

# Assessment at IUP: The Road Traveled and the Road Ahead

September 2010

## I. Assessment Organization at IUP

Assessment as defined by the Middle States Commission on Higher Education has two main components:

1. Strategic or university assessment, which measures how well the entire university is carrying out its mission and strategic plan.
2. Academic or student learning outcomes assessment, which measures how well we are teaching our students what they need to know

At IUP, the first component of assessment is carried out under the guidance and oversight of the Office of Institutional Research, Planning and Assessment. As noted on their web page, "this office also provides support and analysis of the System Accountability Plan (SAP), reporting and assessment related to the University Strategic Plan, and the implementation of the Voluntary System of Accountability." Their mission includes administration of the National Survey of Student Engagement (NSSE), an important tool for tracking student development and success. Under the leadership of Barbe Moore, the Office of Institutional Research, Planning and Assessment has recently begun using the Nuventis-designed relational database known as TracDat to archive and report out on strategic assessment efforts at IUP.

The Academic Affairs division coordinates a major part of the strategic assessment effort at IUP in the form of summary reports such as:

1. Yearly Narrative Assessment assembled by the Associate Provost based on reports submitted by every dean and then forwarded to the Office of Institutional Research, Planning and Assessment for bundling and submission to PASSHE
2. Yearly college reports submitted by college deans to the Provost for purposes of strategic planning and resource allocation
3. Five-year academic program reviews that are mandated by PASSHE for every academic program at the university.

In addition, Academic Affairs oversees and coordinates university accreditation efforts, some of which involve particular colleges (NCATE, AACSB) as well as the over-arching goal of maintaining Middle States accreditation. Accreditation from Middle States was last granted in 2005-06

and will be re-applied for in 2015-16. A five-year Periodic Review Report to Middle States is being drafted for submission in June 2011.

The second component of assessment (student learning outcomes) is carried out almost entirely within the Division of Academic Affairs and will be the main subject of this report. We will focus on the progress IUP has made since its last Middle States review, but we will also pinpoint areas where more support and planning could be done to position IUP at the forefront of student learning outcomes assessment efforts in time for its next Middle States review.

## **II. University-wide Student Learning Outcomes Assessments**

There are several on-going assessment efforts at IUP that measure student learning outcomes across all majors and colleges. Most of these have been in effect since the 2005 Middle States accreditation review, if not earlier.

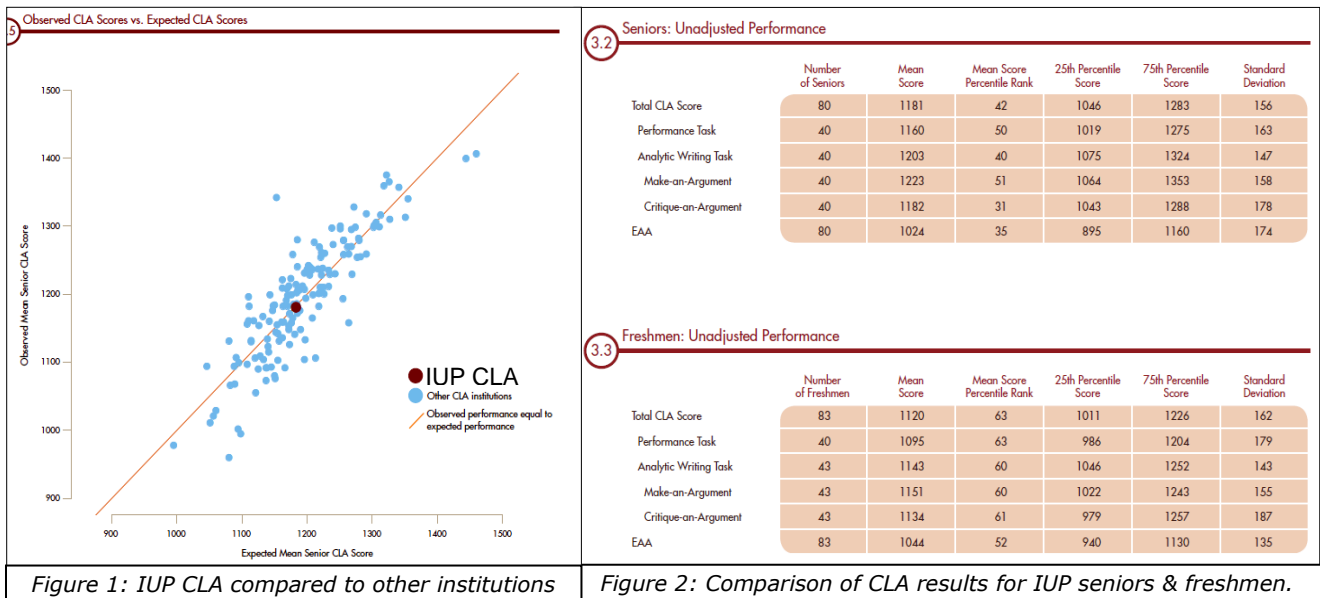
### A. Collegiate Learning Assessment (CLA)

The Council for Aid to Education coordinates administration of the national Collegiate Learning Assessment instrument across the USA. At IUP, this instrument is overseen by the Provost's Office, with Lynnan Mocek as the point person. The description of the scope and purpose of the CLA is taken from the CEA website:

*"CLA Assessment Services provide a means for measuring an institution's contribution to the development of key higher order competencies, including the effects of changes to curriculum and pedagogy. To gauge summative performance authentically, the CLA presents realistic problems that require students to analyze complex materials and determine the relevance to the task and credibility. Students' written responses to the tasks are evaluated to assess their abilities to think critically, reason analytically, solve problems and communicate clearly and cogently."*

Data from the CLA is reported to the Associate Provost's office, which analyzes it in conjunction with the University-Wide Assessment Committee. The results of the analysis serve as input for consideration when decisions are made about issues such as curriculum revision, academic resources and student support issues.

As an example, the overall results of the recent CLA (2009-2010) show that IUP students score almost exactly in the mid-range of student learning outcomes for institutions across the nation (Figure 1). When their scores are adjusted on the basis of incoming SAT's and freshmen year CLA results, they achieve near normal expectations in all cases. This data indicates that overall learning outcomes achieved by IUP students are precisely what one would expect based on their academic potential.



One question that we plan to address in this year's analysis of CLA results is why recent IUP freshmen scored significantly higher than IUP seniors did compared to their intellectual peers across the country (Figure 2). This apparent drop-off may in fact reflect a selection bias among the classes (more intellectually curious freshmen volunteer to take the test than do seniors), a difference in test-taking attitudes (seniors being more blasé toward non-graded tests than freshmen) or possibly a more academically-qualified freshman class due to the recent economic recession.

### B. National Survey of Student Engagement

Although this survey is administered outside of Academic Affairs, it asks students to report on their coursework and also to self-assess the extent to which they have developed critical thinking skills as a result. The resulting data can be used in conjunction with other measures to estimate student learning. An example of NSSE survey instrument showing its relevancy to student learning outcomes is attached as Appendix One.

### C. Liberal Studies assessments and course proposals

Every spring semester, the Liberal Studies program at IUP collects representative student writing samples from capstone courses across all departments and colleges at IUP. These samples are assessed by a committee of faculty members using a rubric which measures critical thinking, fluency of expression and content mastery. The results are collated and compared across academic cohorts as a more detailed and granular measure of the overall value-added education at IUP that can be used in addition to the CLA results to inform academic decision-making.

The Liberal Studies program at IUP has also emphasized the importance of learning outcomes assessment by requiring that specific learning outcomes related to the mission and goals of Liberal Studies be addressed in initial course proposals. All course proposals that faculty submit for Liberal Studies approval in the future must include the type of forms attached in Appendix Two. Course proposers must identify the primary Expected Undergraduate Student Learning Outcomes that will be fostered in their course. For first-year seminars, specific assessment tools must be identified before these courses will be approved for teaching.

### **III. College-wide Student Learning Outcomes Assessments**

There are two colleges that undergo specialized college-wide accreditation at IUP: the Eberly College of Business and Informational Technology (AACSB) and the College of Education and Educational Technology (NCATE). Both of these colleges now have bespoke student learning outcomes programs in place, designed to function in conjunction with the Banner system of student information. The Key Assessment Ratings System (KARS) has been in place for many years in the College of Education, and asks instructors of all education majors to independently assess their learning outcomes on three key assessments in each course. In addition, overarching assessments are done on student e-portfolios, teacher work samples and unit plans, and student teaching reports. A similar system of course assessments and overarching assessments has recently been put in place in the Eberly College of Business.

### **IV. Department-level Student Learning Outcomes Assessments**

As a university, IUP encompasses many departments with quite divergent goals for student learning, from musical performance measures to scientific research and hospitality management. Each department is therefore asked to maintain their own plan for student learning outcomes assessment, which measures and tracks their student's achievements relative to their own

unique learning goals. In the past, these plans have been submitted bi-annually to the Associate Provost and have also been reported on in the five-year academic review that each academic program is required to submit. The specific mandate from PASSHE regarding student outcomes assessment is quoted below from Policy 1986-04 –A which outlines the scope of five-year reviews: *“Criteria for Full Review of Academic Programs, heading 3f: Student Learning Outcomes—describe the knowledge and skill outcomes and how they are assessed.”*

The strength of the individual department student learning outcomes assessment programs are that they are flexible and can be adjusted quickly to assess new issues such as the impact of recent curriculum changes within a department. Faculty members can gather and analyze the data themselves without needing to wait for a university-level instrument to be administered or processed. This ability to react in a nimble and immediate way is key to ‘closing the loop’, so that changes can be made over the course of a few academic years to address issues where students have not learned the critical thinking or professional skills they need to succeed in their chosen fields.

One substantial weakness of individual departmental assessment programs is that they vary in quality and utility depending on the attitude, training and commitment which departmental faculty have toward student learning outcomes assessment. This is the main area where more support and organization is sorely needed. Better faculty training in assessment methods and techniques (rubrics, portfolios, electronic surveys using Qualtrix, etc.) would help many departments create a more effective and less onerous plan for assessing their student’s learning outcomes. In addition, the roll-out of a university-wide system that could be used to archive and report on assessment data would assist many departments in keeping track of what they have done when they react quickly to an identified weakness in their student outcomes. Being able to show strong and concrete examples of ‘closing the loop’ will play a major role in our eventual re-accreditation by Middle States in 2015-2016. Our sense of assessment at IUP is that it is being done thoroughly and intuitively by most programs and departments, but it is not being documented (except by the Colleges of Business and Education) in a way that will allow us to show Middle States that we have done it.

In an attempt to address this last issue, the Associate Provost’s office has instituted a pilot project using the Nuventive-designed relational database, TracDat to align the academic mission and goals of Academic Affairs. The project also tests the effectiveness of TracDat in storing and reporting on student learning outcomes for the Division as a whole as well as for

component academic units. A few programs have volunteered to share outcomes for this pilot project, and we hope to create model data sets that will inspire other programs to participate in this database in a deep and thorough way. We have attached a preliminary example of a TracDat learning outcomes assessment alignment report in Appendix Three to show its potential use for assessment and accreditation reports.

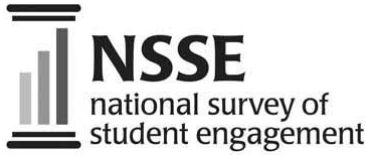
## **V. Summary and Suggestions**

IUP currently assesses both university strategic outcomes and student learning outcomes in a wide variety of ways. Some of our efforts are broad and bring together students from many disciplines under a single umbrella of assessment. Many other efforts are uniquely tailored to a particular program or department, and enable faculty to respond in a nimble and effective manner to changing curricular needs as well as changes in student population and programmatic demand. The challenge with most of these small, unique assessment programs at IUP is to 'catch them in the act' and permanently document the assessment and analysis loop, so that we can assure outside accrediting agencies that we are accomplishing our stated mission.

Over the next five years, leading up the next Middle States accreditation effort, IUP must assure that all assessment work being done is thoroughly documented and archived for inspection by outside accreditors. The TracDat database may be the technology we need to document our work, but the real challenge will be to identify the champions of assessment in each college and within each individual department and then to provide them with the tools and time to document what their program has accomplished.

In an environment of limited resources, one possible strategy would be to appoint an academic assessment coordinator to run an online center where faculty can get training and support in the use of rubrics, e-portfolios, Qualtrix surveys and TracDat. The growing need to include assessment for Liberal Studies, for specialized accreditations and for five-year program reviews could then be met with less resistance and less frustration on the part of the faculty.

# Appendix One: Example of Learning Outcomes Assessment in NSSE



## Worksheet 3

### Making the Most of Your NSSE Data

These worksheets are additional tools to help your team focus in on important item level results by NSSE benchmarks and other scales. You will need to reference your NSSE means report to complete the worksheets. Key terms are defined at the end of the document. When an item is part of the scale that forms a benchmark, it is noted with an asterisk.

1. Please select a comparison group or groups to complete the worksheet.
2. Enter “\*,” “\*\*,” or “\*\*\*” in the significance level column to indicate confidence level.

Item	Item Description	Significance Level	Effect Size	Significance Level	Effect Size
		(* significance)	(indicate sign + or - and magnitude)	(* significance)	(indicate sign + or - and magnitude)
<b>Academic Challenge</b>		FY	FY	SR	SR
9a	Hours students spend in a typical 7-day week preparing for class*				
3a	Number of assigned textbooks, books, or book-length packs of course reading*				
3c	Number of written papers or reports of 20 pages or more*				
3d	Number of written papers or reports between 5 and 19 pages*				
3e	Number of written papers or reports of fewer than 5 pages*				
2b	Coursework emphasizing analyzing the basic elements of an idea, experience, or theory*				
2c	Coursework emphasizing synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships*				
2d	Coursework emphasizing making judgments about the value of information, arguments, or methods*				
2e	Coursework emphasizing applying theories or concepts to practical problems or in new situations*				
10a	Campus environment emphasizing spending significant amounts of time studying and on academic work*				
1r	Working harder than you thought you could to meet an instructor’s standards or expectations*				
<b>Academic Challenge–Related Items</b>		FY	FY	SR	SR
1f	Come to class without completing readings or assignments				
4a	During a typical week, how many problem sets do you complete that take you more than an hour to complete				

Figure taken from NSSE Facilitators Guide downloaded from the NSSE Website.

## Appendix Two: Outcomes Assessment Forms Required for New Liberal Studies Course Proposals

<b>Expected Undergraduate Student Learning Outcomes</b>
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All course proposals for Liberal Studies approval must include the chart below. Proposers are asked to identify the primary Expected Undergraduate Student Learning Outcomes that should be fostered in the course, based on the criteria outlined in this handbook.

Outcome	Primary Outcomes
<p><i>Informed Learners</i> understand nature and society through forms of inquiry fundamental to the sciences, the humanities, and the arts. Learners are informed by knowledge and ways of knowing that extend beyond core concepts enabling them to link theory and practice.</p> <p><i>Informed Learners</i> demonstrate knowledge and understanding of:</p> <ul style="list-style-type: none"> <li>• the ways of modeling the natural, social and technical worlds</li> <li>• the aesthetic facets of human experience</li> <li>• the past and present from historical, philosophical and social perspectives</li> <li>• the human imagination, expression and traditions of many cultures</li> <li>• the interrelationships within and across cultures and global communities</li> <li>• the interrelationships within and across disciplines</li> </ul>	
<p><i>Empowered Learners</i> are critical thinkers who demonstrate intellectual agility and creativity and the ability to manage or create change. They are able to derive meaning from experience and observation. They communicate well in diverse settings and employ various strategies to solve problems. They are empowered through mastery of intellectual and practical skills.</p> <p><i>Empowered Learners</i> demonstrate:</p> <ul style="list-style-type: none"> <li>• effective oral and written communication abilities</li> <li>• ease with textual, visual and electronically-mediated literacies</li> <li>• problem solving skills using a variety of methods and tools</li> <li>• information literacy skills including the ability to access, evaluate, interpret and use information from a variety of sources</li> <li>• the ability to transform information into knowledge and knowledge into judgment and action</li> <li>• the ability to work within complex systems and with diverse groups</li> <li>• critical thinking skills including analysis, application and evaluation</li> <li>• reflective thinking and the ability to synthesize information and ideas</li> </ul>	
<p><i>Responsible Learners</i> are engaged citizens of a diverse democratic society who have a deep sense of social responsibility and ethical judgment. They are responsible for their personal actions and civic values.</p> <p><i>Responsible Learners</i> demonstrate:</p> <ul style="list-style-type: none"> <li>• intellectual honesty</li> <li>• concern for social justice</li> <li>• civic engagement</li> <li>• an understanding of the ethical and behavioral consequences of decisions and actions on themselves, on society and on the physical world</li> <li>• an understanding of themselves and a respect for the identities, histories, and cultures of others</li> </ul>	





**Appendix Two: Outcomes Assessment Forms Required for New Liberal Studies Course Proposals (continued)**

<b>First Year Seminar Expected Undergraduate Student Learning Outcomes</b>		
<b>Outcome</b>	<b>Course Objectives</b>	<b>Assessment Tools</b>
Students will demonstrate knowledge and understanding of the interrelationships within and across disciplines		
Students will demonstrate information literacy skills including the ability to access, evaluate, interpret and use information from a variety of sources		
Students will demonstrate intellectual honesty		
Students will demonstrate an understanding of the ethical and behavioral consequences of decisions and actions on themselves, on society and on the physical world		
Students will demonstrate an understanding of themselves and a respect for the identities, histories, and cultures of others		

- \* You may include additional Student Learning Outcomes as they apply to your course.
- \* You will need to include a rationale/explanation for any outcomes listed as a required outcome that you do not intend to meet (in whole or in part) in your course.



## Appendix Three: Examples of TracDat Input and Output


 Selected Unit: PROG - Geoscience

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[Home](#) | [Assessment Unit](#) | [Plan](#) | [Results](#) | [Reports](#) | [Documents](#)

[Student Learning Objectives](#) | [Key Success Indicator](#) | [Related Courses](#) | **Related Goals**

PROG - Geoscience > Plan > Related Goals
 
 

Student Learning Objective Name: A.1. Quantitative Tools
**Sample Input Screen**

Student Learning Objective: Students will be able to analyze earth science problems using quantitative tools.

Goal Type	Goal
<input type="checkbox"/> Academic Affairs - College of Natural Sciences and Mathematics	
<input checked="" type="checkbox"/> NSM I. Knowledge, skills and ethics	I. A. Create student learning activities that lend themselves to possible solutions through the use of science, mathematics, and technology
<input checked="" type="checkbox"/> NSM I. Knowledge, skills and ethics	I. B. Create student learning activities that require different scientific and algorithmic techniques and practical application of those techniques for their resolution
<input type="checkbox"/> NSM I. Knowledge, skills and ethics	I. C. Create student learning activities that instill a perspective on the development and implementation of science
<input checked="" type="checkbox"/> NSM I. Knowledge, skills and ethics	I. D. Create student learning activities that require development of strategies and problem solving skills
<input type="checkbox"/> NSM I. Knowledge, skills and ethics	I. E. Create student learning activities that lend themselves to

[Save Changes](#) | [Discard Changes](#) | [Return To Student Learning Objective](#)

### PROG - Geoscience

#### Student Learning Objective: A.1. Quantitative Tools

Students will be able to analyze earth science problems using quantitative tools.

#### Sample Output Report

Assessment Year: 10-11

Action Status: Active

Key Success Indicator			
Indicator	Expected Outcome	Source of Data	Active
Introductory courses GEOS 201 and 202 will assess students with graded problem-solving modules	75% of students in GEOS 201 and 201 will successfully complete all problem-solving		Yes
Capstone courses GEOS 470/ 480 or EDUC 441 (student teaching) will assess students with detailed rubrics.	90% of students in capstone courses will be rated Highly Accomplished or Accomplished on the quantitative skill column of their presentation rubric.		Yes

#### Related Courses

- \* GEOS 201 - Foundations of Geology
- \* GEOS 202 - Quantitative Methods in Geoscience
- \* GEOS 302 - Structural Geology

#### Related Goals

##### Academic Affairs - College of Natural Sciences and Mathematics

- \* NSM I. Knowledge, skills and ethics - I. A. Create student learning activities that lend themselves to possible solutions through the use of science, mathematics, and technology
- \* NSM I. Knowledge, skills and ethics - I. B. Create student learning activities that require different scientific and algorithmic techniques and practical application of those techniques for their resolution
- \* NSM I. Knowledge, skills and ethics - I. D. Create student learning activities that require development of strategies and problem solving skills