ASSESSMENT METHODS Assessment tools can generally be placed in two categories, direct and indirect measures and well as be both quantitative and/or qualitative. Direct measures are those in which the products of student work are assessed in light of the learning outcomes for the course/program. Evidence from course work such as projects or specialized tests of knowledge or skill, are examples of direct measures. Indirect measures are not based directly on student academic work but rather on the perceptions of students, alumni, employers, and other outside agents. While both direct and indirect measures have their place in assessment (together they form an important holistic impression of student learning), it is most useful for programs to start with the direct measures, given that it is there that student learning t is directly assessed. Direct Methods of Assessment 1. Capstone assessment (or milestone) draws upon the integrated knowledge, concepts, and skills associated with the entire course. Taken normally at the end of the semester capstone assessments ask students to demonstrate knowledge, skills in the course’s learning outcomes. Some programs may designate certain gate-keeping courses as opportunities to capture specific skills levels or measure program outcomes. An example of embedded assessment is the acceptable production of an APA-style experimental paper as a benchmark of learning experimental psychology. Capstone courses may routinely provide an assessment opportunity that reflects development up to that point. . 2. In course-embedded assessment, student work in designated courses, services is collected and assessed in relation to the course learning outcomes, not just for the course grade. As in the capstone assessment, the products of student work need to be considered in light of the multiple dimensions of the learning outcomes. Products may include final exams, research reports, projects, papers, and so on. The assessment may be conducted at specific points during the semester. 3. Standardized tests. The Educational Testing Service and other companies offer standardized tests for various types of learning outcomes, such as critical thinking or mathematical problem solving. Scores on these tests may be used as evidence of student learning. (E.g. Federal Aviation Administration exam) 4. Locally developed tests. Faculty may decide to develop their own internal test that reflects the program’s learning outcomes. Though locally developed tests require work by the program’s faculty in development and scoring, they are less costly than a standardized test and are often more meaningful in that they focus more clearly on the intended learning outcomes. 5. Portfolio evaluation. A portfolio is a compilation of student work that demonstrates a student’s achievement of various learning outcomes. Portfolios can be created for a variety of purposes aside from program assessment, such as fostering reflection by students on their education, providing documentation for a student’s job search, or certifying a student’s competency. 6. Pre- and post- tests. One of the questions that comes up in assessment is not only whether students can demonstrate the learning outcomes when they complete the course/program, but how much of what they can demonstrate was actually gained during their time in the program. This suggests the need to assess the students' knowledge and skills at the point of entry into the course/program and later, at the point of exiting the program. Some other qualitative direct methods can be: • Qualitative internal and external review of comprehensive projects • Externally reviewed exhibitions and performance in the arts • External evaluation of performance during internships based on stated program objectives Indirect Methods 1. Student self-efficacy. Students have a sense of their own competence. Student self-efficacy involves students rating their perception of their own achievement in particular learning outcomes. Research shows a significant, although imperfect, correlation between actual and perceived competence. What can be problematic are gender and demographic differences in the accuracy of self-efficacy. For example, certain groups of students may rate their quantitative skills at a level below that indicated by standardized tests. Also, unless “the answers are anonymous, students will be likely to overrate their abilities. 2. Student satisfaction surveys. Given that student satisfaction with a program or course is not a learning outcome, satisfaction may or may not relate to outcomes assessment. However, satisfaction may correlate with other variables. For this reason, a common component of assessment systems is the student satisfaction survey. Such surveys may consider students satisfaction with their interactions with faculty and other students. 3. Student attitudinal surveys. If learning outcomes include elements of appreciation or understanding of particular issues of concern, student attitudes can be measured as part of the assessment program. For example, informed appreciation for the arts may be assessed using an attitudinal survey. 4. Exit interviews. Rather than assess students’ attitudes, self-efficacy, or satisfaction through the use of surveys, students may be interviewed directly in individual or focus-group settings. Such interviews allow a more thorough, free-form exploration of the issues through the use of follow-up questions that depend on students’ responses. 5. Alumni surveys. The perspective that students have on their education may change significantly after time away from school. Some learning outcomes lend themselves more naturally to questions posed some time after graduation. For example, an outcome involving preparation for professional practice can best be assessed after the student has graduated and been employed in the job market. 6. Employer surveys. It is possible that some of the students' knowledge and skills are evident to the employers who rely on these characteristics. Thus, some accrediting bodies either require or encourage programs to perform an assessment through the major employers of their students. These may range from information as basic as hiring data, to site supervisor evaluations, to detailed surveys of the characteristics that the employers perceive in program graduates. Advisory boards, anecdotal information, and placement data may be used in place of formal surveys. 7. Curriculum Analysis. Accrediting bodies have historically required institutions to document the information that students are receiving and the content that the program delivers in its courses.