

Assessing General Education Outcomes in the Disciplines

IUPUI Summary Response to ICHE Goal 6

September 2004

Development of Learning Goals at IUPUI

Prior to 1990, general education at IUPUI was the responsibility of each school and may be characterized as a distributive model. In 1991 a Commission on General Education began work on development of a coordinated approach to general education. In 1992 the NCA visiting team noted the work of the Commission and encouraged the campus community to identify “desired outcomes for general education...amenable to meaningful assessment.”

Over the next several years general education was discussed in a series of multi-disciplinary committees, day-long retreats, consultant-led workshops, and town hall meetings. This process culminated in the adoption by the IUPUI Faculty Council in 1998 of six Principles of Undergraduate Learning (PULs):

1. **Core Communication and Quantitative Skills** - the ability of students to write, read, speak and listen, perform quantitative analysis, and use information resources and technology.
2. **Critical Thinking** - the ability of students to analyze carefully and logically information and ideas from multiple perspectives.
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, both within the United States and internationally.
6. **Values and Ethics** - the ability of students to make judgments with respect to individual conduct, citizenship, and aesthetics.

The Principles of Undergraduate Learning underlie a “process approach” to general education at IUPUI that is intended to permeate the entire undergraduate curriculum rather than being a set of courses or skills developed in specified courses during a student’s first two years of college. The PULs constitute a set of common learning outcomes that provide a shared intellectual foundation across disciplines.

Ensuring Engaging Learning Opportunities for Students

To ensure that IUPUI students have opportunities to participate in engaging learning experiences that are aligned with expected learning outcomes, IUPUI faculty developed a template for initiating and guiding assessment in academic units that includes the following contents:

What general outcome do we seek?	How will we know this outcome when we see it? That is, what will students know and be able to do upon graduation?	How will students learn these things (in or out of class)?	What evidence can we provide to demonstrate what students know and can do? That is, how can we assess student learning?	What are the assessment findings?	What improvements have been made based on assessment findings?
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Through the combined efforts of faculty and administrative support staff, all IUPUI students should experience each of the following:

1. Prior learning is assessed in writing, mathematics, and selectively in languages, chemistry and other disciplines upon matriculation and students are placed in courses appropriate to their levels of achievement. End-of-course assessments administered in Indiana high schools will be considered in this process as appropriate.
2. Students are introduced to the PULs in their First-Year Seminars and begin immediately to reflect on their learning of the PULs in their other courses.
3. Students continue to develop their PUL-related knowledge and skills in coursework, particularly in Gateway courses—those 30 or so introductory courses that account for over 30% of all undergraduate credit hours.
4. Students’ PUL-related knowledge and skills are assessed in the courses in which these concepts are taught, with baccalaureate-level skills assessed in capstone courses or in association with other culminating experiences such as design projects or professional licensure exams.
5. Faculty and professional staff use both direct and indirect measures of student learning to improve curriculum, instruction, and assessment processes.

Providing Administrative Structures and Practices to Promote Learning

Various mechanisms have been established to ensure that the five processes related to general education at IUPUI are occurring. First an oversight committee representing each academic unit prepares an **annual report** using the template illustrated above. Each year the content of the annual report—with a report for each school—is reviewed by a faculty committee, and suggestions for improvement of assessment methods are offered.

Comprehensive **academic program review** provides a second mechanism for ensuring that general education instruction and assessment are occurring according to plan. Peer review of all academic units (and many administrative units) is conducted every seven years.

A third mechanism is the appointment of **individuals charged specifically with responsibility for assessment** in schools and academic centers.

IUPUI has developed **performance indicators** designed to chart progress on ten institutional goals, including student learning outcomes. Underlying each of these macro-indicators is a rich set of sub-indicators.

In connection with the institutional self study carried out in preparation for its NCA review in 2002, IUPUI focused on campus-wide implementation of the PULs. Campus leaders are using the results of

this **self-study** to develop a system that will provide direct and authentic evidence of achievement and improvement in learning. This system has taken the form of an electronic student portfolio.

Development of the Student Electronic Portfolio

Led by the Center on Integrating Learning, the IUPUI student electronic portfolio (ePort) is being designed to provide evidence of both improvement and achievement in each of the Principles as they are learned within the context of the major. Authentic evidence of individual student learning, as well as aggregated information of learning at the course, department, program, and campus level will be increasingly available, as the ePort moves from its pilot phase in fall 2004 to full implementation over the next four to five years.

Every student will have opportunities to provide evidence of learning in each of the Principles at the Introductory (first 26 credit hours), Intermediate (first 56 credit hours), and Advanced (junior and senior) levels. Additionally, throughout their undergraduate careers, students will be able to upload examples of co-curricular and extra-curricular learning related to the Principles. This forms an electronic “matrix” with each of the PULs as the rows and the four levels of assessment as the columns. In essence, each cell of the matrix is an electronic work and storage space.

Each student uploads artifacts from course work (or from co-curricular and extra-curricular learning in the “experiential” cells) into the appropriate cell (each square of the matrix is a cell). When the student has met the campus-determined expectations for learning in each of the cells, he or she writes a reflection, showing how understanding of the Principle has been demonstrated and enhanced by the creation of these artifacts of learning. There are three parts to these reflections: evidence of learning; connection of the evidence to campus learning outcomes; and intellectual transformation (the articulation of increased understanding). All of the materials are permanently stored in each of the electronic cells according to a university-prescribed template.

These reflections are read and assessed by trained readers who provide written responses to each student. However, the chosen ‘level’ of the response is accorded a number from 0 to 3 within the system, and these numbers are aggregated for instantly available assessment information. A ‘3’ indicates the student has exceeded campus expectations; a ‘2’ indicates the student has met campus expectations; a ‘1’ indicates the student has made a start at meeting campus expectations; and a ‘0’ indicates an incomplete. While each individual student will receive written comments, these numbered equivalents will be accessible only on an anonymous, aggregated basis.

However, student learning outcomes may be accessed according to any demographic or programmatic basis required, so that, for example, one could learn how conditionally admitted students are performing in relation to quantitative reasoning, or values and ethics. One could compare how majors in biology are achieving in “Understanding society and culture” in relation to philosophy majors. The ability to gather meaningful assessment data on student learning of the Principles of Undergraduate Learning in relation to the major will be amenable to many academic and administrative needs and will provide excellent information to improve curriculum and pedagogy at IUPUI. Our goal is to make completion of an ePort a requirement for every undergraduate by 2010.

The ePort is being designed to ensure compatibility with other electronic portfolio systems, and specifically the portfolio will accommodate transfer of students from Ivy Tech to IUPUI. The ePort is based on open-source software and is being created in collaboration with UITS through a consortium of universities and colleges across the nation—to ensure portability of credits and documented learning accomplishments. Further, the ePort is being designed to accommodate: electronic transfer of K-12 school records, credit transfer among colleges and universities in the state, course alignment, and K-12 student portfolios currently under development or consideration within Indiana. And ePort will be

fully compatible with a new career portfolio being created by the State, ensuring that students will have the capacity to use their portfolio throughout their lives. Information stored in the matrix to meet IUPUI's graduation expectations will be available for students to use in a variety of ways and formats as they represent their life-long learning in many different settings.