

**SUGGESTIONS AND RESOURCES FOR ASSESSING STUDENT
OUTCOMES AT UIUC**

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**Student Outcomes Assessment Technical Assistance
Center for Teaching Excellence**

For help with your unit assessment plans contact:

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Portions of this document were adapted from the “Assessment Workbook” written by the Office of Academic Assessment and Institutional Research at Ball State University and the “Guide for End-of-Program Student Outcomes Assessment” written by the Office of the Provost for Instruction at Washington State University.

USING SURVEYS

Surveys can be used to collect information about individuals' attitudes and opinions, values, experiences, expectations, needs, and factual information. E-mail and the Web provide efficient and convenient avenues for administering surveys to various populations.

I. SUGGESTIONS FOR USING DEPARTMENT SURVEYS

- **Entering student surveys** may be administered to students entering the program or entering a course.

Why did you select this program?

What are your academic goals?

What do you expect to gain from this program or course?

- **Current student surveys** may be administered to all students in the program or to a sample of students at each class level.

How would you rate the quality of the program?

How could the program be improved?

How difficult is it to enroll in your desired courses?

- **Exiting student surveys** can collect information about student perceptions of the department, self-assessments of achievements, and future plans.

How satisfied are you with your major?

How would you assess your entering and exiting levels of competency in the following areas: speaking effectively, writing effectively, etc.?

Did you find employment in the area of your major?

- **Alumni surveys** allow departments to determine the types of jobs or graduate degrees their majors are able to obtain and the skills that are necessary for the job market or for graduate study. Alumni can also reflect on the knowledge and skills gained in the program of study.

Are you employed in the area of your major?

How would you rate your program's ability to prepare you for your present position?

What could the department have done to better prepare you for your job?

- **Employer surveys** enable the department to determine if their graduates have the necessary job skills and if there are additional skills which are especially sought after.

Does the graduate have the necessary skills for the job?

In what areas is the graduate most and least prepared?

What should be added to our curriculum to better prepare our graduates?

- **Faculty surveys can** allow the department to determine if there is consensus on the goals and objectives of the unit, strengths and weaknesses of entering and exiting students, or linkages between courses in the curriculum.

In what content areas do our seniors appear to be the strongest? the weakest?

How well do our prerequisite courses prepare students for the next level of study?

What do you see as the strengths and weaknesses of the curriculum?

- **Applicant surveys** may be given to all students who have applied for admission to learn of their reasons for applying and acceptance or refusal.

Why did you apply to this program?

What factors entered into your decision not to accept our offer of admission?

What could we have done differently to help you decide to come to our university?

II. CAMPUS RESOURCES

- Samples of the following **commercially available survey instruments** are available in the Center for Teaching Excellence (CTE). Go to www.act.org/ess/fouryear.html for additional information.

ACT Evaluation/Survey Service (ESS) instruments (approximately \$15 per 25)

Alumni Survey

Alumni Outcomes Survey

College Outcomes Survey

College Student Needs Assessment Survey

Entering Student Survey

Survey of Academic Advising

Survey of Current Activities and Plans

Survey of Post-secondary Plans

Withdrawing/Non-returning Student Survey

- There are two national **surveys of student experiences and activities** that can be used to assess the quality of effort students expend in using institutional resources and opportunities provided for their learning and development. One is called the **College Student Experiences Questionnaire (CSEQ)** and the other is the National Survey of Student Engagement (NSSE). Both can provide useful information about what your students are doing and the opportunities to learn provided by the institution and their instructors. You can learn more about these fee-based surveys at <http://nsse.iub.edu/index.cfm> and www.indiana.edu/~cseq/cseq_generalinfo.htm.
- The **Senior Survey** is administered each spring by the Center for Teaching Excellence to all seniors included on the May graduation list. Campus, college-level, and departmental results are available at www.cte.uiuc.edu/assessment/senior-surveys.html.
- **All-campus alumni surveys** are distributed to selected graduation classes on 1, 5, and 10 year cycles by the University Office for Planning and Budgeting. For example, in 2005 the Class of 2000 was sent a five-year survey and in 2006, the Class of 1997 was sent a nine-year after graduation survey. Survey results and a listing of scheduled mailings are available at www.pb.uillinois.edu/.
- **College alumni surveys** are routinely administered by some colleges. Check with your college office to see whether your college distributes alumni surveys.
- The **Survey Research Lab** offers hourly, fee-based consulting on survey design, sampling, and analysis. For assistance call 3-4273.
- The **Illinois Statistics Office (ISO)**, affiliated with the Department of Statistics at the University of Illinois at Urbana-Champaign, provides statistical consulting services to members of the University community, government, and industry. Fee-based assistance is available for designing experiments, constructing survey plans, analyzing data, developing theoretical and empirical models, using computers for statistical computations, and preparing statistical sections of research proposals. Consult their website (www.stat.uiuc.edu/iso/) for further information.
- **CTE assessment support staff** is available to help design surveys and survey research studies.
- Your assessment activities (e.g., surveys and tests) may require clearance of the **Institutional Review Board (IRB)**. We recommend checking with your local IRB representative or contact the campus office at 3-2670 before collecting data.

USING INSTITUTIONAL DATA

Information may already exist on campus that may be useful for departmental outcomes assessments.

I. SUGGESTIONS FOR USING INSTITUTIONAL DATA

- **Possible questions** addressed by institutional data:

What is the grade point average of majors by class level? overall?

What are the enrollment trends for particular courses?

Are class sizes too large?

What are the demographics of incoming students?

What percentage of students are dropping particular courses?

What percent of majors graduate from the program?

What percentage of applicants are accepted?

What percentage of majors are Bronze Tablet graduates?

- **Existing campus records** may be examined to assess the quality of students entering a department, number of applicants, rates of admission and graduation, grade distributions across courses, or patterns of course enrollments.

The **Campus Profile** developed and made available by the Division of Management Information provides the following information about an academic unit that may be useful for outcomes assessment:

- faculty and staff counts (lines 1000-1835)
- student demographics and enrollments (lines 3600-4087; data by program, gender, race/ethnicity available by drilling down)
- number of applicants, admissions for graduate students (lines 4100-4300; drilldowns by program with gender and race/ethnic breakdowns),
- student to faculty ratios (lines 4330-4382)
- degrees awarded (lines 4160-4200; drilldowns by program with gender and race/ethnicity)
- selected Senior Survey items (lines 5000-5046)
- credit hours taught (lines 6100-6454)
- section size (lines 6500-6890)
- ICES teaching evaluations (lines 9500-9860)

- **Departmental admissions records** can be analyzed to assess quality indicators of incoming students such as, entering gpa, ACT/SAT scores, high school rank, etc.

- **Nationally available databases** may be reviewed to assess student achievements. For example the National Science Foundation (e-mail: stisinfo@nsf.gov or call: 800-877-8339) database can be accessed to determine the number of program graduates receiving NSF Fellowships.

II. CAMPUS RESOURCES

- The **Campus Profile** supporting documentation can be found at www.dmi.uiuc.edu/cp. Questions can be answered by the Division of Management Information, 3-3551.

USING EXAMINATIONS

Locally developed or commercially available examinations may be useful for assessing student achievement of departmental outcomes. Outcomes may also be measured by embedding items in the final examinations of selected courses in the major.

I. SUGGESTIONS FOR USING EXAMINATIONS

- A **comprehensive exam** is usually a written exam intended to serve as a cumulative assessment experience, providing students with the opportunity to demonstrate their combined skills and knowledge developed and gained during their program of study. This type of exam also allows the department to evaluate whether students have been able to integrate and synthesize the program's curriculum.

Some issues to be considered when using a comprehensive exam include:

- Determine the scope of the exam. Which outcomes will be covered? Will the exam be a survey of the breadth of the program, or will it reflect the course content of a few major courses in the program? The comprehensive exam might be the final exam of a senior seminar or capstone course.

- Identify the content domains of the exam and develop a pool of sample items for each domain. This may be done by writing items that match the curricular objectives or selecting items from existing exams or other item pools.

- Will the exam use multiple-choice items, essay/short answer questions, or a combination of both?

- Will the exam be administered at the end of a capstone course, at a special testing session, or at several shorter testing sessions covering subsets of the exam?

- **Standardized Tests** are commercially available, usually machine scored, multiple-choice instruments that provide information about the students' performance relative to a

“standard.” The standard may be the performance of another set of students (e.g., national norms) or subject matter attainment (e.g., percentage of items answered correctly in different subject matter domains). Standardized exams are available to test specific content domains as well as general ability skills such as critical thinking.

Some issues to be considered when using standardized tests include:

- Determine which student learning objectives you want to assess.
- Obtain samples of possible tests and test information by contacting CTE or the test companies directly. Determine how well the subject areas covered by the standardized exam match your departmental learning goals. Determine if norms made available are appropriate for comparative purposes.
- Examine the information on administering the test. Under what conditions should the test be given? Can it be taken in a typical fifty-minute class period? Are there any special equipment needs?
- **Embedding common items** in the final exams of selected courses in the major is another strategy for testing students. Faculty can write test items to match departmental learning outcomes and embed them in the final exams of selected courses taken by students in the major. Student responses to the common items can be combined and summarized to assess student attainment of the specified learning outcomes.
- Some things to think about when selecting any one of the three testing strategies described above:
 - Are there faculty willing (and able) to construct a test? write test items? select a standardized exam? score and analyze results?
 - Are funds available to purchase exams? buy-out faculty time to develop a test?
 - If the testing is not part of a course how will the students be motivated to perform at their best? any incentives?
 - Not all students need to be tested for assessment purposes; a representative sampling of students may suffice.
 - Possible sources for test items include course unit tests or final exams, retired or current departmental tests, item banks or curriculum materials accompanying textbooks, colleagues at other universities, and professional agencies with certification exams may have retired tests or item banks.

II. CAMPUS RESOURCES

- The assessment support staff in CTE has information about the following **commercially available exams**:

The **ACT Collegiate Assessment of Academic Proficiency (CAAP)** are 40- minute multiple-choice exams in the following areas (costs are approx. \$13.50 per student):

Writing Skills
Reading
Math
Science Reasoning
Critical Thinking

For more information contact ACT at www.act.org/caap/.

The **Collegiate Learning Assessment (CLA)** is an innovative approach to assessing an institution's contribution to student learning developed by Council for Aid to Education with the RAND Corporation. The measures are designed to simulate complex, ambiguous situations that every successful college graduate may one day face. The CLA measures are designed to test for reasoning and communications skills in the following four areas:

Critical Thinking
Analytic Reasoning
Written Communication
Problem Solving

To learn more about the CLA go to www.cae.org/content/pro_collegiate.htm.

- **CTE assessment support staff** is available to help in developing local assessment exams.

USING INTERVIEWS

A department can make many uses of individual or group interviews in an effort to measure student outcomes. While interviews may take more time to conduct than the administration of surveys or examinations they can provide more in-depth and useful information.

I. SUGGESTIONS FOR USING INTERVIEWS

- Faculty members can be interviewed about their perceptions of the strengths and weaknesses of graduating seniors or of the departmental curriculum. The interviewer could be from outside the department for purposes of confidentiality.
- Group interviews can be conducted with students enrolled in selected courses. Students could be asked questions about the amount of their learning in the course as well as questions about the curriculum as a whole.
- Exit interviews can be conducted with all, or some, of the graduating seniors. Exit interviews can be used to determine a student's degree of attainment of department learning objectives, as well as, provide the unit an opportunity to analyze students' communicative and personal interaction skills.
- Telephone interviews or focus groups can be conducted with alumni to assess their perceptions of the program's ability to prepare them for employment or graduate education.
- Some suggestions for conducting interviews include:
 - Determine which student learning objectives will be assessed during the interviews.
 - Interview questions should be written in advance to assess student attainment of the learning objectives as well as to produce consistent information across interviews. Follow-up questions should be prepared in case the original question did not adequately prompt the desired response. A standard set of questions also helps provide more accurate and useful information when multiple interviews are being used.
 - Sometimes it may be preferred to use interviewers from outside the department, such as CTE staff, to help with matters of confidentiality.
 - Consider how responses will be recorded and summarized. Will there be someone else present to record student responses? Do you plan to use a tape or video recorder?

II. CAMPUS RESOURCES

- **CTE assessment support staff** is available to help design interview protocols and interview studies.

USING PORTFOLIOS

A portfolio is a collection of records of student performances assessed according to specific and explicit criteria. Portfolios are a potentially valuable option adding longitudinal and “qualitative” data.

I. SUGGESTIONS FOR USING PORTFOLIOS

- Portfolios can be used to view learning and development longitudinally. Samples of student work can be collected over several semesters to determine student growth. Samples in portfolios are more likely than test results to reflect student ability when pre-planning, input from others, and similar opportunities common to most work settings are available. The process of reviewing and scoring portfolios provides an excellent opportunity for faculty exchange and development, discussion of curriculum goals and objectives, review of grading criteria, identification of the types of assessments required by the faculty, and determination of common strengths and weaknesses of students in the program.
- Portfolios can require a student self-reflection piece on the quality of their work over time or the amount of learning that took place.
- One method for collecting portfolios is to ask a random sample of students enrolled in selected “core” courses to collect a sample of their work in each course. Another method is to require all, or some, freshman to collect samples of their work over their four-year college career. Sometimes this latter method may focus on specific samples such as collecting writing assignments or lab reports. Another method may be to collect portfolios for different groups of students such as honor students versus non-honor students or freshmen versus seniors.
- To assess writing skills in the major, a department could choose to keep samples of student writing from the courses in the major. Are students getting ample opportunity to write? What types of writing assignments are being required? How does the writing ability of sophomores compare to seniors? Is there one particular course in the program that seems to have a significant impact on the writing skills of the majors?
- When thinking about using portfolios you should:
 - Consider which student learning objectives will be reflected in the materials to be collected,
 - Determine which records of student performance will be collected to allow an adequate assessment of student achievement of the learning objectives,
 - Determine how the collected records of student performances, the portfolios, will be evaluated or rated. It is important to develop a consistent format so as to be able

to produce reliable data. The evaluation procedure will vary with the nature of the contents of the portfolio. For example, for a collection of written documents should both content and style be considered?

- A sample portfolio in Psychology may include an experimental report from Experimental Psychology; internship evaluations which include mentor and self-assessments, interview tape from Clinical Psychology; work samples from analytic practice courses, senior seminar presentation video and theoretical review paper; leadership seminar summary (or other project that involves student contribution to others in a new context.).
- A potential benefit of developing student portfolios is that students will leave their major programs with products that they can take to their future employers or graduate schools that provide evidence of their knowledge and skills.

II. CAMPUS RESOURCES

- **CTE's Cheelan Bolin** (3-3370) has helped several campus units use portfolios.

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| USING FIELD EXPERIENCE ASSESSMENTS |
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Field experiences are often out-of-classroom experiences which may last one day, one week, or longer and occur in a setting which may be common or required of a practitioner in the student's major field of study.

I. SUGGESTIONS FOR USING FIELD EXPERIENCE ASSESSMENTS

- Successful and useful field experiences require careful planning. Planning in the months prior to the scheduled field experience that gives attention to: 1. goals and objectives of the field experiences; 2. types of activities that will promote the attainment of those goals and objectives; and 3. means for assessing student performance during the field experiences will help to guide a successful field experience program.
- Collection and administration of results depend largely on the specific type of activities required by the field experience. The evaluation process will be heavily influenced by the type of department and objectives the department hopes to accomplish during the field experience. Typical forms of evaluation exercises include:
 1. Journal or Observation Logs - Journals or logs may be kept by the student during the field experience. Upon return from the field, faculty may evaluate the journals for content or each student may be asked to summarize the log through a written report or paper which may in turn be graded;

2. Performance - Field experiences often are performance oriented, requiring the student to perform specific activities: identify rock formations, date forests or assess diseases, etc., and these activities may be assessed directly in the field or recorded by the student for assessment upon returning to campus; and

3. Group Assessments - Field experiences often provide opportunities for encouraging teamwork and group problem solving. The assessment is of the performance of a group, an individual, or both.

II. CAMPUS RESOURCES

- **Bruce Wicks (3-4410)** in the Department of Recreation, Sport and Tourism oversees field experiences in the East St. Louis area, including efforts to assess student outcomes.

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| USING EXTERNAL EXAMINERS |
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Individuals or groups of individuals from outside the department or from another university can provide an objective assessment of a course or program.

I. SUGGESTIONS FOR USING EXTERNAL EXAMINERS

- A department may invite one or more faculty members from similar departments at other universities to provide an objective critique of the curriculum. They may be asked to conduct a review similar to an accreditation visit wherein they look at the courses being offered, examine curriculum and course materials, speak with faculty about the quality of the department and of the students, and possibly visit with some of the students.
- It should go without saying that it serves little purpose to select examiners who may not be objective in their reviews. Friends from other universities can be selected as long as they understand the purpose of the visit is not to give a stamp of approval but rather to identify departmental strengths and weaknesses. The procedure should be seen as a process for improvement with open dialogue and comment a necessity.
- There are obvious costs to conducting external reviews, including honorariums, travel, food and lodging expenses.

USING SENIOR SEMINARS, CAPSTONE COURSES, OR END-OF-PROGRAM ASSESSMENTS

Senior seminar or capstone courses are generally semester-long courses typically required of all students majoring in a particular degree program. End-of-program assessments are often included in these courses. These courses and assessments provide opportunities for students to synthesize four-years of instruction in the major as well as showcase their learning and abilities.

I. SUGGESTIONS FOR USING SENIOR SEMINARS, CAPSTONE COURSES OR END-OF-PROGRAM ASSESSMENTS

- Senior seminars and capstone courses are most often described as the setting or the context in which assessment takes place, rather than the actual method or technique for assessing student learning. A department could make use of any of the assessment methods described in this handout to assess student learning in these types of courses.

The following assessment activities may also be considered:

- Senior thesis, which may involve extensive literature review and emphasis on a specific topic;
- Senior projects, group or individual;
- Senior research project, scientific, qualitative or quantitative research; and
- Oral presentations.

II. CAMPUS RESOURCES

- **Several campus units** have very successful capstone courses or end-of-program assessments. To learn more about successful offerings you can contact Jassim Emad (jassim@uiuc.edu) in Mechanical Engineering or Jane White (3-5275) in the Executive MBA program.