



Assessment of Student Learning at IUPUI

2014-15 Campus Report

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Assessment of Student Learning at IUPUI 2014-15 Campus Report

Overview

IUPUI assesses student learning for two primary purposes: (1) to assure ourselves and our students that their learning experience at IUPUI meets or exceeds appropriate standards; and (2) to inform and guide improvements to our pedagogy, our programs, and our services. In addition, we have regularly reported to stakeholders through the annual IUPUI *Performance Report* (currently being re-conceived as part of a new reporting framework) and, since 2003, through this report and its predecessor, which was developed for the Indiana Commission for Higher Education. These reports are publicly available on the IUPUI web site at <http://strategicplan.iupui.edu/Performance-Report/Archive> for the *Performance Report* and at <http://planning.iupui.edu/assessment/reports.html> for this assessment report.

At an institution with more than 30,000 students in 17 schools and two colleges, assessment is multi-faceted and complex. This report highlights the many approaches to and structures that support assessment at IUPUI at campus and unit levels, from articulating learning outcomes through strengthening curricula and teaching practices based on assessment findings.

The words *assessment*, *evaluation*, and *measurement* are often used as synonyms, but advanced practitioners make distinctions among them. In higher education, it is more common to use the term “assessment” in relationship to learning, while “evaluation” frequently applies to projects or administrative procedures, and “measurement” connotes for many people a quantitative dimension. This report takes its definition of “assessment” from a glossary compiled by the Advanced Practices Subcommittee of the IUPUI Program Review and Assessment Committee (PRAC):

Assessment: is the systematic collection, review, and use of information about educational programs undertaken for the purposes of improving student learning and development (Palomba & Banta, 1999). The purpose of assessment is to provide information about the student learning and development that occurs as a result of a program. A “program” may be any activity, project, function, or policy that has an identifiable purpose or set of objectives.

(<http://planning.iupui.edu/evalassess/DRAFTGlossaryofAssessmentTerms.pdf>)

For purposes of this report, then, assessment determines whether, what, how, and how well students learn. It addresses factors known to affect or correlate with students’ academic success. It is linked with, but not the same as, measures related to students’ completion success (e.g., retention and graduation rates). Its overarching purposes at the unit and campus levels are to improve student learning and program effectiveness in supporting that learning.

Within degree programs, responsibility for assessment of student learning rests with the faculty, whether assigning course grades, determining satisfactory accomplishment of the Principles of Undergraduate Learning (PULs) and of Graduate and Professional Learning (PGPLs), or confirming that students have achieved a program’s expected learning outcomes and are ready to

graduate. Faculty determine program curricula and are thus in the best position to identify opportunities for enhancement and to implement improvements. Within academic support and co-curricular units that work with students, assessment is often carried out by professional staff members with assessment expertise and/or in collaboration with faculty members who work with those units. For example, the Principles of Co-Curricular Learning (PCLs), created by the Division of Student Affairs, are not only used by staff educators in that unit but are also beginning to be adopted by other student engagement programs. Numerous internal and external structures support this important work by faculty and staff and ensure leadership and planning for assessment across the campus.

For information about administrative structures supporting assessment at IUPUI, and for examples of types of assessment commonly used, see the Appendix to this report.

Major Assessment Structures

Accreditation

Beyond the internal purposes of assessment noted above, accreditation is a key external driver of assessment. IUPUI is evaluated every ten years for reaffirmation of accreditation by a regional body, the Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools. IUPUI's most recent reaffirmation of accreditation review in 2012 was preceded by three years of intensive preparation, including development of an institutional self-study, by a number of campus-level faculty and staff committees, along with members of the Division of Planning and Institutional Improvement and the Office of Academic Affairs. These efforts concluded with a HLC accrediting team visit in November 2012. The self-study report and the subsequent report of the visiting team continue to be publicly available at <http://accreditation.iupui.edu>. In April 2013, the HLC approved the visiting team's recommendation for reaffirmation, and IUPUI moved into a new accreditation cycle with mid-point review anticipated in Fall 2017. For the past two decades, the HLC has expected increasingly rigorous attention to assessment of student learning outcomes, including evidence of defined standards or competencies, systematic processes in place to measure student achievement, evidence of wide campus involvement in outcomes assessment, and examples of improvements made based on assessment results, particularly at the campus level.

Regional accreditation focuses on entire institutions. More than fifty programs at IUPUI also hold specialized accreditation—validation by a professional community of peers that a program meets quality standards in a discipline or field of practice. As with regional accreditors, most of these disciplinary or professional bodies require concrete evidence of student learning and ongoing improvement that meet the accreditor's standards, which often include specific learning outcomes and/or competencies. Some departments and programs must be certified by multiple bodies, and at varying intervals, so the effort involved in specialized accreditation is extensive. For example, the School of Nursing is reaccredited by the National League for Nursing Accrediting Commission for the BSN and MSN programs every eight years, the Commission on Collegiate Nursing Education for the BSN and MSN every ten years, the Indiana State Board of Nursing for the BSN every year, and the American Nurses Credentialing Center for its

continuing nursing education programs every five years. The complete list of IUPUI's accredited programs and their current status is available at <http://planning.iupui.edu/accreditation/unit-level.html>.

In 2014-15, the following programs or departments hosted specialized accreditation visits, each requiring a year or more of extensive self-evaluation in preparation:

- Health Administration Information, B.S., Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
- Forensic and Investigative Science Program, B.S., The Forensic Science Education Program Accreditation Commission (FEPAC)
- School of Medicine, Clinical Laboratory Science, B.S., National Accrediting Agency for Clinical Laboratory Science
- School of Medicine, Cytotechnology, B.S., Commission on Accreditation of Allied Health Education Programs
- School of Nursing, Continuing Nursing Education, American Nurses Credentialing Center Commission on Accreditation

Program Review

Although similar to specialized accreditation in requiring self-study and peer review, IUPUI's internal process of program review is explicitly aligned with the campus mission and includes all programs, including several that are not instructional, regardless of the existence of an external accrediting body. Programs prepare for an upcoming review by developing a self-study report that addresses: program purposes, reputation, and aspirations; financial, human, and physical resources; processes for program content and student support; and indicators of program quality, including evidence of student achievement of learning outcomes. Program review teams include community members, students, and school and campus administrators, as well as faculty from other IUPUI units and disciplinary specialists from peer institutions. The process is integrated with campus planning, decision-making, and resource allocation so that any recommendations for improvement can be carried out as part of coordinated planning for the future. The Program Review and Assessment Committee (PRAC) oversees the process, with administrative support from the Division of Planning and Institutional Improvement and data support from the Office of Institutional Research and Decision Support. The dean of each school is responsible for leading the reviews in that school.

Reviews occur on approximately an eight-year cycle, coordinating with any relevant external reviews to minimize duplication of faculty time and effort. The program review team conducts the on-site review (including interviews with various constituent groups) and presents a written report with recommendations. During the following year, program faculty prepare a written response that identifies actions to be taken to address each recommendation, and the dean convenes a follow-up meeting to discuss next steps. PRAC subsequently meets with the department chair to discuss long-term outcomes.

Program review at IUPUI emphasizes improvement driven from within, and this emphasis is grounded in IUPUI's history, mission, and successive strategic plans. Because program review

teams include external peers and community members, the process also contributes to enhancing program and institutional reputation and accountability.

During 2014-15:

- The following units hosted on-site visits by a review team: the Departments of Anthropology; Computer and Information Science; Tourism, Conventions, and Event Management; and World Languages and Cultures; the School of Nursing; the MS in Technology program; Advising in Technology in the School of Engineering and Technology; and the IUPUI Campus Center in the Division of Student Affairs.
- Preparing self-studies for program review during 2015-16 were: the Lilly Family School of Philanthropy; the School of Informatics and Computing Science; the Honors College; the Departments of Forensic and Investigative Sciences; Kinesiology; Philosophy; and Sociology; and the Office of Housing and Residence Life in the Division of Student Affairs.
- Several programs were engaged in immediate follow-up activities from their reviews during 2013-14: The Departments of English and History in the School of Liberal Arts; the Departments of Biology, Chemistry and Chemical Biology, and Physics in the School of Science; the Division of Student Affairs; the Graduate Office; and the First-Year Experience program in University College.

Recent and current examples of actions that faculty and staff have taken for improvement following program review team recommendations include:

- In the Department of Biology, faculty are reviewing the alignment of course content across majors to avoid unnecessary duplication of material while continuing to reinforce core concepts and to provide sufficient choice to assure that all students emerge with a firm grounding in biology fundamentals. In the Ph.D. program, faculty acted to improve program coherence by adding a course on professional skills, including statistics, scientific writing, presentation skills, and ethics, and by creating informal research-in-progress seminars.
- The Department of History developed a comprehensive strategic plan with goals to increase undergraduate enrollments, strengthen the master's program, implement a digital humanities initiative, increase faculty development opportunities, increase civic engagement, and improve administrative roles.
- The First-Year Experience program in University College developed a new Template for First-Year Seminars at IUPUI, which will also be shared with other IUPUI schools to help assure fidelity and consistency of FYS offerings across campus. At the same time, the Themed Learning Communities program, which has documented a strong track record of improved student success, implemented a new marketing strategy to encourage more new freshmen to enroll in these linked courses.

Assessment of Student Success

Much of the assessment reporting at IUPUI addresses student achievement of learning outcomes. Several campus units also conduct research on student success and on strategies and interventions that support such success, using metrics related to student retention and graduation.

The School of Science and University College have been campus and national leaders in this important research.

For example, several departments in the School of Science have received multi-year National Science Foundation funding to improve undergraduate student success leading to higher numbers of students graduating with STEM degrees. Several creative new instructional strategies resulted in statistically significant reductions in course failure and withdrawal rates in important “Gateway” science courses. As a result of these and corollary investments, the school has met or exceeded its target goals, including:

- 10% increase in the number of new and transfer students admitted to School of Science majors
- 10% increase in the number of minority students admitted to School of Science majors
- 10% decrease in the DFW rates for mathematics, computer science, physics, and other courses
- 50 graduating seniors participating in honors seminars

Because of IUPUI’s culture of evidence-based decision-making, the campus has continuously evaluated its extensive investments in improving student success, using sophisticated, comprehensive data collection and analysis techniques. Longstanding efforts to support undergraduate student persistence and success by improving the first-year experience have expanded to encompass other critical aspects of undergraduate experience, with initiatives focused on underrepresented minorities, transfer students, and many others. Most of this work is now led by the Division of Undergraduate Education, a unit created in 2014 as a result of a new strategic plan, *Our Commitment to Indiana and Beyond*, that was sharply focused on promoting undergraduate student success. Oversight is provided by the Council on Retention and Graduation, formed in 2004 and made up of representatives of units that contribute to or report on undergraduate student success efforts.

An example from University College’s 2014-15 Assessment Report illustrates the benefits to students of this sustained monitoring. The IUPUI Summer Bridge Program is an intensive two-week course for incoming first-year students conducted before regular classes begin. Many of the student cohorts continue to meet as First-Year Seminars throughout the fall semester. Since the first offering of Summer Bridge in 2007, data have consistently demonstrated that one-year retention rates for Summer Bridge participants are statistically significantly higher than for nonparticipants, even when taking into account academic preparation and demographic factors like gender, income level, race and ethnicity, and date of admission. Participants’ academic performance has also been significantly stronger than for nonparticipants. For example, African American students who participated in the Fall 2014 Summer Bridge Program were more likely to earn grade-point averages above 2.0 and had higher fall-to-fall retention rates than nonparticipating African American students. As a result of these positive outcomes, University College has offered more sections and encouraged more students to enroll in Summer Bridge, approximately tripling enrollments between 2007 and 2015.

Assessment of Student Learning

Principles of Undergraduate Learning

IUPUI has devoted considerable effort to assuring that undergraduates master the six Principles of Undergraduate Learning (PULs), our campus-wide general education outcomes. (Further explanation of each PUL appears in the Appendix.) In Spring 2010, we instituted a systematic campus-wide approach to PUL assessment reporting to assure regular attention to all PULs across all undergraduate programs and to enable aggregation of PUL outcomes at the campus and school levels. Most undergraduate programs established a five-year cycle for assessing student learning of PULs identified as major and moderate emphases in each course; a few programs adopted a three-year cycle. Course instructors used their accustomed tools and a common rating scale to report the PUL results at the same time that they submitted course grades for each student.

Since Spring 2010, the accumulating data have provided information about undergraduate student learning of the PULs. The table below, prepared by Information Management and Institutional Research (IMIR), represents aggregated campus outcomes for students nearing graduation, with mean results from the 400-level courses ranging from a low of 3.06 to a high of 3.44 on a 4-point scale (where 1 = Not at All Effective and 4 = Very Effective). Several IUPUI schools also used reports sorted by department to permit closer examination of opportunities for program-level improvement.

IUPUI Faculty Ratings of Student Performance on PULs with Major Emphasis (400-Level Courses)¹

PUL – Major Emphasis	Mean ³	Not Effective	Somewhat Effective	Effective	Very Effective	Total
1A. Written Oral & Visual Communication Skills	3,049 3.29	129 4.2	305 10.0	1,180 38.7	1,435 47.1	3,049 100.0
1B. Quantitative Skills	2,135 3.06	142 6.7	361 16.9	856 40.1	776 36.3	2,135 100.0
1C. Information Resource Skills	395 3.13	43 10.9	51 12.9	114 28.9	187 47.3	395 100.0
2. Critical Thinking	3,412 3.23	130 3.8	384 11.3	1,455 42.6	1,443 42.3	3,412 100.0
3. Integration and Application of Knowledge	8,155 3.43	195 2.4	508 6.2	3,017 36.0	4,435 54.4	8,155 100.0
4. Intellectual Depth, Breadth, and Adaptiveness	4,211 3.40	122 2.9	318 7.6	1,533 36.4	2,238 53.1	4,211 100.0
5. Understanding Society and Culture	2,399 3.28	134 5.6	280 11.7	733 32.2	1,212 50.5	2,399 100.0
6. Values and Ethics	1,551 3.44	49 3.2	79 5.1	563 35.3	860 56.4	1,551 100.0
Total ²	25,307 3.33	944 3.7	2,286 9.0	9,491 37.5	12,586 49.7	25,307 100.0

1 Includes Columbus

2 Combined number of student ratings in all 400-level courses sampled in Spring 2010, Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, and Fall 2014. A student may be evaluated more than once if he or she is taking more than one 400-level course.

3 Scale: 1 = "Not Effective" 2 = "Somewhat Effective" 3 = "Effective" 4 = "Very Effective"

Principles of Graduate and Professional Learning

In 2011, IUPUI's Faculty Council adopted a set of campus-wide Principles of Graduate and Professional Learning (PGPLs) parallel to the PULs, in response to a need expressed by a number of IUPUI graduate/professional programs. (Further explanation of each PGPL appears in the Appendix.) Neither regional nor specialized accrediting bodies require assessment of graduate/professional-level "general education" outcomes. Nor, given the significant variability among graduate and professional programs—medical and dental, doctoral, professional such as MBA and JD, applied master's in fields such as education, creative such as MFA programs—does IUPUI have any campus-wide requirement that schools report on such outcomes for purposes of aggregation. Nonetheless, most IUPUI graduate and professional programs have now aligned their program outcomes with the campus PGPLs and several have begun including PGPL outcomes in their annual Assessment Reports.

The School of Dentistry's (IUSD) Doctor of Dental Surgery program provides a case in point. The school is accredited by the Commission on Dental Accreditation, which determines overall standards but permits each dental school to establish specific learning outcomes and assessment protocols. IUSD has twenty competencies that each student must independently challenge and successfully complete in order to be eligible for graduation. Students who are not successful on a competency exam are remediated as needed and given additional opportunities to master the skills, then must attempt the competency again. Students are not eligible to graduate until they have demonstrated achievement of all twenty competencies (in addition to successfully completing all required courses in the curriculum). Each clinical assessment is used as a direct measure of at least one of the competencies; most assessments also map to all four (or at least one) of the IUPUI PGPLs. For example, IUSD Competency #19—*Graduates must be competent in providing evidence-based patient care in which they assess, critically evaluate, and communicate scientific and lay literature, incorporating efficacious procedures with consideration of patient needs and preferences*—maps to all four of the PGPLs. (See Appendix for detail).

Principles of Co-Curricular Learning

Building on the PULs and PGPLs, in 2013 the Division of Student Affairs created a set of Principles of Co-Curricular Learning (PCLs) that expands on expectations set forth in the PULs to encompass students' out-of-class learning. The PCLs add two new Principles to the six PULs: one focused on intrapersonal development, the other on interpersonal development. A complete explanation of the PCLs is provided in the Appendix. The division began in 2013-14 to roll out use of the PCLs for assessment in its varied programs, especially those which cut across academic divisions on campus (for example, leadership of student organizations, employment in the division, residence halls, etc.).

The division's Assessment Report for 2014-15 highlights assessment of student learning and development in three of its units: the Campus Center, Housing and Residence Life, and JagVenture (a three-day pre-college transition program). The Campus Center employs approximately 55 students as building managers, area managers, team members, and communication specialists. Previously, assessment was incorporated into these student

employees' annual performance evaluations; in 2015 the report presents results from a stand-alone survey developed for student self-assessment and feedback to the division. The report identifies decided improvements in students' computer and software skills as a result of augmented training implemented after 2013. The assessment results also suggested some areas in which training can be enhanced, especially in supervisory skills for building managers. Professional staff members plan to incorporate more in-depth training in these skills and increase opportunities for student managers to role-play difficult situations. They will also conduct train-the-trainer sessions so students are better prepared for their roles in training new team members.

Program Learning Outcomes

Most of the unit Assessment Reports emphasize achievement of student learning outcomes for their degree programs (which are also aligned with the PULs or PGPLs). For example, in the Kelley School of Business Indianapolis, as faculty assessed student learning outcomes in undergraduate business courses, they reported concern about deficiencies in concise and actionable business writing. Following analysis of the reports, the interdepartmental Kelley Assessment Committee recommended to the dean's office and the Undergraduate Policy Committee a two-pronged response: requiring students to write a management brief in one of the 400-level management courses and, over a longer period, considering a program-wide standard of at least one writing assignment in every undergraduate course. The latter will require additional resources and is under study.

The Biomedical Engineering (BME) Department in the School of Engineering and Technology, which assesses programs every three years, reported results of actions taken following the 2012 assessment cycle. Students of a nearby private university can participate in a five-year dual degree program in which they concurrently pursue a science or liberal arts degree from their home institution and an IUPUI engineering degree, with most of the first two years' coursework completed at the home campus. The 2012 data had indicated that these students were struggling with the IUPUI BME coursework that required programming and implementing a computational model or technique. Based not only on exam results, but on feedback solicited from seniors in the program, the department switched the sequence of two BME courses to allow earlier introduction of material for all students and to align with the common physics prerequisites. In addition, faculty increased use of MATLAB (software environment for engineering and science) in two sophomore-level courses to give students additional practice earlier in the curriculum. The 2015 results showed that the other students still lagged their IUPUI counterparts but had nonetheless made strides toward closing the gap. BME plans to share the recent assessment results with colleagues at the partner institution, with the suggestion that they consider revising their introductory computing course or allow BME-interested students to take the IUPUI version of the course.

Collaborative Support for Assessment

Program Review and Assessment Committee

Faculty ownership and collaboration are important to the success of any assessment program, and especially so at IUPUI, given our size, scale, and structure of schools and centers for

experiential and co-curricular education. The primary campus-level mechanism supporting faculty-driven, collaborative assessment approaches is the Program Review and Assessment Committee (PRAC), composed of representatives from all academic units and a range of support units, and led by faculty. PRAC activities are supported by staff of the Division of Planning and Institutional Improvement.

As a collaborative body, PRAC provides a forum for exchange of program review and assessment information and strategies among undergraduate, graduate, and co-curricular units across the campus. In addition, the committee offers guidance for student learning outcomes assessment at IUPUI and funds small grants that promise innovative approaches or improved practice in assessment. PRAC members compile and submit the annual school or unit Assessment Report, and a PRAC subcommittee peer-reviews these reports and provides collegial feedback and suggestions for improvement. PRAC members also serve as liaisons to their units and provide guidance and expertise on assessment issues within the school or center.

At monthly meetings, PRAC members learn about special initiatives, discuss current issues related to assessment and program review, approve new assessment grants and hear reports from previous grantees, and engage in professional development.

- In 2014-15, the committee approved new assessment grants for projects in Healthcare Engineering Technology Management, Mechanical Engineering Laboratory, Interior Design Technology, Library and Information Sciences, and the School of Law. Faculty and staff from the Center for Service and Learning, School of Nursing, and Department of World Languages and Cultures presented reports from recently completed assessment grants.
- PRAC members from the Kelley School of Business reported on assessment planning at the school level. Representatives from the Center for Teaching and Learning worked with PRAC leaders to provide a series of professional development workshops on developing and using rubrics, formulating assessable learning outcomes, and designing assignments to meet learning outcomes.
- Members were regularly updated on:
 - plans to implement and assess the new general education core curriculum;
 - approaches to expanding participation in and improving usefulness of assessment of the PULs as IUPUI transitions to new PUL assessment approaches;
 - the multi-institution pilot of an assessment model conducted as part of the Multi-State Collaborative to Advance Learning Outcomes Assessment, sponsored by the Indiana Commission for Higher Education and the Association of American Colleges and Universities' Quality Collaboratives;
 - efforts to re-launch and strengthen assessment of courses in the RISE Initiative, which aims to increase opportunities for experiential learning at IUPUI;
 - progress on IUPUI's participation in the Foundations of Excellence self-study intended to improve the transfer student experience at IUPUI; and
 - campus participation in a competency-based assessment project sponsored by the Council for Adult and Experiential Learning (CAEL).
- Leaders of Institutional Research and Decision Support offered reports on the extensive information now readily available on the office's new website, results from the 2014

Continuing Student Survey, and a research brief prepared in support of Foundations of Excellence.

- Leaders from University Information Technology Services (UITS) and University Institutional Research and Reporting introduced a new “digital learning ecosystem” being launched by a consortium in which Indiana University is a leading member. Another UITS representative provided overviews of assessment capabilities in Canvas (IU’s new learning management system) and Taskstream (IU’s new ePortfolio platform).

Undergraduate Affairs Committee

As the campus moved to implement IUPUI’s Strategic Plan, the Office of Academic Affairs and the IUPUI Faculty Council Executive Committee created a new representative body focused on undergraduate education with responsibilities parallel to those of the Graduate Affairs Committee. The new committee replaces one committee and assumes some duties of another. Composed of associate deans and faculty members who lead undergraduate curricula across all schools conferring undergraduate degrees, the new committee is charged with:

- assuming curricular responsibility for the IUPUI General Education Core
- supporting the assessment of student learning outcomes aligned with the Principles of Undergraduate Learning in general education courses
- reviewing and coordinating undergraduate curriculum changes involving general education courses
- reviewing proposals for new undergraduate degrees, subplans, minors, certificates, and name changes
- coordinating the updating of four-year degree maps and
- helping to guide the development of curricular and academic policies to support timely degree completion by beginning students, transfer students, and re-engaged adult students.

Priorities of the Undergraduate Affairs Committee include developing procedures, in partnership with PRAC, for review of assessment data on both the General Education Core and the PULs; seeking to improve institutional effectiveness in undergraduate education; and guiding undergraduate curricular initiatives that span academic units.

PUL Assessment Revisited

As noted in the IUPUI Assessment Report for 2013-14, a new legislative mandate for a 30-hour fully transferrable general education core for all public colleges and universities in Indiana created challenges for IUPUI’s approach to general education assessment. The PULs emphasize broad skills and competencies (e.g., oral communication, critical thinking) intended to be honed and demonstrated throughout a student’s undergraduate education, including the academic major. On the other hand, the state mandate focuses on more traditional subject-matter domains (e.g., cultural understanding, life and physical sciences) intended to provide a foundation for all majors, primarily during the first two years of study. Several IUPUI leaders participated in a week-long workshop on general education presented by the Association of American Colleges and Universities, and they combined their learning from that experience with lessons from

IUPUI's recent participation in several statewide and national multi-campus assessment initiatives. With advice from PRAC, the new Undergraduate Affairs Committee then developed a plan to assess PULs in the general education core. Since nearly all undergraduate programs have aligned their own program learning outcomes with the PULs, students' progress in mastering those competencies will continue to be assessed in the context of program outcomes assessment.

To complement this planning, the Department of Communications undertook a Spring 2015 pilot project modeled on work by the Multi-State Collaborative to train faculty to use VALUE rubrics to assess student learning. Focusing on the introductory public speaking course, department faculty developed a standard rubric for assessing oral communication based on the VALUE rubric for that skill, then aligned the R110 course learning outcomes with the PULs and statewide general education competencies. A sample of approximately 225 student speeches in each of three categories (informative, informational, and persuasive speeches) provided a basis for the pilot. Preliminary results, included in the 2014-15 School of Liberal Arts Assessment Report, helped faculty in this very large course (enrolling approximately 2,000 students each semester) to identify areas for improvement. Though results were generally consistent across the numerous sections of the course, and data indicated student improvement from beginning to end of the semester, the average scores were slightly below targets. Further analysis led to a recommendation that additional faculty be trained in using the rubric. Results also highlighted the need to improve methods for recording the student speeches, as poor camera placement and audio/video quality created barriers to effective assessment.

Educational Unit Annual Reports for 2014-15

Each year, academic and co-curricular units prepare summary reports of their assessment activities for the Program Review and Assessment Committee. Reports submitted for 2014-15 are posted on the PRAC web site at <http://planning.iupui.edu/assessment/prac-files/school-reports/prac-school-reports.html>.

Each unit's approach to reporting is adapted to meet its particular number, range, and types of programs. Most units identify student learning outcomes for their programs and describe approaches to helping students achieve the outcomes, methods of assessing this achievement, assessment findings, and improvements they have made or plan to make based on these assessment findings. Some large schools report on half or a third of their programs in alternating years; others provide comprehensive summaries every year, but only periodically detail such items as learning outcomes or assessment procedures that may change very little from one year to the next.

Reports from the following schools and educational units are available for 2014-15.

- Indiana University-Purdue University Columbus
 - English
- School of Dentistry
 - DDS Program
 - Dental Hygiene
- School of Education

- School of Engineering and Technology
- Richard M. Fairbanks School of Public Health
- School of Health and Rehabilitation Sciences
- Herron School of Art and Design
- Honors College
- School of Informatics and Computing
- Kelley School of Business Indianapolis
- School of Liberal Arts
- Lilly Family School of Philanthropy
- Robert H. McKinney School of Law
- School of Medicine
 - MD Program
 - Health Professions Programs
- School of Nursing
- School of Physical Education and Tourism Management
 - Department of Kinesiology
 - Department of Tourism, Convention, and Event Management
- School of Public and Environmental Affairs
- School of Science
- School of Social Work
- Division of Student Affairs
- University College

Appendix

Assessment Types and Structures at IUPUI

Matter for Assessment

The Principles of Undergraduate Learning, adopted by the IUPUI Faculty Council in 1998 and revised in 2007, describe the expectations for what IUPUI undergraduates will know and be able to do upon completing their degrees, regardless of major. As a result of the faculty's efforts to link these general principles with the disciplinary learning outcomes of individual majors, students are provided multiple opportunities to gain increasing mastery of the PULs across their entire undergraduate experience, including general education courses and those in their major fields of study.

1. **Core Communication and Quantitative Skills**—the ability of students to express and interpret information, perform quantitative analysis, and use information resources and technology—the foundation skills necessary for all IUPUI students to succeed
2. **Critical Thinking**—the ability of students to engage in a process of disciplined thinking that informs beliefs and actions, remaining open-minded, reconsidering previous beliefs and actions, and adjusting their thinking, beliefs, and actions based on new information
3. **Integration and Application of Knowledge**—the ability of students to use information and concepts from studies in multiple disciplines in their intellectual, professional, and community lives
4. **Intellectual Depth, Breadth, and Adaptiveness**—the ability of students to examine and organize discipline-specific ways of knowing and apply them to specific issues and problems
5. **Understanding Society and Culture**—the ability of students to recognize their own cultural traditions and to understand and appreciate the diversity of the human experience
6. **Values and Ethics**—the ability of students to make sound decisions with respect to individual conduct, citizenship, and aesthetics

In the complete description of the PULs (<http://due.iupui.edu/Undergraduate-Curricula/General-Education/Principles-of-Undergraduate-Learning#16225100-pul-1-core-communication-and-quantitative-skills>), the definition of each principle further articulates specific outcomes or objectives that help, not only to explain the principle's importance, but also to assure commonality in measurement across the campus, even though each school or department assesses the PULs through the lens of its own disciplinary standards.

The Principles of Graduate and Professional Learning (<http://graduate.iupui.edu/faculty-staff/policies.shtml>) were adopted by the Graduate Affairs Committee in 2010 and similarly represent common expectations for all students who earn graduate and professional degrees from IUPUI, regardless of the field of advanced study.

1. Demonstrating mastery of the knowledge and skills expected for the degree and for professionalism and success in the field
2. Thinking critically, applying good judgment in professional and personal situations
3. Communicating effectively to others in the field and to the general public
4. Behaving in an ethical way both professionally and personally

The Principles of Co-Curricular Learning, developed by the Division of Student Affairs in 2013, address outcomes of both undergraduate and graduate learning within a co-curricular context. Grounded in the PULs and PGPLs, the PCLs incorporate two additional principles: Intra- and Inter-personal development. Each has a set of associated outcomes (see <http://studentaffairs.iupui.edu/about/assessment/learning-outcomes.shtml>). The PCLs thus furnish the framework for co-curricular programs such as leadership development, residence life, campus recreation, and on-campus employment.

1. **Core Communication Skills**--the ability of students to express and interpret information and use information resources and technology—the foundational skills necessary for all IUPUI students to succeed.
2. **Critical Thinking**--the ability of students to engage in a process of disciplined thinking that informs beliefs and actions. A student who demonstrates critical thinking applies the process of disciplined thinking by remaining open-minded, reconsidering previous beliefs and actions, and adjusting his or her thinking, beliefs, and actions based on new information.
3. **Integration and Application of Knowledge**--the ability of students to use information and concepts from studies in multiple disciplines in their intellectual, professional, and community lives.
4. **Intellectual Depth, Breadth, and Adaptiveness**--the ability of students to examine and organize disciplinary ways of knowing and to apply them to specific issues and problems.
5. **Understanding Society and Culture**--the ability of students to know and identify the interests, beliefs, and customs of their community and others through interaction, self-discovery, scholarship, and active participation in communal traditions.
6. **Values and Ethics**--the ability of students to make sound decisions with respect to individual conduct, citizenship, and aesthetics.
7. **Intrapersonal Development**--the ability of students to be aware of their emotions, behaviors, and motivations, analyze their strengths and weaknesses, and take responsibility for their decisions and actions.
8. **Interpersonal Development**--the ability of students to navigate social and organizational systems such that they acknowledge and respect the values of others in their interactions while creating conditions of mutual benefit for themselves and those around them.

RISE to the IUPUI Challenge. IUPUI’s academic plan calls for all IUPUI undergraduates to participate during their college careers in two experiences captured in the acronym RISE—Undergraduate **R**esearch, **I**nternational Learning, **S**ervice Learning, or other **E**xperiential Learning (such as internships, practica, and clinical or field experiences). These experiences occur within courses, and are identified accordingly on students’ transcripts. RISE experiences incorporate the PULs and often contain a reflective component that is incorporated, along with other relevant materials, into students’ ePortfolios, digital stories, or other records to support assessment of PUL learning outcomes across the campus.

The First-Year Experience. One of IUPUI’s mission commitments is that each of its core activities—teaching and learning; research, scholarship, and creative activity; and civic engagement—will be characterized by the pursuit of best practices. Many of these “best practices” support students’ success in achieving their educational goals, particularly by enhancing academic engagement and improving retention and graduation rates. The RISE learning experiences are themselves forms of engaged learning closely correlated with improved

learning outcomes. IUPUI has also invested substantial resources in its First-Year Experience programs to assure that students are well supported as they make the transition to college. Students are introduced to the PULs in their First-Year Seminars and Themed Learning Community courses; they also develop their PUL-related knowledge and skills in Gateway courses (courses that enroll the highest numbers of entering undergraduates), which account for over 30 percent of all undergraduate credit hours, and other introductory courses. Instructors and advisors work with new freshmen in First-Year Seminars to create a Personal Development Plan that includes academic and career goals integrated with the PULs. Assessment of these practices typically focuses on engagement levels, student perceptions, and percentages of students retained into their second semester and second year.

Program and project evaluation. Some assessment approaches resemble the kinds of customer satisfaction surveys or program evaluations common in the for-profit and non-profit sectors. Programs, as well as the institution as a whole, have educational reasons to measure student and alumni satisfaction. They want to understand student perceptions of roadblocks to completing their education, to check for disparities between what students think they are learning and what faculty believe students are learning, and to understand why students encounter difficulties with particular courses or concepts. Similarly, after attempting to improve some aspect of student academic support, a program evaluation approach is often the best means to follow up to assure the desired improvement. Forms of assessment that go beyond ascertaining academic achievement are thus necessary and useful in helping academic programs serve students well.

Structures Supporting Assessment

Primary responsibility for assessment of learning at IUPUI is properly decentralized to the faculty. Coordination is achieved through the work of two standing institutional groups: the Program Review and Assessment Committee (PRAC) and the Undergraduate Affairs Committee. In addition, the Council on Retention and Graduation (CRG), though primarily focused on student success and retention initiatives, also has occasion to address student learning outcomes assessment. Administrative support and leadership for assessment are provided through (1) the Division of Planning and Institutional Improvement, including its offices of Accreditation and Program Review, Institutional Effectiveness, and Testing Center, and (2) the Office of Institutional Research and Decision Support in Academic Affairs. The Office of the Executive Vice Chancellor for Academic Affairs contributes academic leadership and also assures that the Centers for Teaching and Learning, Service and Learning, and Research and Learning are engaged and ready to assist faculty in acting on any identified needs for improvement. In addition, many schools have active assessment committees, typically comprising representatives from all departments, that provide school-level coordination, reporting, and professional development opportunities.

Several practices prompt attention to assessment processes and results. Comprehensive program review helps ensure that general education and discipline-specific instruction and assessment are occurring according to plan. Review teams are asked to comment on the quality of curricula, methods of instruction, and evidence of student learning in general education, as well as in the major field of study. Annually, each educational unit prepares an Assessment Report to PRAC. These “PRAC Reports” serve as the main foundation for this report on learning assessment at

IUPUI and are available at <http://planning.iupui.edu/assessment/prac-files/school-reports/prac-school-reports.html>.

Common Methods of Assessment

Grades. Assignment and course grades are considered to be indirect evidence of learning for purposes of program or institutional assessment, but they do represent essential direct feedback from instructor to learner on individual progress and achievement. Since low grades can cause students to be underprepared for later courses, faculty members pay close attention to unusually high rates of low grades in classes so they can intervene when necessary. Grades in capstone courses and experiences (culminating experiences that offer students opportunities to integrate and apply learning of both content and skills) can often provide direct evidence of cumulative student learning. These courses and experiences typically include research projects, honors theses, creative exhibitions or performances, and/or internships or field experiences. Grades in these courses or experiences may bear directly on program assessment and are now integrated with PUL assessment as well.

Surveys. Indirect evidence of student learning is collected annually through a variety of surveys administered to representative samples of undergraduates. The locally developed IUPUI Continuing Student Satisfaction and Priorities Survey (CSSPS) was administered annually from 1995 until 2001, when it was moved to biennial administration to permit use of the National Survey of Student Engagement (NSSE) in alternate years. Currently, NSSE is administered every third year, while the CSSPS is administered in other years. Comparison of average responses of lower- and upper-division students offers an indication of how best practices adopted at IUPUI contribute to learning and development. National surveys like the NSSE allow IUPUI to benchmark its performance on learner engagement over time and against a set of peer institutions and other participating institutions. NSSE does not directly measure student learning, but higher education research demonstrates that the engaged practices on which NSSE focuses are closely linked to student learning. Our local surveys are particularly helpful for understanding students' perceptions of the extent to which they are mastering PUL skills and knowledge.

Another example of survey-based indirect evidence is the survey of undergraduate alumni employment and satisfaction conducted since 1996-97. Several subsets of questions probe how well students believe their education at IUPUI prepared them for their careers and/or graduate study. Direct experience in a job or graduate program may offer alumni perspectives on their learning that are more realistic than were their perceptions when they graduated.

School-level results of locally developed surveys are given to IUPUI schools to enable them to compare themselves to other schools on campus and to results at other institutions that administer NSSE. In addition, program-level results of the CSSPS are provided to individual programs in years when those programs undergo their IUPUI program reviews.

External sources. External audiences also contribute directly to our understanding of our undergraduates' learning outcomes. For example, many of the schools that prepare students for employment in professional fields (e.g., nursing, business, engineering) periodically survey employers of their graduates to assure that students are acquiring the abilities and knowledge

they need to thrive professionally. In other cases, graduates must pass a state- or nationally-normed examination in order to enter a profession (e.g., attorneys, nurses and allied health professionals, some kinds of social workers). Pass rates of IUPUI graduates on these exams furnish important feedback to faculty about areas showing satisfactory learning and opportunities for improvement. Similarly, student scores on various graduate entrance examinations or acceptance rates into graduate school can supply helpful external validation.

Portfolios. Portfolios of student work also offer direct evidence of learning outcomes. Some IUPUI programs continue to rely on traditional methods of assembling and evaluating portfolios. Other programs have been drawn to the opportunities offered by electronic portfolios. IUPUI's ePortfolio system serves both assessment and pedagogical purposes. Data derived from authentic evidence (that is, evidence created during learning experiences rather than scores on one-time-only examinations) collected, reflected upon, reviewed, and evaluated by individual faculty members or teams can be aggregated via digital reporting mechanisms to provide information at program and campus levels. As departments incorporate the ePortfolio into their curricula, they often refine courses or even entire programs to address desired learning outcomes more deliberately and effectively.