example, assessment of purchasing data has led to the consolidation of purchases through a smaller number of selected vendors in order to improve the University's negotiation position. Larger contracts with fewer vendors have been initiated, resulting in significant cost savings. These negotiations also include "product rationalization"; by narrowing the vast array of potential items for purchase (e.g., pens, printer paper) to a smaller number of equivalent items, supplies can be standardized and organized into vendor-based contracts to achieve additional savings. Currently, 80 percent of the University's total spending is distributed among just 4.2 percent of the total supplier pool. The remaining 95.8 percent of suppliers fill unique and small purchases that account for only 20 percent of total spending.

Another example of how assessment has improved procurement focuses on purchase order systems. Assessment results have indicated that the PRISM system is a relatively inefficient and expensive way to create purchase orders. Benchmarking analyses revealed that an Internet-based system should be explored. After interviewing various Internet providers and comparing their offered services, the University ultimately selected one (called PantherBuy) that specializes in the purchase of scientific equipment and supplies. The Web/Internet interface allows for more efficient and less expensive order processing. For example, using PRISM, a single traditional purchase order costs an average of \$36, whereas an order using the paperless PantherBuy system for Internet procurement costs less than a 10th of that (about \$3.50). Given that University departments place approximately 280,000 orders annually for the purchase of goods and services, the savings are enormous. The University currently is working to convert all purchases away from the PRISM system and into PantherBuy, beginning with the largest suppliers first. Work also is continuing to optimize the PantherBuy system for University use as well as to move the University's locally hosted PRISM site to a hosted site via SciQuest software export (which requires less local maintenance).

Improving and Defining a Sustainable Assessment Practice

Improvements to procurement over time indicate that a culture of assessment exists within financial operations at the University of Pittsburgh. The three areas that constitute the system have established routine and regular processes of assessment, which include analyzing patterns of spending, payment processes, contracting relationships, and compliance with regulatory requirements; identifying opportunities for improvement; and implementing changes. These processes satisfy the fundamental elements of Standard 7. In particular, specific goals, strategies, and performance measures for the procurement departments have been developed and refined over time. Benchmarking data are used to compare outcomes to other institutions and

identify areas for improvement. Data collected through assessment are accurate and useful and result in specific cost savings, as illustrated in the channeled spending program PantherBuy.

SUMMARY OF FINDINGS AND SUGGESTIONS

The Working Group on Using Assessment for Institutional Effectiveness (WGIE) found that the fundamental elements of Standard 7 are met and that the assessment processes in place are both effective and sustainable. The working group also found substantial evidence that assessment is now part of the culture of the University of Pittsburgh.

The WGIE report states that the University's planning and budgeting system has clearly identified goals and processes that are broadly communicated. The system itself has been formally assessed and improved over time. The annual planning process is transparent, promoting a dialogue among the central administration; the individual responsibility centers; and the broader faculty, staff, and student communities. Through feedback and assessment, the annual planning process has been adapted over time to better serve both the University and the individual units. Benchmarking at the University level is conducted in a systematic fashion, and schools and departments have increasingly incorporated internal and external benchmarking into their planning processes. Planning and benchmarking activities yield data that are meaningful and useful and have clearly impacted decisions and resource allocation. Specific planning, budgeting, and benchmarking activities have been designed to allow responsibility centers some flexibility in goals and processes to reflect their individual needs while at the same time providing a framework to ensure that unit activities align with overall University goals. A culture of assessment is clearly evident within the planning, budgeting, and benchmarking activities of the University of Pittsburgh.

WGIE also found evidence of effective assessment in institution-wide infrastructure investment, as documented in the areas of

information technology, facilities, the University Library System, international activities, and budget and finance. The University has articulated a low-cost, real-time, and systematic culture of assessment within its regular information technology operations. The University also has effectively used assessment as a tool in facility planning for a number of years, as can be seen in the number of formal facility planning documents, both past and present, and their implementation in a sustained process that can be seen all the way through to activities and initiatives that are currently under way. An explicit commitment to assessment at every level and a high level of sophistication in planning have been demonstrated by the University Library System. It is poised to continue in an organized, systematized, and sustained assessment effort that generates useful results. In addition, WGIE found that assessment in budget and finance is clearly useful, cost-effective, reasonably accurate and truthful, planned, ongoing, organized, and sustained.

Throughout the WGIE report on institutional effectiveness, specific suggestions or areas of improvement were noted along with a few broad suggestions:

- The annual planning process, while effective, can be resource-intensive for units to prepare. A well-designed online system could facilitate the task, although the diversity of relevant data across the many different units of the University makes it challenging to develop a single standardized reporting system.
- External benchmarking data can be quite valuable in terms of providing the information necessary for setting objectives and assessing progress, but there is some unevenness across the University in terms of the quality of the available data and the ease of

gathering the data. Thus, it may be useful to examine benchmarking practices across the University to determine whether there are opportunities for improving the effectiveness of benchmarking. However, University resources are limited and will be further taxed due to proposed reductions in the level of support received from the commonwealth. Thus, any new endeavors must be balanced against competing needs and cost/benefit evaluations.

- The University should continue to explore ways to assess faculty interest and involvement in research and other partnerships outside the United States, as called for in the *International Plan Framework*.
- The University should continue on its path of developing a robust financial data warehouse and its use of advanced analytical tools that ultimately will provide additional efficiency and speed for the administration as well as the unit levels. However, such endeavors require resources, and the University will need to channel its resources to the most exigent needs given pending budget constraints.





III Using Assessment to Improve the Student Experience

INTRODUCTION

While the University has a long tradition of assessing the student experience through student surveys and the examination of institutional data, the strategic use of planning and ongoing assessments to advance the University's ambitions for undergraduate education moved to a new level starting in the mid-1990s with the introduction of the Planning and Budgeting System and the passage of a Board of Trustees resolution that established the University's goals for pursuing excellence in undergraduate education.

The position statements adopted by the board in 1996 identified the aggressive pursuit of excellence in undergraduate education as one of the University's top priorities and articulated the University's ambitions regarding undergraduate education. In 2000, the board again adopted a position statement that reinforced excellence in undergraduate education as a top priority, noting that building on the successes the University had experienced since the 1996 statement would require, among other things, "the continuous assessment of progress by monitoring indicators—such as retention rates, time to graduation, academic achievement, and alumni satisfaction—that can be monitored over time." Over the ensuing years, ambitious, measurable goals were established, and the University engaged in a process of ongoing planning and assessment through which the University has successfully advanced those goals.

The following sections report on the findings of the Working Group on Using Assessment to Improve the Student

Experience's findings regarding the effectiveness of the University's assessment processes as they relate to the student experience¹².

ASSESSMENT OF STUDENT LEARNING OUTCOMES

For many years, the University has conducted periodic evaluations of academic programs as a substantive and consistent way to ensure high-quality academic programs. Traditionally, these evaluations focused on inputs such as the quality of the program faculty, the structure of the curriculum, and the availability of resources (see the Guidelines for Conducting Evaluations of Academic Programs¹³). Until recently, however, the University did not systematically include in these reviews regular, ongoing assessments of the outcomes of the academic programs that would allow it to determine, in a consistent way, the extent to which graduates left the institution with the skills and knowledge they needed to be successful.

The first efforts to use outcomes assessment were in the form of indirect evidence such as retention rates, graduation rates, and student surveys to assess and guide program development. In the early 2000s, several different schools and programs began to look systematically at direct evidence of student learning outcomes as part of their evaluation of academic programs. Several of the professional programs, such as engineering and medicine, began to incorporate assessment of learning outcomes into their comprehensive

III Using Assessment to Improve the Student Experience

INTRODUCTION

ASSESSMENT OF STUDENT LEARNING OUTCOMES

ASSESSMENT OF STUDENT RETENTION, SATISFACTION, AND GRADUATION

ASSESSMENT OF UNDERGRADUATE RECRUITMENT AND ADMISSIONS

SUMMARY OF FINDINGS AND SUGGESTIONS

The Pitt Panther
Inscribed August 15, 2005 with the words "The Panther
inspired and the resulting spirit of our panthers
has the best achievement and spirit."
A gift from the 1998 Student Body
George G. Monaghan
President, Student Government
Mark A. Weinberger
Chairman

¹² The working group's full report can be found in Appendix C1.

¹³ www.pitt.edu/~provost/guidelines.pdf

reviews by specialized accrediting agencies; graduate and professional programs began routinely collecting data on student placements; and the collection of placement data on undergraduates was strengthened.

By the mid-2000s, the University was using a variety of assessment activities on its campuses, including collecting both direct and indirect evidence of student learning. As a natural progression of University-wide discussions and the real progress individual schools and campuses had made in assessing student learning, in 2006, the Council of Deans established guidelines regarding institutional expectations for ongoing and regular assessment of student learning. Today, the University has a comprehensive, ongoing practice of assessing student learning outcomes, which leads to improved academic programs.

Structure of Assessment of Student Learning Process at Pitt

In November 2006, the Council of Deans formalized expectations for assessment by developing the Guidelines for Documenting the Assessment of Student Learning Outcomes at the University of Pittsburgh¹⁴. These guidelines were purposefully designed to ensure that the process is useful, meaningful, and respectful of faculty time.

Requirements

The guidelines require that student learning outcomes be assessed for all certificate and degree-granting programs and for the general education curricula offered at the University of Pittsburgh. Specifically, each program is required to articulate three to five learning outcomes tied to its mission and specific goals for each outcome. These learning outcomes must be assessed at least once every three to five years. These assessments must include some direct evidence of student learning and a feedback mechanism through which the assessments of student learning outcomes are used to improve the academic programs.

The guidelines also provide guidance on the types of direct evidence that can be used. For example, course grades are often not useful because they reflect the assessment of many different aspects of the course and cannot be mapped to specific student learning outcomes. Similarly, external validation (in the form of a team of faculty members) is necessary if class projects are being used in the assessment process.

To keep the process manageable, programs are encouraged to assess the work of a sample of students rather than every student; to design a timetable suitable to their faculty, noting that each learning outcome does not need to be assessed every year as long as each is assessed at least once every three to five years; and to take advantage of existing assessment opportunities such as course exams, capstone projects, and licensure exams rather than creating entirely new processes. Finally, it was noted that learning outcomes, measures, and standards should evolve over time if they are to remain useful and relevant to the individual schools and programs.

Responsibility

The University believes that discussions of goals for student learning are best conducted by the individual program faculties. Consistent with this philosophy, the University takes a decentralized approach to the assessment of student learning. The faculties offering the specific degree and certificate programs are responsible for developing expected learning outcomes for their programs and for establishing standards and goals for their students (often in consultation with industry experts or graduate schools). Because they are in the best position to judge whether or not students have developed the necessary skills and knowledge, program faculties also are responsible for assessing whether or not students are meeting the goals and, if they are not, for modifying the curriculum in order to better achieve the goals.

School and campus faculties also have broad responsibility for structuring the curriculum so that students develop breadth and depth of knowledge as well as an array of skills, typically

through the general education curricula. Thus, responsibility for assessing student learning of these general skills rests with the school or campus and is typically overseen by that school or campus' curriculum committee.

Accountability

Individual deans and campus presidents are responsible for monitoring and documenting assessment processes within their units. The Office of the Provost, through the vice provost for undergraduate studies, retains final oversight for this entire process and, as such, serves the function of assessment coordinator at the University. In this capacity, the vice provost monitors the institutional assessment process through a review of annual assessment reports from the schools and regional campuses, provides feedback to deans and campus presidents on the assessment processes, and supports improvements to the assessment activities. The vice provost for graduate studies provides support for monitoring the assessment processes of graduate programs.

Reporting requirements for assessment of student learning are purposefully minimal to allow units to focus their attention on the assessments and related curricular improvements rather than reporting. Discipline in reporting is enforced by the requirement that programs report in a standardized matrix format based on the assessment matrix developed at the University of Virginia.

Reporting by Programs with Specialized Accreditation

Programs may substitute a professional accreditation process by showing how that professional accreditation process maps onto the guidelines. Currently, four schools comply with the University's requirements for assessment of student learning outcomes by satisfying the standards and reporting requirements of their professional accrediting agencies (the year of their most recent accreditation renewal is noted in parentheses): Joseph M. Katz Graduate School of Business and College of Business Administration (2008), School of Dental Medicine (2010),

Swanson School of Engineering (2011), and School of Nursing (2009).

The Working Group on Using Assessment to Improve the Student Experience (WGSE) confirmed that the requirements of the specialized accreditors for these programs map fully onto the University of Pittsburgh's requirements set forth in the Council of Deans' guidelines. These schools routinely submit copies of their accreditation reports to the Office of the Provost to demonstrate their compliance with student learning assessment standards. They have extensive assessment requirements that include learning goals, outcomes, direct and indirect measures of student learning, and the use of these results for continuous improvement.

Building a Culture of Assessment

The process for assessing student learning described above was the result of a purposeful effort to develop a culture of assessment regarding student learning outcomes at the University of Pittsburgh. It was presented as a natural extension of the planning processes of each program and school/campus rather than a directive from the Provost's office for the purpose of satisfying accreditation standards. These efforts began when the Council of Deans held initial panel discussions of learning outcomes assessment at its meetings in spring 2004 and fall 2005. Following these discussions, in September 2006, the Provost charged an ad hoc working group of the council to develop guidelines for documenting the assessment of student learning in all academic programs. The ad hoc committee was chaired by the dean of the largest school (the Kenneth P. Dietrich School of Arts and Sciences) and included membership from several other key units. This committee of deans and campus presidents developed the basic process and structure for assessing student learning outcomes. The November 2006 meeting of the Council of Deans had a session devoted to assessing student learning led by the dean of the Dietrich School at which the council approved

¹⁴www.academic.pitt.edu/assessment/pdf/assessment_guidelines.pdf

the proposed guidelines and discussed how to implement them.

Following the passage of the guidelines by the Council of Deans, each school and campus began developing its own processes, and the individual faculties began articulating mission statements and student learning outcomes as well as considering methods to assess these outcomes. To assist the senior administrators in moving the new initiative forward, assessment of student learning also was the topic of a session at the March 2007 meeting of the Council of Deans, and at this meeting, the vice provost for graduate and undergraduate studies (who was leading the implementation of the effort) discussed expectations, and three members of the council (the deans of the Swanson School of Engineering and the School of Information Sciences and the director of the University Library System) discussed how their units were approaching the assessment of student learning.

A similar panel discussion was held as part of the annual University-wide chairs retreat in spring 2007. Over the next year, the learning outcomes assessment initiative also was discussed at meetings of the University Council on Graduate Studies, the Provost's Advisory Committee on Undergraduate Programs, the Enrollment Management Committee, the Faculty Assembly, the University Senate Education Policies Committee, and the Board of Trustees Academic Affairs and Libraries Committee as well as at annual chairs meetings and numerous school and department meetings. It also was the topic of articles in campus newspapers and newsletters (see Appendix C2).

To assist individual programs as they developed plans for assessing student learning outcomes, the Provost's office developed a Web site¹⁵ explaining expectations regarding assessment and providing links to assessment resources, including examples from programs at other universities. The Center for Instructional Development & Distance Education held workshops and worked with 24 individual programs as well as individual

Figure 3: Feedback Provided After Initial Submissions (2007)

- Student learning outcomes are not specific to the program and are more reflective of general education outcomes.
- Learning outcomes outline the requirements for graduation and not what students should know or be able to do after they complete the program.
- Courses are used as a method of assessment with no external validation, and course grades or GPAs are used as a standard for assessment.
- Assessment methods are not tailored to specific learning goals.
- Assessment methods do not contain information on who will be assessed, when they will be assessed, and how often assessment will take place.
- Standards do not identify the percentage of students who should achieve the stated outcome.

schools and campuses (Appendix C3). Deans and campus presidents led the efforts in their individual schools.

The initial assessment plans reviewed by the Office of the Provost in March 2007 were uneven. Though many programs developed meaningful plans consistent with the guidelines, the concept of assessing student learning for the purpose of improving academic programs was not clearly understood by all. Some of the common areas of improvement were discussed at the March 2007 Council of Deans meeting and were included in the individualized feedback provided to the deans and campus presidents (Figure 3).

Over time, however, assessment efforts strengthened as programs became familiar with the process and responded to feedback from the deans, campus presidents, and Provost's office. The process of assessing student learning has

now become part of the culture of the University of Pittsburgh, with virtually all programs' having meaningful assessment processes in place. Deans and campus presidents report to the Provost annually on the assessment processes in their schools, including submission of the assessment matrices, and the Office of the Provost continues to provide feedback on these assessment efforts. The Provost's Advisory Committee on Undergraduate Programs and the University Council on Graduate Studies require that all new and revised programs include assessment plans of student learning outcomes as a required component of the review process.

Demonstrating a Growing Culture of Assessment

WGSE conducted a careful review of the documentation on assessment of student learning at the University to assess compliance with the guidelines and to determine how the process of assessing student learning outcomes has changed since its inception in 2007. This included a review of four years of the annual assessment reports submitted by a randomly selected 10 percent sample of the University's 350 degree- and certificate programs. Using the Middle States' Rubric for Evaluating Institutional Student Learning Assessment Processes as a guide, the working group rated each assessment report on 12 dimensions, including appropriate learning outcomes, use of direct evidence, and dissemination and use of results to drive curricular change. The key findings of the working group's assessment are as follows:

Finding 1: Responsibility for the development and implementation of assessment plans firmly resides with the faculty members who have the disciplinary expertise and curricular proximity to make decisions about the results of the assessments.

Finding 2: Every degree and certificate program has a plan to assess student learning outcomes; the majority are both robust and sustainable, and more than 90 percent are in compliance with the Council of Deans' timetable.



Finding 3: Programs have well-developed statements of learning outcomes that are appropriate to their specific aims, and they are using a variety of discipline-appropriate methods of collecting direct evidence (see Figures 4 and 5).

Finding 4: Assessment plans have improved on all 12 criteria used by the working group in its evaluation; in some cases, these improvements have been quite substantial.

Finding 5: The process of oversight, review, and support by the next level of authority in the administrative hierarchy has had the desirable result of helping to improve the plans over time. The Office of the Provost has provided feedback on the assessment plans every year, and the deans, directors, and campus presidents have used this feedback as they work with their programs to improve their plans.

Finding 6: Through the assessment process, faculty have identified programmatic strengths as well as areas for improvement and have developed plans to make needed improvements.

Finding 7: The assessment process has resulted in improvements throughout the University, ranging from smaller adjustments to more substantive programmatic changes such as redesigning or adding courses.

¹⁵ www.academic.pitt.edu/assessment/index.html

Figure 4: Most programs have well-developed statements of learning outcomes that are appropriate to their specific aims.

- **Kenneth P. Dietrich School of Arts and Sciences, MA, French Languages and Literatures:** Students will refine critical skills in reading and interpreting literary texts and other cultural artifacts; convey interpretations of texts in formal academic writing; acquire comprehensive knowledge of the various periods, major writers, and currents of thought in French and Francophone literature; and develop an understanding of the historical, material, social, and intellectual contexts that inform that literature.
- **Dietrich School of Arts and Sciences, BS, Actuarial Mathematics:** Students will demonstrate modeling of financial applications and computing competency.
- **Dietrich School of Arts and Sciences, MA, History Education:** Students will be able to interpret events and processes in a transnational context; as part of the global movements of ideas, people, and commodities; or as examples of patterned sociocultural interactions.
- **School of Education, MEd, Department of Instruction and Learning:** Students will be able to articulate how they link educational theory, or current disciplinary issues and debates, with instructional practice.
- **Swanson School of Engineering, Accreditation Board for Engineering and Technology (ABET) Criterion 3, Program Outcomes:** Each program must demonstrate that graduates have an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice (ABET Outcome K).
- **School of Law, JD:** Students will understand and be prepared to conform their actions to the law that governs the conduct of lawyers, including substantive law, procedural law, and the codes of professional responsibility; be attentive to the potential for and able to recognize issues of legal responsibility, professionalism, and ethics and resolve them appropriately; and understand the values of the profession, including the importance of pro bono service and the responsibility to promote justice.
- **School of Nursing, BSN:** By the time of graduation, students will be able to develop a written persuasive argument for a clinical intervention based upon a critical analysis and review of a supporting body of clinical research and a reflection on its potential impact on a subject of intervention.
- **School of Health and Rehabilitation Sciences, MS, Prosthetics and Orthotics:** Students will show proficiency in the hands-on fabrication and modification skills needed to work as prosthetic and orthotic clinicians.
- **School of Information Sciences, BS, Information Science:** Students will possess an understanding of the core principles of programming, databases, computer operations, systems analysis, networking, and human-computer interaction.
- **School of Medicine, MD:** By the end of the second year, students will develop basic patient examination and communications skills, including the ability to communicate clearly and effectively with patients.
- **University of Pittsburgh at Bradford, BA, Business Management:** Students will be able to effectively communicate business concepts orally and in writing to organizational stakeholders.
- **University of Pittsburgh at Greensburg, BA, American Studies:** Graduates will demonstrate understanding of historical, political, and philosophical events, trends, and thinking related to the American experience.
- **University of Pittsburgh at Johnstown, BA, Geography:** Students will demonstrate the ability to create maps and charts based on the proper acquisition, interpretation, and presentation of geographic information.
- **University of Pittsburgh at Titusville, AS, Nursing:** Students will be able to demonstrate mastery of clinical performance skills to provide safe, competent care.

Figure 5: A variety of discipline-appropriate methods of collecting direct evidence are used.

- **Kenneth P. Dietrich School of Arts and Sciences, General Education, Writing Across the Curriculum:** The College Writing Board conducts a blind review of a random sample of papers from writing-intensive courses from the three divisions.
- **Dietrich School of Arts and Sciences, MS, Neuroscience:** Students' ability to critique published scientific papers from the primary literature is evaluated through journal clubs and a formal examination using a rubric. Students' ability to present and critique a research paper is formally assessed.
- **Dietrich School of Arts and Sciences, BA, Political Science:** The course work and final exam in PS 700 were designed and approved specifically to assess students' competency in their use of analytic, research, and disciplinary skills of social analysis and theorizing.
- **Swanson School of Engineering, BS, Chemical Engineering:** Student work (including in-class exercises on green chemistry and green design, discussion of excerpts from "The Chemical Industry at the Millennium," and a written analysis and presentation of ethical case studies) is collected and compared against the scoring rubric to assess students' knowledge of contemporary issues (ABET Outcome J).
- **Graduate School of Public Health, MPH, Behavioral and Community Health Sciences:** Final projects completed for BCHS 2559 will be assessed to determine students' ability to apply principles of community-based participatory research and practice.
- **Graduate School of Public and International Affairs, PhD, Public and International Affairs:** Students' ability to demonstrate knowledge and skills in advanced research design and methods appropriate for conducting doctoral-level research, including a range of qualitative and quantitative procedures for obtaining, analyzing, and interpreting data, is assessed by performance on their research design for PhD dissertations and on papers submitted to conferences and journals.
- **School of Information Sciences, MLIS:** Using a faculty-developed rubric, two faculty members examine a representative sample of projects from students enrolled in LIS 2600: Introduction to Information Technologies, in which students use research and the collaborative tools Jing, Zotero, and RefWorks to produce a learning module delivered from a network-based service.
- **School of Pharmacy, MS, Pharmacy Administration:** Faculty members assess students' mastery of human resources management skills to provide competent care using students' prepared job descriptions for a selected position and performance appraisal of another student in class. Students are graded on a predetermined scoring rubric.
- **School of Social Work, BASW:** Seniors are assessed on their ability to apply knowledge gained from required liberal arts courses through capstone projects involving research questions, research design, data collection, and use of statistics to describe research findings in the research poster session.
- **University of Pittsburgh at Bradford, BA, Sociology:** Using a rubric, the program director and a faculty member review all papers of the Sociology Capstone course every three years to assess students' abilities to understand and communicate core concepts of sociology and how sociology differs from other social sciences; the effects of domestic and global forces on one's life, the lives of others, and groups; and the impact of domestic and global social forces and institutions.
- **University of Pittsburgh at Greensburg, BS, Chemistry:** Student knowledge of chemical concepts will be assessed on quizzes and exams during the Physical Chemistry 1 and 2 courses using embedded key concept questions.

Figure 5: A variety of discipline-appropriate methods of collecting direct evidence are used, *continued*

- **University of Pittsburgh at Johnstown, BA, Environmental Studies:** A rubric is used to assess papers from the Senior Seminar to determine students' ability to summarize basic concepts and information, use appropriate techniques, generate and interpret information to identify interpretative assumptions, and organize and analyze data.
- **University of Pittsburgh at Titusville, AS, Natural Sciences:** The Assessment Committee will review 50 percent of student portfolios to assess students' ability to demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in the natural sciences.

The working group confirmed the last finding through a review of reports submitted by deans, directors, and campus presidents documenting curricular changes resulting from this assessment process. A list of curricular improvements since 2007 compiled by the working group identifies 310 changes, including new courses and course content, revised course sequences, changes in teaching assignments, new assessment methods, major overhauls of programs, creation of new tracks within programs, raised standards, additional required seminars, and restructured advising (see Figure 6 and Appendix C16). The implementation of these changes is strong evidence of closing the loop and also demonstrates that a culture of assessment has been ingrained throughout the University.

Figure 6: More than 300 curricular initiatives have resulted from the assessment of student learning initiative, including the following:

- 35 new courses or seminars
- 98 substantially revised courses
- Eight new or substantially revised majors
- 12 programs that restructured or revised advising
- 31 programs that raised standards and/or increased requirements for the major
- Three revised course sequences

Documentation of Assessment of Student Learning

A series of appendices provides complete documentation of the University's ongoing process for assessing student learning outcomes and using the results of those assessments to drive curricular change:

- Descriptions of the process for assessing student learning in each school and campus, provided by the deans and campus presidents (Appendix C4)
- All assessment matrices (reports) submitted for individual programs annually since 2007 (Appendix C5)
- All assessment matrices (reports) submitted for general education programs on each of the campuses since 2008 (Appendix C6)
- Relevant sections of accreditation reports submitted by those schools using specialized accreditation to meet the University's guidelines (Appendix C7)
- All Office of the Provost reviews of assessment activities in each school and campus (Appendix C8)
- A comprehensive list of programmatic changes that have occurred as a result of the assessment of student learning initiative (Appendix C9)

The following sections provide examples from these appendices that illustrate how the various schools and campuses have developed a culture of assessment around the assessment of student learning outcomes and the impact this

culture has had on our curricula. These examples were chosen by WGSE to capture the variety of successful approaches taken to assessing student learning at the University of Pittsburgh. This diversity of approaches reflects the diversity of cultures across the schools and campuses of the University and further demonstrates the benefits of the decentralized approach to planning and assessment at Pitt.

Examples of Developing a Culture of Assessment

Developing a Culture of Assessment in the School of Law

The experience of the School of Law, as reported in a paper by the dean and associate dean titled *A Funny Thing Happened on the Way to Institutional Assessment (at Pitt Law)*, captures some common aspects of the evolution of a culture of assessment at Pitt. The paper recounts the process through which the "assessment of student learning outcomes evolved from a University-imposed, administration-centered, uninspiring, anxiety-inducing exercise to a collaborative, creative, mission-clarifying, confidence-building enterprise." An abridged version of this experience follows.

Pitt Law came to the assessment of student learning outcomes reluctantly, at the prompting of the University administration. Starting conditions were neither ideal nor uncommon: The faculty were resistant to and skeptical of assessment, and those in the dean's office lacked familiarity with the concept, process, and methods of outcomes assessment and were not much more enthusiastic about the initiative than their colleagues. To meet the University's requirements while minimizing conflict and stress, the dean took on the responsibility of identifying and defining student learning outcomes (SLOs) as well as designing and implementing methods of assessment. To keep the faculty informed and to obtain faculty input while minimizing the faculty's time and effort, four faculty "consultants" and the faculty steering committee worked with the dean to develop a plan, with reports to and surveys of the entire faculty at key points.

Faculty were shielded from actually assessing student work, which was done by the dean's office with the assistance of three faculty librarians.

In several respects, that approach worked. The University's requirements were met, and elements of the assessment plan were held up as something of a model for other schools. In other respects, however, the initial approach reaped what it sowed. Assessment was treated as a necessary evil, and the faculty, not surprisingly, remained disengaged and unconvinced of the value (and perhaps even the legitimacy) of the school's administration-driven efforts. After the second year of this approach, members of the faculty asked for greater involvement in assessment—mainly because they began to realize the potentially significant ramifications of assessment for how they taught and wanted to keep an eye on and have input into an unavoidable task of which most remained skeptical.

A number of faculty members questioned the value of schoolwide assessment with arguments that fell into four categories: Institutional assessment of SLOs is not necessary, because each faculty member assesses student learning by assigning grades; institutional assessment of SLOs would be harmful, because it would lead to "teaching to the test"; this assessment cannot be done in a meaningful way, because what faculty teach cannot be quantified or evaluated objectively; and, finally, the effort would entail a large and unjustifiable drain on faculty resources and take faculty away from the important work of teaching, scholarship, and service. Lurking in the background (and sometimes expressed directly) was the suspicion that outcomes assessment was a vehicle for the University to exert control over the law school and therefore something to be resisted. But not all faculty members were so negatively inclined; indeed, a number embraced the idea of assessing student outcomes. They stressed the importance of identifying and stating learning objectives to ensure a clear institutional sense of mission and direction and noted the relationship of assessment to what and how faculty teach.



Prompted by the faculty's desire for greater input, the dean appointed the ad hoc faculty Committee on the Assessment of Student Learning Outcomes (CASLO) and charged it with developing, with faculty input, a proposed general approach to guide the law school's assessment process and proposing how responsibility for carrying out these efforts should be shared in the future between the school's faculty and administration. The committee's work did not get off to a promising start: The chair was both wary of the potential for top-down assessment to interfere with meaningful instruction and concerned about the drain on faculty time and resources. But a funny thing happened over the course of that year: The chair, then the committee, and finally a critical number of other faculty members came to appreciate the value of identifying and assessing student learning outcomes, and the faculty as a whole adopted a sound set of principles to guide the school's efforts. By the end of the third academic year with assessment, the ad hoc CASLO recommended, and the faculty adopted, a number of important proposals, including the establishment of a standing faculty committee on assessment and the integration of an assessment process into the law school's curriculum. CASLO went on to develop a list of the specific components that constitute a particular SLO. These elaborated SLOs help the faculty to

design and implement assessment; help students to understand the specific knowledge, skills, and attributes they should strive to achieve; guide the school's development of curricular and cocurricular programs; and help individual faculty members to identify and articulate learning objectives for courses.

Developing a Culture of Assessment in the Dietrich School of Arts and Sciences

The Dietrich School of Arts and Sciences took a different approach for a couple of reasons. It would not have been feasible to attempt to centrally conduct

significant portions of the assessment of student learning in 67 undergraduate and 60 graduate programs, and the culture of the Dietrich School would have been even less welcoming to a top-down approach than the law faculty were. From early on, the dean of the Dietrich School was a champion of the institutional efforts to assess student learning because of the benefits he perceived for the academic programs. He cautiously but purposefully led his faculty over the course of four years to develop a comprehensive program of ongoing assessment of student learning outcomes.

Recognizing the need for faculty buy-in, the dean made great efforts to ensure that this was not viewed as a meaningless exercise dictated by either the central administration or the Middle States Commission on Higher Education. With this in mind, the dean set out to engage the faculty in meaningful discussions of assessment of student learning, focusing on this process as a means to advance academic excellence and as a natural extension of the existing structure of program evaluation and the faculty's interest in and ownership of the curriculum and its development. This framing of the project can be seen in the initial letters sent to the departments requesting that they identify the following:

- What attributes, skills, and knowledge do you expect graduates in your major(s) to acquire that are characteristic of the discipline?
- What attributes, skills, and knowledge do you expect graduates in your major(s) to acquire that are hallmarks of your program at Pitt?
- What qualitative and/or quantitative evidence can you collect on an ongoing basis to show how well your graduates are meeting these goals?

In addition, departments were asked to identify how they would determine whether students were achieving those goals. The dean's office was persistent in following up with departments that did not submit responses while providing thoughtful feedback to those that did. The faculty soon realized that the assessment of student learning could not be ignored.

While setting clear expectations for each individual program, the dean also took purposeful steps to ensure that the school developed the appropriate culture of assessment. Initially, program plans were reviewed by the associate deans, but over time, members of the school's curriculum committees became involved. Assessment of student learning was a featured topic at every chair's meeting; at first, these involved presentations by the dean and his associate deans, but after the first round of assessment plans was developed, chairs of departments with successful programs were asked to participate in panels to share their approach and their successes with colleagues. The annual Board of Visitors (BOV) meetings (attended by department chairs) regularly featured presentations about the culture of assessment developing within the school. In addition, at each BOV meeting, a single department chair was asked to make a presentation about the department; for the past four years, each of these presenters has deliberately featured assessment as a central message in his or her report.

Examples of How Assessment of Student Learning Is Leading to Curricular Change

History, Dietrich School of Arts and Sciences

Among the learning outcomes that the Department of History identified are that students will attain mastery at writing a sustained piece of formal, analytical prose and that they will demonstrate expertise in conceptualizing, investigating, and discussing history as a subject of intellectual inquiry. In academic year 2007–08, the department assessed a sample of final papers written in the capstone seminar using a rubric developed by members of the department's undergraduate committee. Only 45 percent met the standard of capable or better in mastery of writing; only 40 percent met the standard of capable or better in expertise. The findings from the 2008 assessment process in regard to these two learning outcomes helped to fuel the department's decision to revamp the undergraduate major in history, doubling the number of required writing seminars and redesigning those seminars so that they function together as a skill-building sequence. Implementation of the new major, however, was put on hold in 2009 due to budget constraints. In 2010, assessment results suggested that the process of intensive discussion of pedagogy that accompanied the curricular redesign had succeeded in "bringing up the floor," reducing the proportion of marginal essays, although the number of essays judged proficient still fell short of goals. Recent hires have now made it possible to accelerate implementation of the revised major, which the department believes will make a major impact on students' opportunities to develop the skills in expository writing and historical conceptualization central to these two learning outcomes. (see Appendix C5: Arts and Sciences Undergraduate Assessment Matrices for History, 2008 and 2010.)

Actuarial Mathematics, Dietrich School of Arts and Sciences

Similarly, in academic year 2009–10, the faculty of the actuarial mathematics program assessed their students' ability to think critically and solve problems. The results were reviewed by the undergraduate committee, program faculty, and the department chair, and they were used as a guideline for modification of the content and pace of instruction. With input from graduating students and the Actuarial Mathematics Advisory Board, an updated and more streamlined curriculum was developed that includes one new course and a strengthening of other courses aimed at the content in which students were not meeting the expected standards. A formal liaison was established to improve coordination with the statistics department. The strengthened curriculum and new course was put in place in academic year 2010–11, and the department is looking forward to assessing how this new approach helps to prepare students to better meet the standards of the actuarial exam when they take it in 2012. (See Appendix C5: Arts and Sciences Undergraduate Assessment 2010, "Actuarial Math Matrix May 2010.")

Criminal Justice, Pitt–Greensburg

In reviewing senior papers as part of the assessment of student learning in the criminal justice program at Pitt–Greensburg, the faculty found that students were not achieving the expected levels of competence in identifying a feasible problem, framing a research question in terms of independent and dependent variables, dealing with methodological issues, and communicating conclusions. To address these deficiencies, faculty introduced a requirement that criminal justice majors take a course in research methods. It is hoped that subsequent assessments will indicate improvements. (See Appendix C5: UPG 2010, "Update on Assessment Pitt–Greensburg May 2010," pp. 39–49.)

Biology, Pitt–Bradford

Through their assessment of student learning, the biology faculty found weaknesses in students' ability to correctly define, explain, and

describe the basic concepts of biology and to effectively communicate scientific information both verbally and in writing. The faculty decided to increase the rigor in the introductory biology and sophomore biology courses and to offer a senior seminar in which all students will be required to make oral presentations for which they will receive feedback from faculty about content and delivery. (See Appendix C5: UPB 2010, "UPB Table of Contents and Matrix," pp. 15–18.)

Industrial Engineering, Swanson School of Engineering

One ABET-directed expected learning outcome is that students attain "a recognition of the need for, and an ability to engage in, lifelong learning." One way of assessing this outcome is to ask questions that are included on the University's Student Opinion of Teaching survey. Student responses to these questions are monitored by the undergraduate program director and reported to department faculty so that strengths and areas of concern can be identified. In 2008, the Department of Industrial Engineering (IE) concluded that its students were not demonstrating significant improvement in attainment of this outcome. To address this and other specific learning outcomes, in fall 2008, the required undergraduate seminar for IE majors was revised to require students to write and submit a career plan, and speakers were brought in to specifically address career and professional skill areas. Subsequent assessments of this learning outcome have demonstrated improvement as a result of the revised undergraduate seminar and other program changes. (See Appendix C1, pp. 31–34.)

Graduate Programs

All graduate programs also have in place programs to assess student learning and use the outcomes to further enrich the curriculum. In all cases, these learning outcomes are developed by the program faculty, and in most cases, the process is overseen by an associate dean for graduate studies, or the equivalent, who ensures that the process is being implemented appropriately and provides feedback on the assessment plans of the

faculty, sometimes in consultation with a faculty committee. These plans also are included in the overall review conducted by the Provost's office through the vice provost for graduate studies. The plans for the individual programs can be found in Appendix C5, but it is worth highlighting a few common aspects of the assessment of student learning in doctoral programs. A key aspect of doctoral training is that all graduates are expected to be able to conduct original research that advances their discipline. For individual students, achievement of this learning outcome is assessed at the dissertation defense, at which representatives of the faculty review the student's work. As part of the assessment of student learning initiative, some schools have developed rubrics that are now used by faculty as part of the overall review of the defense. Other programs have assessed this learning outcome by collecting and reviewing data on publications by their graduates both while they are students and upon graduating. Still others look at the levels of research funding their students are able to attract, again both while they are students and postgraduation.

General Education

Assessing learning outcomes for general education presents its own challenges that have been addressed effectively on all campuses. As part of the development of a culture of assessment in this area, the deans and campus presidents (along with faculty and staff they wished to include) met in 2008 to discuss the approaches they were taking to assessing student learning in general education. These conversations continued in subsequent years as each campus developed its own approach.

Each school on the Pittsburgh campus that admits freshmen and each regional campus has its own general education curriculum with learning outcomes that map onto the University's student learning goals reported in Figure 7. The upper-level schools on the Pittsburgh campus rely on the Dietrich School of Arts and Sciences' general education curriculum. The general education requirements of each school and campus

Figure 7: Council of Deans' Learning Outcomes

Students should be able to:

- Think critically and analytically;
- Gather and evaluate information effectively and appropriately;
- Understand and be able to apply scientific and quantitative reasoning;
- Communicate clearly and effectively;
- Use information technology appropriate to their discipline;
- Exhibit mastery of their discipline;
- Understand and appreciate diverse cultures (both locally and internationally);
- Work effectively with others; and
- Have a sense of self, responsibility to others, and connectedness to the University.

can be found in Appendix C10. Consistent with this decentralized responsibility for the general education curriculum, individual schools and campuses are responsible for having a process in place to assess student learning in general education consistent with the Council of Deans' guidelines. The general education assessment matrices summarizing the assessment processes for each school and campus can be found in Appendix C6; the assessment processes for the Swanson School of Engineering, College of Business Administration, and School of Nursing are included with the materials on their specialized accreditations found in Appendix C7.

As reported in the 2007 *Periodic Review Report*, at that time, a firm foundation was in place for assessing student learning in general education programs. Pitt–Greensburg had established a process for assessing student learning that included general education as part of its overall planning in 2002. All undergraduate programs in the Swanson School of Engineering also had ongoing assessments of learning outcomes related to the goals of their



general education curricula. The Pittsburgh, Bradford, Greensburg, and Johnstown campuses regularly participated in the National Survey of Student Engagement (NSSE) and used student responses as indirect assessments of specific learning outcomes. The University participated in the Standardized Assessment of Information Literacy Skills (SAILS) survey, which assesses information literacy, and had just begun participating in the Collegiate Learning Assessment (CLA), a test of critical thinking, analytic reasoning, and written communication. However, since the passage of the Council of Deans' guidelines, these assessment efforts have advanced significantly.

Each school and campus now has in place a structure for overseeing this assessment. Typically, general education assessment activities are led by the vice president for academic affairs (on the regional campuses) or the associate dean for undergraduate studies (in the schools on the Pittsburgh campus) working with a faculty committee. Together, they are responsible for overseeing the articulation of expected learning outcomes related to the general education curriculum and the development of plans for assessing these outcomes. In some cases, there are separate committees responsible for individual requirements subject to the review and approval

of the school- or campus-level committee; in other cases, this work is done by the school- or campus-level committee.

University-wide, the process is overseen by the vice provost for undergraduate studies, with each school and campus reporting annually to the vice provost on these assessment activities and the vice provost providing feedback. Over the past four years, each school and campus has articulated learning outcomes for its general education curriculum and has assessed at least three of these learning outcomes. The following provides more detail on the assessment activities related to general education on each campus.

On the Pittsburgh campus, a variety of approaches at both the campus and school levels are used to assess student learning outcomes related to the general education curriculum. Centrally, the vice provost for undergraduate studies, in consultation with the Enrollment Management Committee, the Provost's Advisory Committee on Undergraduate Programs, and the University Library System, takes an active role in assessing the student learning outcomes listed in Figure 7. CLA continues to be used to monitor critical thinking, analytic reasoning, and written communication, and SAILS continues to be used to assess information literacy. Student surveys also continue to provide student self-assessments of learning related to all of the learning outcomes, though the Pittsburgh campus now uses the Student Experience in the Research University (SERU) survey, discussed further in Section III. C, rather than NSSE to provide comparative information as well as the internal Student Satisfaction Survey. Reports on these assessments can be found in Appendices C11, C12, and C13.

There also are school-level processes in place that use assessment of student learning to guide development of the general education curriculum. The four schools that admit freshmen (the Dietrich School, Swanson School, College of Business Administration, and School of Nursing) have defined expectations with regard to general education and have processes in place to assess student learning in this area.

The general education curriculum for the upper-level undergraduate programs in the School of Education, School of Social Work, School of Information Sciences, and School of Health and Rehabilitation Sciences is offered through the Dietrich School.

The four regional campuses in Bradford, Greensburg, Johnstown, and Titusville enroll 27 percent of the total undergraduate population of the University of Pittsburgh. Like the Dietrich School on the Pittsburgh campus, each of the regional campuses has developed a plan for general education based on the University student learning goals established by the Council of Deans in 2006.

Examples of General Education Assessment

Writing in the Disciplines, Dietrich School of Arts and Sciences

The experience with assessing the Writing in the Disciplines curriculum illustrates how the assessment of student learning at the University has evolved over the past decade. The University's composition program, and in particular the Writing in the Disciplines program, has long been well regarded. Part of the reason for this success is the focused attention the faculty have given to reviewing and modifying the curriculum through organized, periodic program evaluations. Traditionally, these evaluations have focused more on the curriculum and how it is delivered and less on a systematic assessment of outcomes. The first steps toward outcomes assessment came in the early 2000s, as the University started to use student surveys (both the internal Student Satisfaction Survey and NSSE) to gather indirect evidence of student learning in the writing program through questions such as "To what extent did your experience at the University contribute to your ability to write clearly?" As noted in the 2007 *Periodic Review Report to Middle States*, these surveys led to a comprehensive review of the Writing in the Disciplines program when they revealed that other institutions were gaining

on our program in terms of student assessment of program effectiveness.

At the request of the Enrollment Management Committee, from 2004 to 2005, a comprehensive assessment of undergraduate writing was directed by two members of the composition faculty. This careful and thoughtful evaluation included a comprehensive review of the curriculum, including a survey of existing writing courses, a review of the writing requirement, online student surveys, and student and teaching assistant focus groups. Notable for this discussion, the evaluation included in-depth interviews with faculty members from across the academic departments in which faculty members were asked to provide their assessment of student writing and how it had evolved over the previous decade. The inclusion of faculty assessment of student writing in addition to student self-assessments marked an expansion of the program's efforts to include outcomes assessments in its overall program evaluation. The report provided insights into what students and faculty thought about writing and writing courses; compelling examples of best practices in teaching writing; and several recommendations for program improvement that were implemented, including additional faculty, smaller section sizes, a new peer tutoring program, and resources to promote campuswide discussions of writing and the development of new writing-intensive courses.

As the University became engaged in using direct evidence for assessing student learning, in 2009, a process was developed to gather direct evidence of student writing on an ongoing basis that could then be used as part of program evaluation and curriculum development.

The new process included clearly articulated expected learning outcomes (see Figure 8) and performance goals/expectations, a plan for the ongoing collection of direct evidence from student writing samples, and a structure through which assessment results will be used to inform curricular discussions. Appendix C14 includes the assessment matrix summarizing the process and a report on the results of the first round of

Figure 8: Student Learning Outcomes for Writing Across the Disciplines

- Students will use writing to engage in the modes of inquiry appropriate to the discipline, demonstrating depth and breadth of understanding, commitment to accuracy, and informed analysis.
- Through substantial revision, students will demonstrate that they are able to make decisions about the purpose, logic, and design of their own writing.
- Students will be able to write coherently about complex issues and ideas, with attention to alternative positions, competing explanations, or disputed conclusions.
- Students will write with precision, clarity, and fluency, demonstrating awareness of textual conventions appropriate to the discipline.

assessments conducted in 2009. Briefly, the nine faculty members serving on the College Writing Board assess the four learning outcomes triennially by reviewing a sample of student papers drawn from writing-intensive courses.

The papers are evaluated using seven criteria derived from the learning outcomes, and the expectation is that at least 50 percent of the papers reviewed should be rated as proficient or above on a scale that includes superior, proficient, adequate, and inadequate. The criteria and results of the first round of assessments are reported in Appendix C14. The assessment indicated that the goal of having 50 percent of papers rated adequate or higher on the seven criteria was not met. Using these assessments, the College Writing Board identified specific weaknesses and recommendations for increasing the number of papers rated proficient and above. In 2010, these recommendations were presented to the Dietrich School of Arts and Sciences Undergraduate Council, were approved for implementation, and

are now part of the assessment system. The school is looking forward to the next assessment by the College Writing Board in 2012, which will provide the first reading against the existing baseline.

Second Language, Dietrich School of Arts and Sciences

A similarly rigorous assessment of student learning related to the Dietrich School's second language requirement was conducted in academic year 2009–10, and the assessment matrix summary of this assessment can be found in Appendix C15. Under the direction of a faculty member in the School of Education, four specific learning outcomes for second language acquisition were developed; standards for comparison were established; and standardized rubrics for assessing these outcomes for reading, writing, and interpersonal communication were developed. The assessments were based on oral interviews and integrated reading and writing assessments given to 10 percent of the students every two years. Based on the results of the assessments, the dean appropriated resources for increased instructor training in identified areas of weakness, and a committee of language coordinators is conducting full reviews of the curriculum in these areas that will extend above the general education level to include majors and certificate programs.

Quantitative Reasoning, School of Nursing

Key learning outcomes for nursing students include the ability to engage in evidence-based practice, to write a critical appraisal of published research studies, and to critique and interpret statistical methods and results. The assessments indicated a weakness in students' ability to read and interpret research findings and that this weakness was common to all nursing students, independent of which existing statistics course the students had taken. As a result, the school created a new course, Introduction to Basic Statistics for Evidenced-based Practice, which is now required for all nursing students. By creating a statistics course specifically directed to meet the needs of nursing students, the school is better able to ensure that all students meet curricular

requirements directly while also meeting the University goals of gathering and evaluating information effectively and appropriately and understanding and being able to apply scientific and quantitative reasoning. (See Appendix C1, pp. 30–31.)

Economic Analysis, Swanson School of Engineering

An example of an assessment-driven curricular change relates to the ABET expectation that students attain “the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.” This outcome is assessed, in part, using student projects from the Engineering Economic Analysis course. Prior to fall 2009, students completed a single comprehensive project requiring an economic analysis of a contemporary problem, including a consideration of the societal implications of their solutions. Based on an assessment of these projects, the faculty concluded that students were not adequately addressing the societal issues. As a result, beginning in fall 2009, the course was modified to require three miniprojects based on model-eliciting activities (MEAs), a proven educational methodology for presenting complex, realistic, open-ended problems to students. Subsequent assessments demonstrate significant improvements in this learning outcome, as students are now better able to consider environmental, ethical, and other societal issues in finalizing their solutions to these problems. These positive results have led the school to introduce MEAs to other courses to reinforce concepts related to other learning outcomes, including an expectation that graduates be able to design and conduct experiments and analyze and interpret data. Preliminary assessments of these student learning outcomes indicate that the introduction of MEAs in these courses also is resulting in improved learning in these areas. (See Appendix C1, pp. 31–34.)

Writing, Pitt-Greensburg

During academic year 2009–10, Pitt-Greensburg's assessment of student composition skills was based on a 20-item instrument.

Fourteen students out of 20 (i.e., 70 percent) scored three or higher on a scale of one to five overall. The percentage falls just short of the stated goal of 75 percent. While this indicates that the program is effective, it could use improvement in specific areas. After rigorous inquiry and discussion, the faculty agreed to create clearer guidelines for the first two composition courses to address identified areas. Furthermore, the purposes of the third composition course are being closely examined; current versions of this course may be replaced with classes that are specific to each major or department. (See Appendix C6: Greensburg 2011, “Assessment Appendix Pitt-Greensburg May 2011,” pp. 46–49.)

Oral Communication, Pitt-Johnstown

In the area of oral communication, faculty used an established general education evaluation form to assess 26 randomly selected Primary Speaking (PS) videotaped speeches. Overall results showed that all PS speeches were rated at the desired 75 percent proficiency level. However, 15 percent of the speeches were ranked below the desired 75 percent proficiency level in the areas of content and performance. To improve performance in these areas, the faculty are strengthening relevant support services. (See Appendix C6: Johnstown 2011, “Gen_Ed_Sp_Enhanced_Assessment Matrix.”)

Mathematics, Pitt-Titusville

In the area of mathematics, the faculty assessed students' ability to apply quantitative reasoning to physics, computer science, business, and nursing. In surveys, 79 percent of students answered that the course had shown them new ways to apply mathematics to various fields and allowed them to better understand the connections between various fields. However, when the department assessed a set of core concepts embedded in assignments and exams, it found that only 57 percent of students could satisfactorily solve practical application problems. The faculty are presently reviewing enhancements to improve student competence in core concepts. (See Appendix C6: Titusville 2010, “UPT

Assessment of General Education 2009–10,” pp. 10–14.)

How Assessment Is Used to Make Changes and Drive Progress

The overarching goal of assessment is to drive the changes necessary to be successful in educating our students. At the University of Pittsburgh, assessment of learning outcomes emanates from the faculty. It provides a structured, not personality-driven, process to identify the weaker elements in programs, units, and curricula. Through the University’s Planning and Budgeting System, assessment is key to setting goals and priorities, and it informs resource allocation. All strategic plans that units submit to the Provost must address assessment in detail.

All schools in the University have implemented changes that resulted from the assessment process. As of May 2011, assessment plans showed marked improvement over previous years. A review of the assessment plans shows that programs throughout the University implemented more than 300 curricular initiatives, including developing new courses, changing course content, changing course sequence, changing teaching assignments, changing assessment methods, conducting a major overhaul of a program, creating a new track, raising standards, increasing required seminars and capstone courses, restructuring departmental advising, creating a new credit distribution, creating an assessment committee, and modifying bylaws to facilitate assessment activities. The complete list of approximately 310 new initiatives is summarized in Appendix C16.

The Dietrich School of Arts and Sciences revised seven undergraduate majors and four certificate programs, and it is engaged in an expansion of the general education requirements through the addition of specific learning outcomes, assessment instruments, and standards of comparison to each of its general education requirements. For example, as discussed previously, under the direction of faculty members in the School of Education, the language program coordinators in Arabic, French, German, Spanish, Italian, and Hebrew developed a set of rubrics¹⁶

for reading, writing, and interpersonal communication based on the OPI¹⁷. Another example of curricular development that is integral to Pitt’s international character is the revision of the Writing Across the Curriculum general education requirement. The College Writing Board held a faculty forum on March 19, 2010, to consider whether Dietrich School students could fulfill a writing requirement in a language other than English¹⁸. Faculty from all divisions in the Dietrich School engaged in a dialogue followed by a recommendation to the Dietrich School of Arts and Sciences Undergraduate Council that allowed for one of three writing requirements to be fulfilled in any language (the first two requirements must be met in English; the third may be met in a second language if the student’s major is in that language).

The Bachelor of Arts in political science was strengthened from 24 to 33 credits, and a new Bachelor of Science in political science was created to attend to those political science students who need more quantitative methods to be better prepared for graduate school. In addition, other programs increasingly use external advisory boards. For example, the actuarial mathematics major was substantially revised following the recommendations of the Actuarial Mathematics Advisory Board, which is made up of working actuaries.

The College of Business Administration used the results of its EBI (Educational Benchmarking, Inc.) Undergraduate Business Assessment to address the lower levels of student satisfaction noted by career services. Career information was added in 2007 to the freshman orientation course, and in 2010, the course was renamed Your Academic Career and Success. Improvements were noted in the seniors’ satisfaction on the EBI survey, and in 2010, *Businessweek* increased its grade for the school’s job placement from C to B.

The Swanson School of Engineering has added model-eliciting activities (MEAs) to

several courses, as previously mentioned. MEAs are a proven educational methodology for presenting complex, realistic, open-ended problems to students. In Probability and Statistics for Engineers 1 (ENGR 0020) and 2 (IE 1071), MEAs are used to reinforce concepts related to the learning outcome Designing and Conducting Experiments and Analyzing and Interpreting Data. The instructor for IE 1071 indicates in her ABET data collection spreadsheet results that she is seeing definite improvements in the scores on these projects, indicating attainment of the above learning outcome.

In Pitt’s decentralized model, assessment informs the planning and budgeting process at all levels, from the departments responsible for the programs, to the deans and directors, to the Provost. Faculty realize that it is in their best interest to prepare and execute good assessment plans and to set their new goals in light of the results of assessment of student learning. Assessment is now part of the Pitt culture. Today, all curricular changes must come with assessment plans, and Pitt’s Planning and Budgeting System has integrated the assessment of outcomes as a key factor.

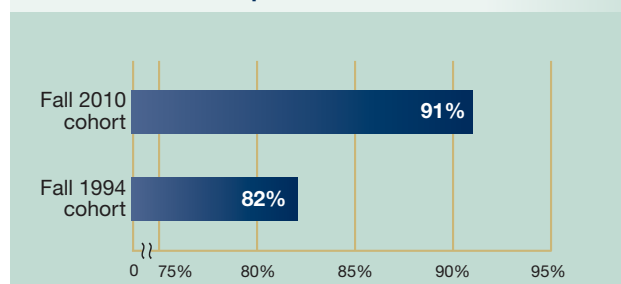
ASSESSMENT OF STUDENT RETENTION, SATISFACTION, AND GRADUATION

The 1996 Board of Trustees resolution *Aggressively Pursuing Excellence in Undergraduate Education* and the 1999 resolution *Repositioning Undergraduate Education* established excellence in undergraduate education as a core institutional goal, determined the broad parameters of a strategy to achieve this goal, and asked for the development of measurable outcomes to be used to assess progress toward this goal.

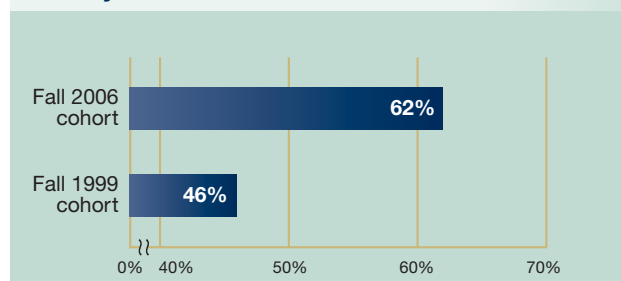
Since that time, the University has aggressively pursued excellence in undergraduate education and has developed an assessment system to guide these efforts. The University has used specific assessment methods to monitor and improve the retention, satisfaction, and graduation of its undergraduate students. Data have been gathered by creating and regularly revising

Figure 9: Retention, Graduation, and Satisfaction

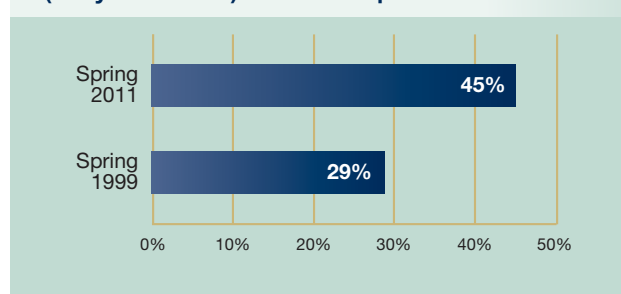
Freshman-to-Sophomore Retention Rates



Four-year Graduation Rates



Overall Student Satisfaction (Very Satisfied) on a Five-point Scale



extensive in-house student surveys, participating in national surveys, and benchmarking progress against peer and aspirational peer institutions. These data have been used to drive programming that will increase retention and satisfaction and to improve graduation rates and students’ preparation for life after graduation.

As a result of these efforts, the University has improved the student experience, as demonstrated by improved retention, graduation, and satisfaction (see Figure 9 and discussed below). The University’s success also has earned external

¹⁶ See the Second Language Assessment Plan, Appendix C5.

¹⁷ Oral Proficiency Examination

¹⁸ See the College Writing Board report on file, Appendix C14.

recognition, including rising in the *U.S. News & World Report* rankings of top public research universities from the second tier (51st–115th) in 1995 to tied for 19th in the most recent ranking (2012); being cited by Kiplinger's, the Princeton Review, and *U.S. News* as one of the best values in higher education; and, in the Princeton Review's list of 650 universities, being ranked eighth as having the "happiest" students and 11th for best quality of life for students.

Structure of Assessment Activities

As with the University's recruitment strategies, assessment of undergraduate retention, graduation rates, and student satisfaction is carried out at the campus or school level, with central oversight provided by the Office of the Provost. In addition to regular central review and analysis by the Office of the Provost, members of the Council of Deans—which includes the presidents of the regional campuses—regularly review data related to retention, graduation, and student satisfaction rates; the Council of Deans also provides an ad hoc opportunity for senior academic administrators to share lessons learned regarding the success or failure of related initiatives.

On each of the five campuses, efforts to improve the undergraduate experience are coordinated through committees that include representation from all of the major units contributing to the undergraduate experience. These committees are responsible for identifying areas for improvement, recommending (and implementing) strategies to advance these goals, and assessing progress toward these goals. The committees also periodically review assessment processes and tools for effectiveness.

On the Pittsburgh campus, the Enrollment Management Committee (EMC) regularly reviews retention, graduation, and satisfaction data to monitor progress and to make recommendations for improving the student experience. EMC is cochaired by the vice provost and dean of students and by the vice provost for undergraduate studies. Members include the associate deans of the undergraduate schools; the director of the Office of Admissions and Financial Aid;

the University registrar; and representatives from housing, residence life, and institutional research. Similarly, each regional campus has a presidential-level enrollment management committee focused on retention and graduation goals, with assessment making up a regular part of the committee's agenda activities throughout the year. The committees are as follows: Enrollment Planning Task Force (Bradford), Advisory Committee on Enrollment (Greensburg), Enrollment Management and First Year Experience Task Force (Johnstown), and President's Task Force for Enrollment Management (Titusville). Individual schools and campuses are held accountable for their efforts through annual reports to the Office of the Provost on strategic planning and progress as well as ad hoc reports.

Measures Used to Assess Retention, Graduation, Student Satisfaction, and Student Placement

Efforts to improve the undergraduate experience on each campus are assessed using data on retention, graduation, student satisfaction, and student placement. These data are collected through a combination of institutional data sources and student surveys discussed below. These data are used to identify areas for improvement and guide strategic planning and investments related to the student experience, to evaluate the effectiveness of these strategies, and to assess progress toward goals in an ongoing manner.

The primary measures used to assess progress in improving the student experience are first-to-second year retention rates, four-year and six-year graduation rates, and student satisfaction (overall, academic, and social). Student postgraduation placements also are used to gauge success. Specific goals for retention, graduation, and student satisfaction are established through examinations of the current and past levels and, when possible, similar measures at peer and aspirational peer institutions. Progress toward these goals is assessed relative to past performance and to progress made at peer institutions, and goals are modified over time in response to progress. For example, in the late 1990s, the goal was to achieve peer averages for retention and for

Figure 10: Freshman Retention Rate by Fall Cohort

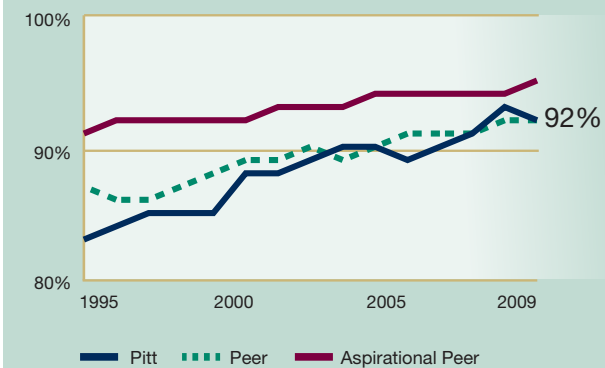


Figure 11: Four-year Graduation Rate by Fall Cohort

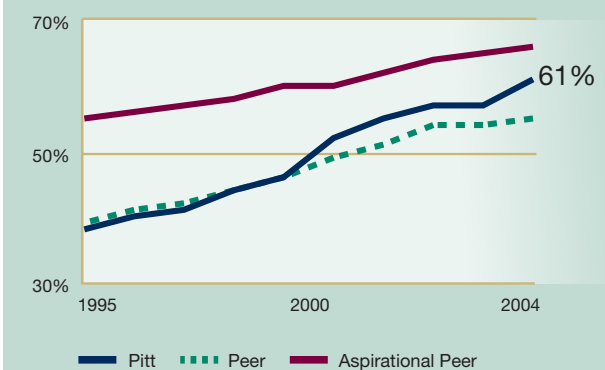
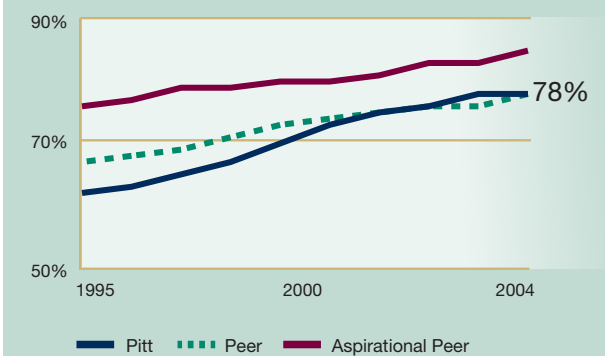


Figure 12: Six-year Graduation Rate by Fall Cohort



four-year and six-year graduation rates; annual goals were established with this longer-term goal in mind. On the Pittsburgh campus, these goals were achieved in the early 2000s, and achieving the median for aspirational peers became the new goal. The most recent benchmarks indicate significant progress toward that goal (see Figures

10, 11, and 12). Similarly, early discussions of student satisfaction on the Pittsburgh campus centered on the percentage of students reporting being either "satisfied" or "very satisfied." As this combined measure started to exceed 95 percent, the focus shifted to the percent of students who report to be "very satisfied."

Data Sources

Data sources are described briefly below; all referenced reports and documents are available for review in the document room.

Retention and Graduation Rates

Retention and graduation rates are derived directly from institutional data and are reported annually in the campus-level *Freshman Retention Report* and *Graduation Rates Report*. Retention and graduation rates by race, gender, residency, and school also are monitored and included in these same reports. Since 2002, comparative data on these measures at other institutions has been collected from the Consortium for Student Retention Data Exchange and reported annually in the *University Benchmarks* report.

Student Surveys

Each campus also has in place a system for assessing student satisfaction with various aspects of the student experience and using the results to guide strategic planning and investments. Student satisfaction is gauged through a combination of homegrown campus-level surveys, national surveys, and focus groups. The standard undergraduate student surveys used on the Pittsburgh campus are listed in Figure 13. See Appendix C17 for all student surveys.

Incoming Freshmen Survey

Information about the experiences and aspirations of incoming freshmen is collected, on the Pittsburgh campus, through the CIRP Freshman Survey, a national survey administered by the Higher Education Research Institute at the University of California, Los Angeles. Student responses to this survey are used to assess the admissions process; to establish baselines for some measures used to assess student growth and development; and as control variables for

multivariate analyses of student retention, graduation, and satisfaction. Survey results are reported annually by the Office of Institutional Research and parsed and sent to the schools that admit freshmen.

Student Satisfaction Surveys

Several surveys are administered to enrolled students. Each campus has its own institution-specific survey(s) used to assess student satisfaction.

UCSUR Survey

On the Pittsburgh campus, this is a cohort-based survey administered and analyzed by researchers in the University Center for Social and Urban Research (UCSUR). This survey/study began in 1997 with a random sampling of about 1,000 freshmen. Similar cohorts were chosen from subsequent freshman classes, and students in each cohort were surveyed in the spring of their freshman, sophomore, and junior years. Over time, the survey has transitioned from a phone-based to a Web-based survey¹⁹ and has been revised to include new questions and remove some that were not useful. However, the core questions and general structure of the survey have remained the same.

Student responses to satisfaction surveys are used to assess year-to-year improvements in overall satisfaction and satisfaction with the academic experience, social experience, facilities, and services. Trends over time and within specific subgroups such as class (freshman, sophomore, or junior), year of attendance, gender, race, residency, SAT scores, and school also are monitored. The UCSUR survey on the Pittsburgh campus also forms the basis of the comprehensive statistical studies of student retention and satisfaction discussed in Appendix C18. Annual survey results are provided to the Provost's office and the Enrollment Management Committee.

Leavers Survey

Complementing the UCSUR Student Satisfaction Survey is a phone survey administered by UCSUR to all nonreturning students in the fall and spring of each year. Information from

this survey is combined with information from those who do return to provide a more balanced view of student perceptions of the University. Annual results are reported to the Enrollment Management Committee.

Collegiate Learning Assessment (CLA)

CLA is administered to 100 students in the fall of their freshman year and another 100 students in the spring of their senior year with questions aimed at assessing student engagement with the academic experience both inside and outside the classroom. These data allow campuses to benchmark student satisfaction against other institutions. Results are reported to the Enrollment Management Committee.

Student Experience in the Research University (SERU)

In 2009, the Pittsburgh campus joined a consortium of public Association of American Universities institutions in administering a survey designed specifically for undergraduates at research universities²⁰. The SERU survey allows comparisons of student satisfaction and academic and social experiences with those at other participating institutions, including major-to-major comparisons. The University replaced the previously used National Survey of Student Engagement with SERU to better align its external survey instrument with its institutional goals and aspirations. Results are reported to the Enrollment Management Committee.

The results of the SERU survey and the previously used NSSE have been used to help formulate goals related to student satisfaction and to assess progress toward these goals relative to peers. The SERU survey also provides feedback to individual departments on various aspects of their offerings, including student perceptions of faculty engagement, advising, and quality of program. Because many aspects of the academic experience are offered at the program level, this feedback promises to be useful in closing the loop between student satisfaction and programmatic development.

¹⁹ Starting in 2008, UCSUR began transitioning the survey to be Web based in an effort to increase response rates. From 2008 to 2010, students were randomly assigned to a phone- or Web-based administration of the survey. Starting in 2011, the survey was administered exclusively via the Web.

²⁰ cshe.berkeley.edu/research/seru

Figure 13: Surveys Used (Pittsburgh Campus, Undergraduate Students)

	Office of the Provost	College of Business Administration	School of Dental Medicine	Swanson School of Engineering	School of Education	School of Social Work	School of Nursing	School of Information Sciences	Dietrich School of Arts and Sciences	School of Health and Rehabilitation Sciences	School of Pharmacy
NSSE ²¹	X	X	X	X	X	X	X	X	X	X	X
SERU ²²	X	X	X	X	X	X	X	X	X	X	X
CIRP Freshman ²³	X	X		X			X				
Other		Educational Benchmarking Inc. Undergraduate Business Exit Assessment		Engineering Global Perspectives Index		Field Practicum Evaluation		Collegiate Assessment of Academic Proficiency			AAACP ²⁴ Application Pool and Enrollment, Tuition, Degrees Conferred, Graduating Students, Peterson's Guide
Internal				Sophomore/Junior Survey; ABET Course Evaluation		Health and Physical Activity	X			X	X
SAILS ²⁵	X	X					X		X		
UCSUR ²⁶ Student Satisfaction	X	X		X	X	X	X	X	X	X	X
Nonreturning Students	X										
Graduation Survey	X	X	X	X	X	X	X	X	X	X	X
Postgraduation Survey	X	X	X	X	X	X	X	X	X	X	X
Alumni	X	X	X			X	X	X	X		
Admit, Not Attend	X	X					X				
Employer	X	X		Co-op				Internship			

²¹ National Survey of Student Engagement

²² Student Experience in the Research University

²³ Cooperative Institutional Research Program

²⁴ American Association of Colleges of Pharmacy

²⁵ Standardized Assessment of Information Literacy Skills

²⁶ University Center for Social and Urban Research

Graduating Senior, Recent Graduate, Alumni, and Employer Surveys

Campuses also administer their own senior surveys. These surveys usually are administered to students as they apply for graduation and typically focus on a few key aspects of the undergraduate experience and postgraduation plans. Alumni surveys also are used to collect information on student outcomes, including employment and education, as well as retrospective impressions that can be used as part of Pitt's overall assessment of the undergraduate experience. Standard benchmarks include the percentage of graduates who go on to graduate or professional school, the percentage who enter the workforce within six months of graduating, and the percentage who believe that their University experience prepared them for their chosen career.

Data are reported annually (to the committees and councils whose work is influenced by the information) for the Pittsburgh campus in institutional research reports of the Senior Survey results and the Alumni Survey, which surveys former Pitt students two, five, and 10 years after graduation. Postgraduation surveys have been conducted since the mid-1990s, and in 2008, the Office of Institutional Research and the Office of Student Employment and Placement Assistance (SEPA) collaborated to conduct a joint postgraduation survey to collect placement as well as employer information from each graduating class. SEPA also works directly with employers to organize career fairs, networking events, and on-campus recruiting and conducts employer satisfaction surveys following all special events. These surveys also ask employers to provide feedback on the students they are recruiting at Pitt, including the quality of the candidate pool.

Groups and Expert Consultants

To supplement the data collection efforts discussed above, campuses also use focus groups to assess and explore specific topics and programs. Sample focus group reports are available in the document room. Campuses also engage expert consultants such as Noel-Levitz, Inc., and

Eduventures, Inc., as well as individual experts to conduct targeted assessments of various aspects of the undergraduate experience. The University also has made good use of best practices reports from the University Leadership Council.

Documentation for Assessment of the Student Experience

A series of appendices and reports available in the document room provide complete documentation of the University's ongoing process of assessing the student experience and using the results of those assessments to drive program development including the following:

- Copies of survey instruments and reports discussed above
- Annual reports on retention and graduation discussed above
- Report of the Working Group on Using Assessment to Improve the Student Experience (WGSE)
- Reports on new program development and assessments related to University efforts to improve retention, graduation, and student satisfaction

The following sections provide examples from these reports that illustrate how the University has developed a culture of assessment around the student experience and how that culture has improved the student experience. The WGSE report provides detailed documentation of specific assessment activities at the University related to retention, graduation, and student satisfaction; it links the development and modification of dozens of programs designed to improve the student experience directly to these assessment activities. The following examples were chosen to capture the variety of successful approaches taken to assessing the student experience at the University of Pittsburgh. This diversity of approaches reflects the diversity of cultures across the campuses of the University and further demonstrates the benefits of the decentralized approach to planning and assessment at Pitt.

Developing a Culture of Assessment: Student Affairs Model

The Division of Student Affairs has taken a comprehensive approach to assessment, from annual planning, to setting goals and assessing progress toward those goals, to ultimately using a culture of assessment for continuous improvement.

While staff members within Student Affairs have worked for decades to provide quality educational and social programs and services to students, the efforts have become more strategic in recent years based on the division's ability to intentionally acquire and assess outcomes-based data and make significant decisions based on the results. The increased recognition garnered by the University's undergraduate programs in recent years shows that a purposeful culture of assessment can provide significant results.

As the University entered a new era of planning and assessment in the mid-1990s, Student Affairs was one of the first to become actively engaged in assessing the impact of its programs. Reports documented student attendance at educational and social events, the number of tutoring sessions offered, and the number of patients seen at the University Counseling Center or Student Health Service; student feedback on these programs was gathered using targeted surveys. However, because different types of information were collected and the quality was inconsistent, these reports varied considerably across the division. In addition, the data collected and reported focused on inputs and quantitative outcomes such as the number of programs conducted during a term or the number of attendees at an event rather than the student learning and development that resulted from student participation in these programs. The reports were generally isolated to specific programming within each unit, with little regard to programming that was occurring in other sectors within the department, the division, or the University as a whole. The data were not linked to overarching goals of the division or the University for the undergraduate experience, and



there was no systematic way of linking assessment to programmatic changes or development.

In 2005, the new vice provost and dean of students led a strategic planning initiative requiring that departmental goals be strategically aligned with specific divisional goals, including the overarching vision of "providing University of Pittsburgh students with the best collegiate experience in the world." These divisional goals were aligned with the overarching goals of the University. With a clear understanding of critical University goals, such as the retention of students, the dean implemented a strategic planning and assessment initiative that started the process of developing a culture of assessment within the division. This shift led to the understanding that it was no longer enough to simply create programs and activities for students; programs alone did not necessarily equate to enhancing the student experience. The staff now had to develop and assess programmatic and learning outcomes for everything they did.

During the development of a planning document, senior staff members were required to submit goals that would help to chart the

direction of their units toward divisional goals. Directors were required to submit strategies for achieving these goals and, most importantly, intended measurement outcomes. In turn, division goals as well as department goals became intricately linked to performance goals for individual staff members. For example, part of the evaluation of a resident assistant was now based on the retention rates of students on his or her floor. This made resident assistants more deliberate about developing programs that would help their residents to connect to the residence hall community and the larger University community. The Reaching Inside Your Soul for Excellence (RISE)²⁷ mentoring program, which seeks to retain African American students, is another example of a program that was developed from outcomes-based data. The program's effectiveness and viability is closely linked to the intended outcomes: retention, academic performance, and graduation rates.

These were only the first steps in creating a culture of assessment in the division. The following year, goals for student outcomes were introduced as part of the Council of Deans' initiative on assessment of student learning. Now that the directors within Student Affairs had a taste of the new planning process, including a clear understanding of the importance of appropriate assessment and the methodology required to achieve it, the entire staff within the division could become engaged in the process. This would prove to be critical, as the University was in the process of developing a structured program to educate the whole student—the Outside the Classroom Curriculum (discussed on page 78 of this report). Spearheaded by leadership from within Student Affairs, this University-wide initiative required careful planning to establish 10 key goal areas and associated outcomes that were universally considered important in connecting students to the University, developing the whole student, and helping to position students for success.

For the past few years, directors have worked closely with staff to generate

departmental goals, strategies, and outcomes for the Student Affairs planning document. The Performance Impact Workplace software system has helped to establish goals and competencies for each employee, further enhancing the division's commitment to assessment.

Other elements have nurtured the culture of assessment. For example, the planning document is visible to all and frequently used. Staff members review goals, strategies, and outcomes at the departmental level, and they share progress reports and celebrations of successes at divisional quarterly meetings. Throughout the year, directors are required to initiate and document assessment strategies in order to report on progress toward achieving goals on quarterly reports. In addition, directors periodically give departmental planning reviews at Student Affairs senior staff meetings and the senior staff retreat. During the formal creation of the new planning document, which generally occurs from November through February, there is intense scrutiny of goals, strategies, and especially outcome measurements and the assessment strategies that bring forth the data. Directors are engaged in the plan and challenge each other to ensure that the right goals, strategies, and outcomes make it to the final document.

The planning document is the clearinghouse for charting completion of goals or progress. In order for a goal to be considered reached, the stated outcome measurements must have been met or exceeded. In order to state that progress has been made, 75 percent of the measurement must be achieved. If progress has not been made, the goal and outcome measurement are usually carried over to the following year, and strategies for achieving the outcome measurement are evaluated and refined where necessary to ensure that it is met in the future.

The data used to measure whether a goal has been met come from a variety of sources. On a micro level, surveys are distributed directly to students at most student events. In addition, many departments have initiated annual surveys to assess student satisfaction with all of the programs and services offered. These include paper

surveys and Web-based surveys that use Survey Monkey or Zoomerang. Data also are extracted from the Quality of Life survey distributed each year in the residence halls to approximately 7,000 students as well as the SERU survey and the UCSUR survey. Various focus groups have been conducted to garner information from students, and strategic benchmarking of other college and university student affairs departments and programs has been part of the process for the past five years.

Assessment is working in Student Affairs. In rating their overall social experience in an internal survey, the number of Pitt students who said they were very satisfied rose more than 10 percentage points between 2007 and 2010. By 2010, almost 99 percent said they were either satisfied or very satisfied with their Pitt social experience. And in 2009, the University celebrated a record retention rate of 92.7 percent for first-year students.

While Student Affairs has clearly developed a culture of assessment, additional assessment data are still needed for certain programs. For example, ongoing assessment of the Outside the Classroom Curriculum program by student focus groups was used to enhance the program in 2011. In addition, the next stage that is planned is to incorporate employer and graduate school admissions evaluations into the assessment mix to ensure intended outcomes of providing students with a competitive advantage in the marketplace or when applying to graduate school. By embracing the challenge of acquiring information of this nature, the University will continue to stay accountable to its mission of helping to educate the whole student and providing an outstanding collegiate experience.

Assessing Student Retention and Satisfaction: Pittsburgh Campus

In 1997, the Enrollment Management Committee commissioned researchers at the University Center for Social and Urban Research (UCSUR) to conduct a longitudinal study of the determinants of student satisfaction and retention on the Pittsburgh campus.

This initial study followed three first-time, full-time freshman cohorts through their junior year and drew on administrative records for student characteristics (e.g., SAT score, GPA, race, gender, residency) and enrollment status, student responses to the CIRP survey of incoming freshmen for other baseline information, and information from student responses to the UCSUR Student Satisfaction Survey and Leaver Survey to develop a fuller sense of the factors contributing to student success measured by retention and satisfaction. (A copy of UCSUR's Longitudinal Study of Undergraduate Student Satisfaction and Retention at the University of Pittsburgh November 15, 2001, is available in the document room.)

This comprehensive study identified several strong predictors of satisfaction and withdrawal and resulted in an initial set of findings and recommendations to improve satisfaction and retention. Key findings of the study were that student retention and satisfaction were strongly correlated with social satisfaction and integration, satisfaction with academic experience, and satisfaction with the campus environment. In addition to these overall satisfaction measures, among the strongest individual predictors of retention were first term GPA, living in on-campus housing, and finances. Based on these and other findings in the report, the following recommendations were made:

- Efforts to integrate and involve students in the social life of the campus should be enhanced, particularly during the freshman year.
- The University should continue to emphasize excellence in teaching, committed faculty, and more individualized or smaller group instruction and continue to strengthen academic support services.
- Particular attention should be paid to developing strategies to enhance the African American student experience.
- All students should be strongly encouraged to live on campus, and special attention should be paid to developing social

²⁷ www.rise.pitt.edu

Figure 14: Improving Facilities and Addressing Financial Need

- New construction and renovation of existing on-campus housing resulted in adding 1,318 beds between 2001 and 2011.
- Efforts to improve the environment included a lead role in developing the Oakland Civic Partnership, supporting an additional housing inspector, working to close nuisance bars, and beautifying campus buildings and grounds.
- From fiscal year 2001–10, there was a 160 percent increase in institutional financial assistance to undergraduate students.

integration programs for commuting students.

- The University should adopt strategies for working with the broader Oakland community to make the neighborhood more attractive to students.
- The University should make every effort to provide adequate financial support for those students who need it.

Over the ensuing decade, dozens of programs were developed in response to these findings. The working group report provides detailed documentation of these assessment activities, some of which are listed in Figures 14 and 15. The Enrollment Management Committee monitored progress through annual reviews of retention, graduation, and student satisfaction data from the ongoing UCSUR Student Satisfaction Survey, through assessment reports on individual programs, and through follow-up studies by UCSUR in 2004 and 2010.

The 2004 UCSUR study concluded that (1) the overall level of satisfaction and the two important components of it (social integration/satisfaction and academic satisfaction) rose; (2) satisfaction with Oakland as a place to go to school showed some improvement; and (3) satisfaction with racial climate improved for all

groups, including students from underrepresented groups. The biggest gains were seen in satisfaction with academic programs (percent “very satisfied” increased 12 percentage points), recreational facilities (+26 percentage points), and residence halls (+7 percentage points). There also were modest improvements in satisfaction with the social aspects of life on the University campus, food services, and the registration process. In response, the University reviewed programs, ending those that were not successful; modifying others; and introducing new ones, particularly in those areas where less progress had been made.

The 2010 UCSUR study used all available data (1997–2010) to examine trends over time on key outcomes (e.g., overall satisfaction, academic indicators, social integration, withdrawal) along with predictors of these outcomes over time. The 2010 study’s findings regarding the six recommendations made in the 2001 study, as stated above, are described in detail below.

- **Efforts to integrate and involve students in the social life of the campus should be enhanced, particularly during the freshman year.**

Social satisfaction and social integration showed dramatic improvement over time across all subgroups of students, particularly freshmen and juniors, and especially since 2006. To highlight the importance of this recommendation, “feeling comfortable and having a sense of belonging” was not only the best predictor of overall satisfaction with Pitt, but its importance is actually increasing over time.

- **The University should continue to emphasize excellence in teaching, committed faculty, and more individualized or smaller group instruction and continue to strengthen academic support services.**

Satisfaction with overall education, including both quality of instruction and the opportunities for interaction with faculty outside the classroom, has increased significantly. There also have been significant

Figure 15: Improving the Social and Academic Experience

- Integrating freshmen through the targeted use of freshman integration funds
- Improving the first-year experience
- Building on freshman studies courses/freshman activities
- Improving academic orientation and integration by requiring participation of all freshmen in PittStart, a two-day academic orientation program offered prior to arriving on campus
- Creating more on-campus housing, Living Learning Communities, and better programming in the residence halls
- Building connections between Dietrich School academic advising and Student Affairs—for example, peer advisors worked in the residence halls to help with advising questions
- Introducing the common reader in freshman programs in order to create a community of learners with a shared experience
- Creating a peer mentoring program, Facilitating Opportunity and Climate for Underrepresented Students (FOCUS)
- Adopting strategies for working with the broader Oakland community to make the neighborhood more attractive to students
- Opening the new O’Hara Student Center facility, which houses the Writing Center, the Math Assistance Center, and various Student Affairs offices, in fall 2011
- Creating individualized programming focused solely on transfers and sessions for nontraditional students in the College of General Studies in order to better integrate transfer students and nontraditional students into the Pitt community
- First Experiences in Research Program for second-term freshmen and other undergraduate research activities coordinated by the Office of Undergraduate Research, Scholarship, and Creative Activity
- Pitt–Johnstown’s RealWorld Action Program: providing students with an effective structure for developing customized personal and professional action plans

increases since 2004 in students reporting that their own academic experience has been intellectually stimulating and challenging, that the atmosphere at Pitt emphasizes academic achievement, and that Pitt provides the support needed to meet their academic goals. While great progress has been made in the academic area, the University needs and intends to continue to focus on this objective.

- **Particular attention should be paid to developing strategies to enhance the African American student experience.**

African American student satisfaction has increased for most of the individual social, academic, and University facilities and services indicators, and gaps in satisfaction between African American and non-African

American students have narrowed over time. While the University has made real progress in this regard—through such programs as the RISE program—strategies to enhance the African American student experience will continue to be a focus until the gaps are resolved.

- **All students should be strongly encouraged to live on campus, and special attention should be paid to developing social integration programs for commuting students.**

The proportion of freshmen residing in on-campus housing has increased from 90 percent in 2001 to 97 percent in 2011. On-campus students continue to report higher satisfaction with Pitt overall, with the education they are receiving, and with the social environment. Satisfaction with

residence halls, recreation facilities, and food services also has improved.

- **The University should adopt strategies for working with the broader Oakland community to make the neighborhood more attractive to students.**

The study showed large increases in satisfaction with the Oakland neighborhood as a place to go to school across all subgroups of students, and this increase in satisfaction with Oakland contributed a significant amount to increased overall satisfaction with Pitt.

- **The University should make every effort to provide adequate financial support for those students who need it.**

While the University has made strenuous efforts to provide adequate financial support to its students while retaining the quality of education, the survey data indicate that students are reporting more difficulty paying tuition over time and that this is having some negative impact on changes in overall satisfaction over time. In this context, the University remains totally committed to doing all that it possibly can to provide financial support to students who need it.

The Pittsburgh campus continues to consider its programs and options in light of these findings. The campus also continues to administer the Student Satisfaction Survey and Leaver Survey as useful tools in its assessment of the student experience and plans to conduct another comprehensive analysis in 2015.

Using Assessment Results to Guide Programmatic Investments on the Regional Campuses

Each of the regional campuses has used the results from assessments of student satisfaction both to initiate programs and to change practices to improve student satisfaction. At Pitt–Johnstown, the data from NSSE and Noel-Levitz contributed significantly to the campus’ strategic plan, *A New Dimension of Excellence*,

2008–2013, and were part of the impetus behind the RealWorld Action Program. Results from assessing satisfaction have led to changes in new student orientation (Johnstown and Titusville); the organization of student affairs (Titusville); the design of academic villages (Greensburg) and facilities plans (Johnstown); and the improvement of transportation services (Bradford and Titusville), food services (Titusville), laundry services (Greensburg), Internet services (Bradford and Greensburg), security (Bradford and Titusville), alcohol awareness programs (Greensburg), intramural programs (Bradford), and academic offerings (Bradford).

Examples of Using Assessment to Enhance the Student Experience

The Outside the Classroom Curriculum

For the past 15 years, one of the University’s goals has been to better align student experiences inside and outside the classroom in an effort to develop the whole student. First steps in this direction were creating the Enrollment Management Committee with membership from both the academic and student services areas and moving the dean of students into the Provost’s office as a vice provost. Initial efforts also included developing the Pitt Pathway program, which works to align career and academic advising; the First Year Experience program, which engages faculty and staff in orienting students to University life; and the Office of Undergraduate Research, Scholarship, and Creative Activity and similar programs, which promote undergraduate engagement in research, teaching, and service learning. Academic support services were structured to be more closely aligned with the academic units. These and dozens of other programs offered by the academic units and by the Division of Student Affairs helped to support efforts to develop the whole student. By 2006, these efforts had developed to the point where the Council of Deans formally approved a set of goals for Pitt graduates that would be supported by both the academic and student services units (see Figure 16).

During the following years, the vice provost and dean of students led members of the Enrollment Management Committee in a review of the extracurricular programming within the academic units and Student Affairs to determine which of these goals for student development were supported by each program. Programs that did not support any of the goals were revised or discontinued. This alignment of the programs and the goals for student development resulted in the creation of the Outside the Classroom Curriculum (OCC)²⁸. This program was first introduced in 2007 as a pilot program open only to freshmen. After a comprehensive review and resulting modifications, the program was expanded to all students in 2008. Through this program, students participate in programs and activities appropriate to the stages in their academic careers to develop attributes the University sees as important for their success. Programs are assessed periodically by the OCC oversight committee to ensure that they continue to meet the goals of the curriculum.

A key feature of the OCC program is the OCC transcript, which records student participation in OCC activities (see Figure 17). This electronic transcript is populated when students attending programs or events swipe their ID cards. It serves as a record of participation and completion of the milestones of OCC. Attendance data collected through these electronic records are used to assess the programs as well as the students. Currently, these data are being linked to the student self-assessments embedded in ongoing surveys to assess the effectiveness of individual programs in advancing the goals of educating the whole student.

RealWorld Action Program at Pitt–Johnstown

A similar comprehensive program of student engagement was introduced at Pitt–Johnstown in 2009. In response to student surveys and consulting reports that indicated that a lack of student engagement was limiting the progress of some students on its campus, Pitt–Johnstown created the RealWorld Action

Figure 16: Educating the Whole Student—Goals

- Think critically and analytically
- Gather and evaluate information effectively and appropriately
- Understand and be able to apply scientific and quantitative reasoning
- Communicate clearly and effectively
- Use information technology appropriate to one’s discipline
- Exhibit mastery of one’s discipline
- Understand and appreciate diverse cultures (both locally and internationally)
- Work effectively with others
- Have a sense of self, responsibility to others, and connectedness to the University

Assessing Progress:

Progress in educating the whole student is measured using student self-assessments embedded in the CIRP Freshman Survey, the UCSUR Student Satisfaction Survey, alumni surveys, the NSSE, and SERU. On the majority of these measures, Pitt students have reported more gains than those at other Association of American Universities institutions that participated in the SERU survey. These measures also are assessed more directly through several different skills tests, such as the Collegiate Learning Assessment, the Collegiate Assessment of Academic Proficiency, and the Standardized Assessment of Information Literacy Skills, in addition to assessments of student learning outcomes at the general education and individual program level (discussed in greater detail in the section on the assessment of student learning outcomes).

²⁸ www.studentaffairs.pitt.edu/occ

Figure 17: Outside the Classroom Curriculum—Sample Goals

Leadership Development

- Manage a team or group
- Serve in a leadership capacity for an off-campus organization or program

Sense of Self

- Learn and apply test preparation and test-taking strategies
- Develop short-term and long-term personal goals

Career Preparation

- Learn networking skills: Attend workshops or programs
- Get experience: Work in an environment or organization related to a field of interest

University Participation

- Attend New Student Orientation
- Attend Pathway to Professions

Communication Skills

- Complete an interview as part of an application process
- Participate in conflict management skills training

Global and Cultural Awareness

- Participate in a project that involves working with people other than your own cultural group
- Experience the customs and traditions of another culture

Wellness

- Acquire health insurance and understand the coverage it provides
- Develop healthy habits

Service to Others

- Be a peer advisor
- Participate in one-time service or philanthropic projects in the community

Appreciation for the Arts

- Study and perform dance
- Attend a PITT ARTS undergraduate arts encounter

Program to provide students with an effective structure for developing customized personal and professional action plans. Such efforts to increase student engagement, improve academic advising, and expand academic support have produced dividends with respect to retention rates. First-year retention at Pitt–Johnstown (74 percent) now exceeds the national average of four-year institutions (67.6 percent).

Through the RealWorld Action Program, Pitt–Johnstown has increased efforts to educate and assist students in order to develop, evaluate, and implement career and educational plans. This increased outreach to students continually establishes counseling relationships with students. New programs and events strive to provide integrated career support, teaching students to articulate the value of what they study and how their education applies to the workplace.

Evidence of the increased impact of the RealWorld Action Program on campus and in the community is reflected in the fall 2010 numbers. A total of 2,139 students took advantage of various programs and services offered through or in conjunction with the RealWorld Action Program office, reflecting a 72 percent overall percentage of engagement. In comparison to fall 2009, this reflects an increase of 21 percent among students and 61 percent among alumni. Walk-in contacts also showed a 14 percent increase. The current job placement rate for Pitt–Johnstown graduates is 93 percent.

In addition, outreach to employers has been significantly expanded. In fall 2010, Pitt–Johnstown connected with 335 employers, a 47 percent increase in employer engagement and interaction from fall 2009. Much of this increase is attributed to the introduction of the Have You Hired a Pitt–Johnstown Graduate? campaign. Through increased outreach, Pitt–Johnstown has educated local and regional organizations about its services, the quality of its students, and how to match the needs of the employer with the unique talents of its graduates.

Using Assessment to Improve Academic Support Services

Pittsburgh Campus

The 2001 UCSUR study identified first-term GPA as the strongest predictor of students' withdrawing from the Pittsburgh campus among those considered. In response, the University developed a number of strategies to improve academic support services and used a variety of measures to assess success of these programs. The appendices on student satisfaction goals and strategies and on student services (Appendices C19 and C21) include documents detailing some of the programmatic changes made to improve academic support services. These included a complete restructuring of these services in 2003 with the creation of the Academic Resource Center and the Math Assistance Center, which, along with the existing Writing Center, brought academic support services fully into the academic units, and the implementation of a new strategic plan for the Academic Resource Center that focused on success for all students in 2005–06.

The effectiveness of academic support services is assessed in a variety of ways. The effectiveness of the Academic Resource Center (ARC) is assessed directly through an annual review of the number of students placed on probation during their first term and the number of these who use the ARC and who subsequently are removed from probation. Student assessments of the effectiveness of academic resources are collected annually through the UCSUR survey, including a special module added in 2009 to gain better insights into student experiences with academic support (Appendix C17 on student surveys). These surveys showed that between 2008 and 2010, student satisfaction with academic support services increased six percentage points. Also in 2009, Noel-Levitz was engaged to conduct a full review of the ARC following the same model that was used to assess the Advising Center one year earlier. This review is nearly complete and a report is forthcoming.

Pitt–Bradford: TRIO Student Support Services

Early in his tenure, the president of Pitt–Bradford established improving student retention as a goal for that campus and established targets based on a review of the campus retention history and that of other similar institutions. This review highlighted the role of demographics in shaping the retention rate on that campus, in particular the large numbers of first-generation and low-income students (between 35 and 40 percent of the students at Pitt–Bradford receive Pell Grants). In response, the campus developed several programs to improve retention and graduation, including the federally funded TRIO Student Support Services program, a program aimed at supporting low-income and first-generation students. The TRIO Student Support Services program provides students with one-on-one academic counseling, a lending library to assist in reducing the burden of buying textbooks, a computer lab with practice software to increase the understanding of subject content, résumé writing support, career and graduate school exploration, and workshops that enhance academic study skills and personal development.

Between 2005 and 2009, this emphasis on enhanced academic support services resulted in a six percentage point increase in retention rates, and the number of students on academic probation fell from 17 to 10.5 percent. Building on the success of the TRIO program, the campus has created a new advising center that consolidates academic support services for the campus' underserved and most-at-risk students. Success of this center, like that of the TRIO program, will be assessed by monitoring the success of the students by looking at retention and probation rates.

Pitt–Greensburg: MAP Works Program

Similarly, Pitt–Greensburg identified academic support services as an area for improvement based on an assessment of retention rates and support programs. Based on this review, it concluded that one of the reasons that students were not succeeding was that they were not taking advantage of the support services offered



on the campus. Further investigation suggested that the students were not always aware that they needed assistance or what the appropriate support would be until it was too late. In response to this assessment, Pitt-Greensburg introduced the Making Achievement Possible (MAP) Works program in fall 2009. The MAP Works program provides a mechanism for surveying new students and identifying those who are experiencing academic and nonacademic difficulties in their adjustment to college life. It also provides a means for faculty and staff to communicate with students, direct them to appropriate services, and help them to establish contact with a mentor early in their college career. With the use of MAP Works, fall-to-spring attrition among first-year students in 2009–10 decreased by 3.3 percentage points to 5.8 percent.

Improving Registration and Access to Student Data: All Campuses

While student satisfaction was increasing throughout the University during the early to mid-2000s, one notable exception was in the area of student registration, a process that involved several different units, including the Office of the University Registrar, academic advisors, and Student Financial Services. Early efforts to

improve student satisfaction in this area focused on coordinating these efforts and on customer service. Targeted customer service surveys in the various units indicated significant improvements as a result of these efforts, but student satisfaction with the overall registration process did not improve. In 2005, the University moved to a new student data system, the PeopleSoft Student Information System, which led to the implementation of online student self-registration²⁹, and access to class schedules and grades was improved through the University's enterprise portal. At the same time, there were enhancements to student services, billing, and financial aid and improved advising and academic support (see

Appendix C21 on student services). Following these improvements, student satisfaction with the overall registration process improved dramatically, and the number of students on the Pittsburgh campus responding that they were "very satisfied" with the registration process increased 15 percentage points between 2008 and 2010.

Developing a Sense of Belonging: All Campuses

The Student Retention and Satisfaction Study of 2001 identified social integration—helping students to create a strong sense of belonging—as a major factor contributing to student satisfaction and retention on the Pittsburgh campus. Surveys on the regional campuses led to similar conclusions. In response, the University focused increased attention on the first-year experience. Individual schools and campuses developed freshman programs to integrate these students into the Pitt community. Programming was developed to enhance student

²⁹ Students are still required to meet with an academic advisor at least twice a year, and freshmen are required to see their advisor twice a term, as advisors work holistically with students to provide guidance about their academic and future professional lives.

academic experiences such as PITT ARTS and undergraduate research opportunities, and efforts were made to improve the quality of student life in residence life, campus recreation, and career advising (see Appendix C21 on student services). During this period, both student surveys and focus groups indicated that freshmen were feeling more integrated into the life of the University, and the percentage of students on the Pittsburgh campus indicating a strong sense of belonging on the UCSUR survey increased by more than seven percentage points. However, as noted earlier, these gains in student satisfaction with the social experience lagged behind the gains seen in student satisfaction with the academic experience.

A second phase of enhancing freshman integration into the community began in 2007 on the Pittsburgh campus with the introduction of a new set of First Year Experience (FYE) programs intended to create an environment for first-year students that would better assist them in connecting to the University. The initiatives were designed to engage first-year students in activities outside the classroom, help them to build meaningful relationships with their cohorts, and provide them with every reasonable opportunity to persist into their sophomore year. One of the major components of the FYE program is New Student Orientation, which is designed to provide students with opportunities to connect with other students, to inform students and their families of the opportunities available at the University and in the city of Pittsburgh, and to educate students about the mission of the University and their responsibilities within this educational setting.

Several strategies have been implemented to assess the orientation program and make modifications to the program to ensure that the intended outcomes are reached. For example, following every New Student Orientation program, a student evaluation is administered to collect data on several key factors of the program, including participant satisfaction; learning outcomes; and participation levels for all programs,

events, and activities. Data collected from the evaluations are reviewed by the orientation planning team and the associate dean of students and director of the Office of Student Life. Over the last five years, decisions have been made to either enhance or eradicate orientation programs and services to reach intended outcomes (see Appendix C20 on first-year retention).

The regional campuses also have invested in the development of FYE programs to improve student retention by successfully integrating new students into the campus community. Regional campuses have devoted resources to achieving better advising and academic support, more attractive residential experiences, and greater availability of recreational facilities. All of the regional campuses have worked to more effectively integrate academic affairs and student life efforts through programming such as learning communities and to expand experiential opportunities for students in leadership, study abroad, internships, and research. They also have developed methods of assessing students' responses to these programs.

ASSESSMENT OF UNDERGRADUATE RECRUITMENT AND ADMISSIONS

The University has established specific, measurable admissions goals and strategies to recruit students who are best able to take advantage of the academic programs and faculty expertise of each campus. The carefully planned approach the University has taken to recruitment (discussed below and in the working group report) has led to improvements in the freshman profile that have outpaced those of the University's peers and to strong enrollments on each of the campuses during a time when a number of public and private institutions in Western Pennsylvania experienced declines.

Background

In fall 2010, the Pittsburgh campus enrolled 17,083 full-time undergraduates, approximately 22 percent of whom were admitted as freshmen through one of the five schools

that admit freshmen: the Kenneth P. Dietrich School of Arts and Sciences; the Swanson School of Engineering; the College of Business Administration; the School of Nursing, and the College of General Studies, which admits nontraditional students. The remaining students enter the campus either as transfers to one of these schools or to one of the five upper-division schools (the Schools of Education, Social Work, Information Sciences, Health and Rehabilitation Sciences, and Pharmacy) or as students relocating from one of the regional campuses. The Pittsburgh campus draws from a national and, increasingly, international pool of applicants interested in a research-oriented undergraduate experience on an urban campus.

Collectively, the regional campuses enrolled in fall 2010 a total of 6,612 full-time equivalent students, approximately 27 percent of the total undergraduate enrollment of the University of Pittsburgh. Each of the regional campuses is unique, and collectively they provide additional choices for undergraduate applicants within the University of Pittsburgh. All four of the regional campuses admit students as freshmen and draw heavily from the local communities, though they are increasingly recruiting from outside Western Pennsylvania. More than 24 percent of Pitt–Bradford’s students come from outside Pennsylvania (primarily New York), while the percentage of students from outside Pennsylvania is 17 percent at Pitt–Titusville, 5 percent at Pitt–Greensburg, and 3 percent at Pitt–Johnstown.

Admissions Processes

The University’s recruitment efforts are designed to attract to each campus a diverse body of students with the background to be successful in the academic programs of that campus and to meet that campus’ enrollment goal. Within this framework and consistent with planning instructions from the Provost, each school and campus develops specific goals for the size of the freshman class and number of transfer students and proposes admissions guidelines that are subject to review and approval by the Office of the Provost. The admissions guidelines proposed

by each school and campus articulate those attributes that the school or campus believes characterize the students who will be most successful in the University’s programs. These typically include various dimensions of diversity, academic preparation, aptitude, and student interests. Through a holistic review process, admissions offices admit students based on these guidelines.

Each campus is then responsible for managing its own recruitment, admission, and financial aid/scholarship strategies and programs. Recruitment for the undergraduate schools on the Pittsburgh campus is handled centrally through the Office of Admissions and Financial Aid (OFA), which also manages the University’s referral program, whereby students who apply to the Pittsburgh campus can be identified as fitting the specific academic programs at one of the regional campuses if they cannot be admitted to the Pittsburgh campus.

Assessing the Admissions and Recruitment Processes

Throughout the recruitment season, OFA monitors applications, admissions, yields, and scholarship/financial aid commitments and updates predictive models using these data. Admissions reports are reviewed weekly by the deans and Office of the Provost. At the appropriate times during the recruitment cycle, more comprehensive reviews are conducted, and decisions regarding midcourse adjustments are made in response to these assessments. On the Pittsburgh campus, for example, a comprehensive review is conducted in early December and updated at the end of January and again at the beginning of March, and any major changes to recruitment strategies are contemplated at those times. Similar reviews occur later on the regional campuses, given their recruitment cycles. Copies of the weekly admissions and profile reports are available in the document room.

The outcomes of the recruitment cycle are assessed annually against the established goals in terms of overall number of students recruited, yields, and the characteristics of the class. The primary measures used to assess progress

toward recruitment goals include measures of academic aptitude and achievement, including average standardized test scores and high school performance; geographic diversity, including the percent from outside Pennsylvania and the percent from abroad; ethnic/racial and, for some programs, gender diversity; and other measures of student characteristics drawn from responses to the student surveys, such as the CIRP Freshman Survey. Pitt–Johnstown, for example, given its focus on connecting with the real world, benchmarks the average number of hours of community service in high school. Given the demographics of its recruitment area, Pitt–Bradford monitors the percentage of students who are the first in their family to attend college in order to guide the planning and delivery of the academic and support services best suited to the needs of these first-generation and other enrolled students. The Pittsburgh campus considers interest in attending graduate and professional school.

These data are benchmarked against peer and aspirational peer institutions when possible; they are reviewed annually to assess whether the recruitment efforts successfully met goals and to help shape recruitment strategies in coming years. This annual monitoring of progress helps to keep the admissions process focused on long-term goals and provides indications of when adjustments need to be made.

There also is an annual review of the recruitment process that includes a detailed analysis of applications, admit rates, yields, and the admissions processes and strategies. These annual reviews are informed by responses to student and parent surveys (from students who chose to attend the University and those who did not), matriculation patterns of those who did not choose to attend the University of Pittsburgh (from student surveys and using data from the National Student Data Clearinghouse), reviews of specific strategies, and insights from reviews conducted by expert consultants. Based on these annual assessments, goals and strategies are changed or modified for the next recruitment cycle. Freshman profiles, application and yield analyses, responses to surveys, and internal and

external reviews of strategies are available in Appendix C22.

Finally, the admissions guidelines developed by the schools and campuses are reviewed periodically. As mentioned earlier, each school and campus develops admissions guidelines in which it articulates those attributes that it believes characterize the students who will be most successful in its programs. The validity of these guidelines as indicators of the fit between the student and the campus is assessed by examining the relationship between the guidelines and student success measured by retention, graduation, and student satisfaction. On the Pittsburgh campus, these reviews are conducted by individual schools and OFA and also are part of the comprehensive assessment of student success conducted by UCSUR and discussed in the section on assessment of student learning outcomes. Similar analyses also are conducted on the regional campuses. For example, a review at Pitt–Greensburg indicated that high school performance (measured by rank in class) was much more important to the success of students on that campus than SAT scores. This led to a modification of the admissions guidelines to put more focus on high school performance.

Below are several specific examples of how planning and assessment have helped the University to build strong recruitment and awarding programs.

Selected Examples of How Assessment Has Led to Improvements in Recruitment and Admissions Processes

The Pittsburgh campus used student feedback to shape programs and recruitment strategies. Critical to success in effectively attracting students to the University is an understanding of who enrolls and why as well as who chooses not to enroll and some of their reasons.³⁰ In fall 2000, more than 80 percent of the freshmen on the Pittsburgh campus responding to the CIRP Freshman Survey indicated that they planned to seek advanced degrees. Using this information, OFA identified an opportunity to build

³⁰ Admit, Not Paid Summary results 2000 vs. 2010, Appendix C23

additional partnerships with the graduate and professional schools so that a select population of admitted freshmen now is eligible for guaranteed admission to a graduate or professional school of interest. These guaranteed admissions programs for graduate/professional school have attracted large numbers of qualified applicants with a strong interest in advanced degrees.³¹

These same surveys, along with a review of internal data, indicate that students who attend a campus program are much more likely to choose to attend Pitt. While this is a useful piece of information in assessing on-campus programs, it also has guided the University's strategies to encourage campus visits. The increased number of students visiting campus and the increasing yields on these students suggest that these strategies have been successful.

OAFA also routinely asks students who do not accept an admissions offer to report where they chose to attend college and the key factors in their decision to attend that institution. This information also has been useful in helping the University to assess its recruitment strategies. For example, in the 2011 OAFA survey, one of the issues that arose was a lack of access to faculty in the applicants' intended areas of study. In response, OAFA is creating a new system to better connect students and parents with faculty members in their area of interest and will assign an OAFA staff member to follow up to ensure that the connection is made and that all of the student/parent questions have been answered.

Assessing Marketing Strategies: Pitt-Bradford and Pitt-Johnstown

Ten years ago, Pitt-Bradford was using an untested tagline, "Pennsylvania's Public Liberal Arts College," in its marketing and recruitment efforts. An external consultant was hired to survey potential students regarding institutional recall and affinity for the tagline; it was determined to be not only ineffective but, in some cases, a disincentive to a population of students being recruited. That tagline was eliminated, and a different consulting firm was engaged to

conduct research and develop a new recruitment and image campaign with the new Pitt-Bradford tagline "Beyond." Implementation of that new campaign played a critical role in achieving the 1,500 FTE enrollment target two years ahead of schedule. A reassessment of the current campaign's effectiveness in mid-2010 resulted in Pitt-Bradford's decision to continue with its integrated marketing plan.

In response to demographic changes affecting the region, Pitt-Johnstown set a goal of increasing the number of prospects, applicants, and enrolled new students from outside its primary draw area. Internal trend analysis and demographic assessment by an external consultant identified counties that provided the greatest potential for expansion. Recruiting strategies were adjusted; the use of advertising, media, and communications was changed or new initiatives were started; and admissions counselor travel patterns were modified. Over a five-year period, applications and yields increased, and three Pennsylvania counties that had been considered tertiary markets for Pitt-Johnstown advanced to secondary markets.

Quantitative Assessment of Admissions and Awarding Strategies

The University regularly employs the services of a leading enrollment management consulting company, Scannell & Kurz, Inc. (S&K), to assist in the assessment of its admissions and awarding practices, including those regarding use of scholarship awards. S&K has provided comprehensive reviews of the admissions and awarding strategies on all five campuses as well as selected graduate and professional programs on the Pittsburgh campus. These reviews provide useful insights into the strategies, programs, marketing materials, and back-office operations used by the schools and campuses. S&K also reviews the admissions and awarding data for the Pittsburgh campus on a regular basis and provides recommendations that are considered as part of the campus' annual assessment of its freshman admissions activities.

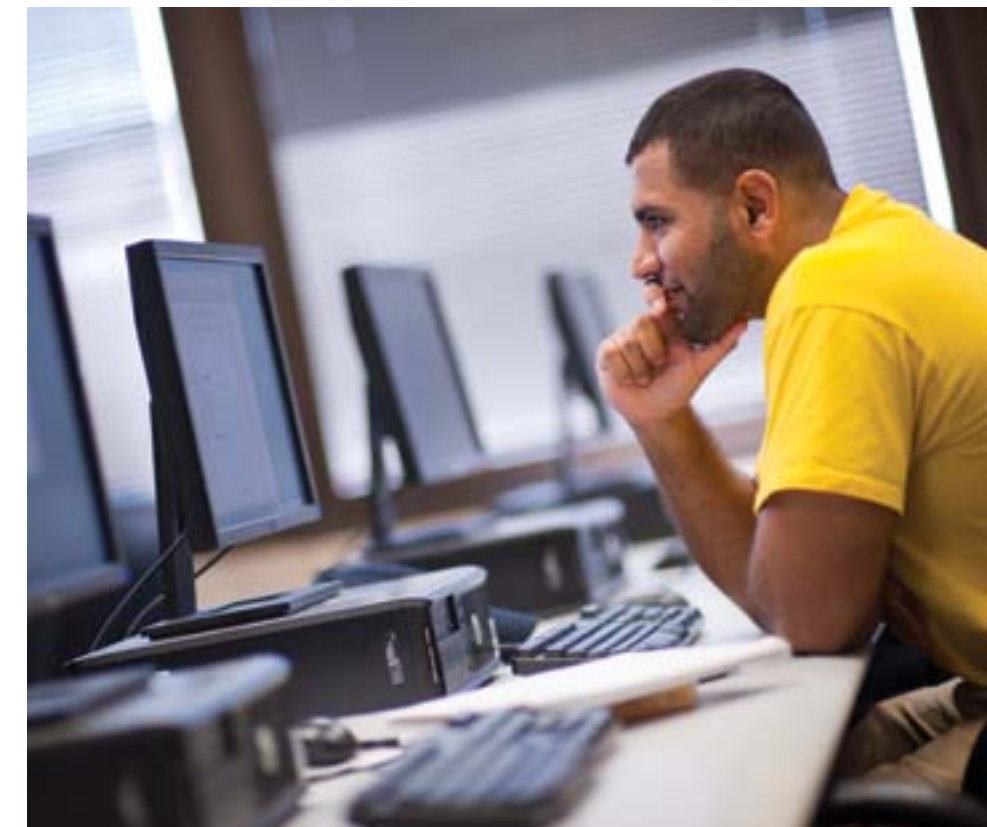
A comprehensive review of the Pittsburgh campus resulted in new awarding strategies for the freshman class of fall 2004, and the results of the recruitment efforts that year provide evidence of the effectiveness of the new strategy. The average SAT score of the enrolled freshman class improved from 1214 the previous year to 1233, and the tuition discount rate for enrolled freshmen decreased from 22.7 percent to 17.7 percent. Annual reviews of the admissions data and appropriate adjustments in recruiting goals and strategies in light of the general recruiting environment (demographics, national economy) have proved it to be a successful strategy. Since 2004, the discount rate remained steady at 18 percent; the profile of the class has continued to improve, with, for example, average SAT score increasing to 1273 in fall 2010; the percent of underrepresented and international students has increased from 15.83 percent in 2004 to 18.45 percent in 2010; and the percent of out-of-state residents increased from 17 percent to 25 percent for the same period.

Pitt-Greensburg provides another example of the success of this approach of analyzing previous years' admissions data with respect to academic qualifications, geographic origin, and ethnicity to identify target profiles, estimate the impact of financial awards, and evaluate the success of awarding practices. Over the past five years that this strategy has been in place, the academic profile of the freshman class at Pitt-Greensburg has improved, with the percent of students in the top fifth of their high school classes increasing from less than 20 percent in fall 2006 to nearly 30 percent in fall 2010. Over the same period, the representation of underrepresented students has increased from 9.1 percent to 13.3 percent. Efforts to increase the proportion of students coming from outside the primary market area have met with

limited success, as the proportion of students from outside Allegheny and Westmoreland counties has increased only slightly more than four percentage points. With this in mind, the campus refocused its efforts and, for fall 2011, anticipates an increase in the percent of students from outside the primary market area to increase to 10 percent.

SUMMARY OF FINDINGS AND SUGGESTIONS

The Working Group on Using Assessment to Improve the Student Experience (WGSE) reviewed the University's processes for assessing student learning in undergraduate, graduate, and professional programs and for undergraduate general education (Standard 14); the group also reviewed the processes for assessing other aspects of the undergraduate student experience, including the effectiveness of assessment in the recruitment, retention, and graduation of undergraduate students as well as student satisfaction with the undergraduate experience (portions of Standards 8, 9, 11, and 12).



³¹ See Graduate/Professional school guaranteed admission programs, Appendix C24

WGSE found that the assessment process used to assess student learning (described in the earlier section on student learning outcomes) is consistent with the guidelines established by the Council of Deans and the standards established by the Middle States Commission on Higher Education. It concluded that the assessment of student learning is appropriately done at the departmental or program level, where faculty with both the knowledge of the subject matter and regular contact with students are in the best position to explore assessment concerns; equally important, they are in the best position to use the information gathered through assessment to improve the University's educational offerings.

The working group also found evidence that assessment is now part of the culture of the University of Pittsburgh. Assessment has been integrated into the planning processes for all activities related to the student experience and into the planning and budgeting system. It offers as an example the Dietrich School of Arts and Sciences, which uses governance mechanisms established in its bylaws to incorporate assessment. In particular, the assessment of general education is now a principal activity of the Dietrich School of Arts and Sciences Undergraduate Council.

Overall, WGSE found that the assessment of student learning processes is sound and effective.

The working group found that the admissions offices on all campuses use a number of assessment results to improve the targeted marketing of high-ability students and to increase the geographic diversity of competitive applicants, including the use of increased involvement of Pitt alumni, parents, and faculty. They concluded that these strategies have allowed the University to maintain and expand enrollments when faced with declining numbers of high school graduates in Western Pennsylvania and to improve student qualifications.

Finally, the working group considered the various assessment initiatives and strategies

used to improve other aspects of the student experience and concluded that they contributed to improvements in retention rates, graduation rates, and student satisfaction. It noted that the increase in student satisfaction was externally recognized by the Princeton Review, which in 2010 ranked the Pittsburgh campus eighth in the category of Happiest Students and 11th in the category of Best Quality of Life. The University's ongoing assessment efforts also have allowed it to better match the attributes of its students to its mission and goals.

WGSE summarizes its findings by saying that the "assessment of student learning and of the undergraduate student experience is well thought out, it's effective, we use it when we plan changes, and it permeates the University. It is one integrated system in which everyone participates and in which responsibilities are charged where the programs are delivered."

All campuses have fairly well-developed processes in place to measure progress toward recruitment goals and to assess the effectiveness of recruitment strategies. The good practices have been instrumental in the success that the campuses have had in maintaining and expanding enrollments at a time when other institutions in Western Pennsylvania are experiencing declining enrollments. At the same time, these good assessment practices have assisted the campuses in better matching the qualifications of the students to the strengths of the campuses.

That said, WGSE makes the following suggestions to improve an already strong assessment process:

- Each campus is different, and what works for one campus might not work for others. Therefore, recruitment efforts on the individual campuses may be enhanced by establishing a forum for sharing results of assessment of recruitment strategies
- The University could increase centralized data collection efforts to provide useful information to all campuses. For example, when requesting information from the

National Student Clearinghouse on the final enrollment of students who applied to the Pittsburgh campus, similar information could be collected for the regional campuses.

The University could further build on its success by pursuing the following suggestions:

- The University has developed many best practices in both assessment and programs; enhancing its process of sharing these across units and campuses could further develop the culture of assessment throughout the institution.
- Benchmarking data for units and programs allow them to better gauge progress against peers, so the University should continue efforts to identify and develop such data. The recent initiative to join the SERU consortium and Academic Analytics are good steps that should be supported.
- A data liaison from Computing Services and Systems Development could provide additional insight and support regarding the University's computing capabilities and could help to make information even more accessible to deans and department chairs. Effective in fall 2011, the Provost appointed an executive data assessment liaison to become a member of the Enrollment Management Committee.





IV Summary of Conclusions and Findings

IV Summary of Conclusions and Findings

The Working Group on Using Assessment for Institutional Effectiveness (WGIE) found that the fundamental elements of Standard 7 are being met and the assessment processes in place are both effective and sustainable. The working group also found substantial evidence that assessment is now part of the culture of the University of Pittsburgh.

The WGIE report states that the University's Planning and Budgeting System has clearly identified goals and processes that are broadly communicated. The system itself has been formally assessed and improved over time. The annual planning process is transparent, promoting a dialogue among the central administration; the individual responsibility centers; and the broader faculty, staff, and student communities. Through feedback and assessment, the annual planning process has been adapted over time to better serve both the University and the individual units.

Benchmarking at the University level is conducted in a systematic fashion, and schools and departments have increasingly incorporated internal and external benchmarking into their planning processes. Planning and benchmarking activities yield data that are meaningful and useful and have clearly impacted decisions and resource allocation. Specific planning, budgeting, and benchmarking activities have been designed to allow responsibility centers some flexibility in goals and processes to reflect their individual needs while at the same time providing a framework to ensure that unit activities align with overall University goals. A culture of assessment is clearly evident within the

planning, budgeting, and benchmarking activities of the University of Pittsburgh.

The working group also found evidence of effective assessment in institution-wide infrastructure investment, as documented in the areas of information technology, facilities, the University Library System, international activities, and budget and finance. The University has articulated a low-cost, real-time, systematic culture of assessment within its regular information technology operations. The University also has effectively used assessment as a tool in facility planning for a number of years, as can be seen in the number of formal facility planning documents. An explicit commitment to assessment at every level, as well as a high level of sophistication in planning, has been demonstrated by the University Library System. In addition, the working group found that assessment in budget and finance is clearly useful, cost-effective, truthful, reasonably accurate, planned, ongoing, organized, and sustained.

Throughout the WGIE report, specific suggestions or areas of improvement were noted along with a few broad suggestions:

- The annual planning process, while effective, can be resource-intensive for units to prepare. A well-designed online system could facilitate the task, although the diversity of relevant data across the many different units of the University makes it challenging to develop a single standardized reporting system.
- External benchmarking data can be quite valuable in terms of providing the information necessary for setting objectives



and assessing progress, but there is some unevenness across the University in terms of the quality of the available data and the ease of gathering the data. Thus, it may be useful to examine benchmarking practices across the University to determine whether there are opportunities for improving the effectiveness of benchmarking.

- The University should continue to explore ways to assess faculty interest and involvement in research and other partnerships outside the United States, as called for in the international plan framework.
- The University should continue on its path of developing a robust financial data warehouse and using advanced analytical tools that ultimately will provide additional efficiency and speed for the administration as well as the unit levels.

The Working Group on Using Assessment to Improve the Student Experience (WGSE) reviewed the University's processes for assessing student learning in undergraduate, graduate, and professional programs and for undergraduate general education (Standard 14); the group also reviewed the processes for assessing other aspects of the undergraduate student experience, including the effectiveness of assessment in the recruitment, retention, and graduation of undergraduate students as well as student satisfaction with the undergraduate experience (portions of Standards 8, 9, 11, and 12).

The working group found evidence that assessment is now part of the culture of the University. Assessment has been integrated into the planning processes for all activities related to the student experience and into the Planning and Budgeting System. It offers as an example the Kenneth P. Dietrich

School of Arts and Sciences, which uses governance mechanisms established in its bylaws to incorporate assessment.

WGSE found that the assessment process used to assess student learning is consistent with the guidelines established by the Council of Deans and the standards established by the Middle States Commission on Higher Education. It concluded that assessment of student learning is appropriately done at the departmental or program level, where faculty with both the knowledge of the subject matter and regular contact with students are in the best position to explore assessment concerns; equally important, the faculty are in the best position to use the information gathered through assessment to improve the University's educational offerings.

Overall, WGSE found that the assessment of student learning processes is sound and effective.

The working group found that the admissions offices on all campuses use a number of assessment results to improve the targeted marketing of high-ability students and to increase the geographic diversity of competitive applicants, including the use of increased involvement of Pitt alumni, parents, and faculty.

Finally, the working group considered the various assessment initiatives and strategies used to improve other aspects of the student experience and concluded that the initiatives and strategies contributed to improvements in retention rates, graduation rates, and student satisfaction. The University's ongoing assessment efforts also have allowed it to better match the attributes of its students to its mission and goals.

WGSE summarizes its findings by saying that the "assessment of student learning and of the undergraduate student experience is well thought out, it's effective, we use it when we plan changes, and it permeates the University. It is one integrated system in which everyone participates and in which responsibilities are charged where the programs are delivered."

All campuses have fairly well-developed processes in place to measure progress toward recruitment goals and to assess the effectiveness of recruitment strategies. The good practices have been instrumental in the success that the campuses have had in maintaining and expanding enrollments at a time when other institutions in Western Pennsylvania are experiencing declining enrollments. At the same time, these good assessment practices have assisted the campuses in better matching the qualifications of the students to the strengths of the campuses.

The University could further build on these successes by pursuing the following suggestions:

- The University has developed many best practices in both assessment and programs; enhancing its process of sharing these across units and campuses could further develop the culture of assessment throughout the institution.
- Benchmarking data for units and programs allow them to better gauge progress against peers, so the University should continue efforts to identify and develop such data. The recent initiative to join the SERU consortium and Academic Analytics is a good step that should be supported.
- A data liaison from Computing Services and Systems Development could provide additional insight and support regarding the University's computing capabilities and help to make information even more accessible to deans and department chairs. Effective in fall 2011, the Provost appointed an executive data assessment liaison to become a member of the Enrollment Management Committee.
- Each campus is different, and what works for one campus might not work for others. Therefore recruitment efforts on the individual campuses may be enhanced by establishing a forum for sharing results of assessment of recruitment strategies.
- The University could increase centralized data collection efforts to provide useful information to all campuses. For example, when requesting information from the National Student Clearinghouse on the final enrollment of students who applied to the Pittsburgh campus, similar information could be collected for the regional campuses.



V Appendices

INTRODUCTION

USING ASSESSMENT TO IMPROVE INSTITUTIONAL EFFECTIVENESS

USING ASSESSMENT TO IMPROVE THE STUDENT EXPERIENCE

V Appendices

A. INTRODUCTION

1. Board of Trustees Resolution 1996: *Aggressively Pursuing Excellence in Undergraduate Education*
2. Board of Trustees Resolution 2000: *The University of Pittsburgh: 2000–05*
3. Provost Presentation: *Strategic Planning Implementation for Academic Programs*
4. University of Pittsburgh Document Road Map
5. Provost and Other Presentations; Media Coverage

Links

1. InfoBrief, September 2009, www.nsf.gov/statistics/infbrief/nsf09313/nsf09313.pdf
2. This document is on the University of Pittsburgh portal. It can be accessed directly at my.pitt.edu/portal/server.pt/community/self-study/882.

B. USING ASSESSMENT TO IMPROVE INSTITUTIONAL EFFECTIVENESS

1. Report of the Working Group on Using Assessment to Improve Institutional Effectiveness
2. Profiles of Kenneth P. Dietrich School of Arts and Sciences, School of Social Work, School of Nursing, and University of Pittsburgh at Bradford
3. University of Pittsburgh at Bradford: *Timeline for Planning and Budgeting Process*
4. *An Information Technology Foundation for the 21st Century*

5. ABS Operation and Maintenance Study
6. *ART* book
7. SOX team efforts: Excerpt of broad risks identified during business process assessments
8. Provost Area Responsibility Centers, Annual Plans, FY2001–12
9. Provost Area Responsibility Centers, Strategic Plans, FY2001–12

Links

1. Planning and Budgeting System: www.academic.pitt.edu/pb/index.htm
2. Planning and Budgeting System, Appendix A: www.academic.pitt.edu/pb/index.htm#APPENDIXA
3. Information Technology Updates: technology.pitt.edu/about/it-plan.html
4. Facilities Plan 2007–18: www.provost.pitt.edu/documents/Facilities_Plan.pdf
5. ULS: www.library.pitt.edu
6. International Plan Framework: www.provost.pitt.edu/documents/International%20Plan%20Framework.pdf
7. Collaborative for Evaluation and Assessment Capacity: www.ceac.pitt.edu
8. Fact Book 2011: www.ir.pitt.edu/fact-book/documents/fb11.pdf
9. Sarbanes-Oxley Act Section 302: www.soxlaw.com/s302.htm
10. Sarbanes-Oxley Act Section 404: www.soxlaw.com/s404.htm

C. USING ASSESSMENT TO IMPROVE THE STUDENT EXPERIENCE

1. Report of the Working Group on Using Assessment to Improve the Student Experience
2. Presentations
 - a. University-wide Chairs Retreat, Spring 2007
 - b. University Council on Graduate Studies, 2008
 - c. Provost's Advisory Committee on Undergraduate Programs, 2008
 - d. Faculty Assembly, 2008
 - e. University Senate Education Policies Committee, 2008
 - f. Board of Trustees Academic Affairs and Libraries Committee, 2008
 - g. Annual chairs meetings, 2008
 - h. School and department meetings, 2008
 - i. Articles in campus newspapers and newsletters
3. Center for Instructional Development & Distance Education workshops
4. Descriptions of the process for assessing student learning in each school and campus, provided by the deans and campus presidents
5. All assessment matrices (reports) submitted for individual programs annually since 2007
6. All assessment matrices (reports) submitted for general education programs on each of the campuses since 2008
7. Relevant sections of accreditation reports submitted by those schools using specialized accreditation to meet University guidelines
8. All Office of the Provost reviews of assessment activities in each school and on each campus
9. A comprehensive list of programmatic changes that have occurred as a result of the assessment of student learning initiative
10. General education requirements of each school and campus
11. The Student Experience in the Research University (SERU) survey
12. National Survey of Student Engagement
13. University of Pittsburgh Student Satisfaction Survey
14. Writing in the Disciplines
 - a. College Writing Board Matrix
 - b. General Education Requirement Assessment: W-requirement
 - c. College Writing Board Report Appendices A–D
 - d. College Writing Board Report E
 - e. College Writing Board Report F
 - f. College Writing Board Report G
15. Second Language
 - a. Second Language Matrix
 - b. Second Language Attachment B: Interpretation of Results
16. Summary of changes to degree and certificate programs from schools that follow the standard University process
17. Student Surveys
18. Retention and Graduation Rates
19. Student Satisfaction Goal and Strategies
20. First-year Retention
21. Student Services
22. Weekly Admissions, Profile Reports, Yield Analysis
23. Admit, Not Paid Summary results 2000 vs. 2010
24. Graduate/Professional school guaranteed admission programs
25. Arts and Sciences Standards and Strategies for Student-centered Advising, 2010.

Links

1. Provost's Guidelines for Conducting Evaluations of Academic Programs: www.pitt.edu/~provost/guidelines.pdf
2. Guidelines for Documenting the Assessment of Student Learning Outcomes at the University of Pittsburgh: www.academic.pitt.edu/assessment/pdf/assessment_guidelines.pdf
3. Assessing Student Learning: www.academic.pitt.edu/assessment/index.html
4. SERU: csh.berkeley.edu/research/seru
5. RISE: www.rise.pitt.edu
6. Outside the Classroom Curriculum: www.studentaffairs.pitt.edu/occ





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