

Student Learning Improvement: A Continuous Process

Morehead State University



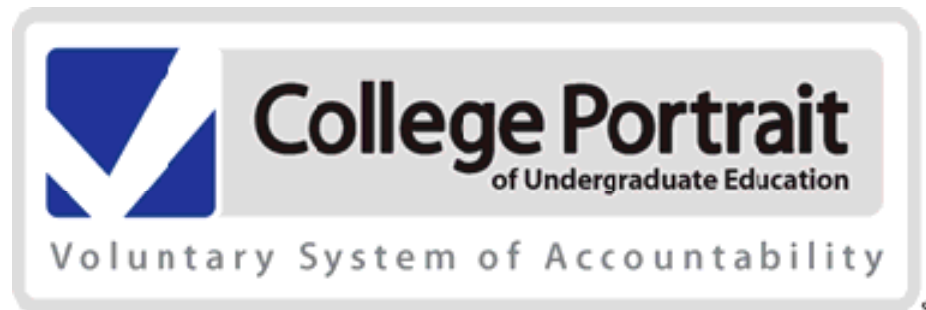


To Do...

- Articulate why the continuous improvement process is necessary and valuable.
- Articulate a plan to develop a continuous improvement process in student learning [***why, what, how, when***].
- Develop student learning outcomes, assign appropriate measurement techniques, and discuss appropriate targets.
- Identify resources for developing the continuous improvement process in academic programs.

Why are we assessing student learning in academic programs?

- VSA – Voluntary System of Accountability



- The VSA is a program to provide greater accountability by public institutions through accessible, transparent, & comparable information and is jointly sponsored by the American Association of State Colleges & Universities (AASCU) & the National Association of State Universities & Land-Grant Colleges (NASULGC). College Portrait is the name of the web template designed to communicate the VSA data to the public.

SACS Principles of Accreditation

- 2.5 The institution engages in *ongoing, integrated, and institution-wide research-based planning and evaluation processes* that (1) incorporate a systematic review of institutional mission, goals, and outcomes; (2) result in *continuing improvement in institutional quality*; and (3) demonstrate the institution is effectively accomplishing its mission. (***Institutional Effectiveness***)
- 3.3.1 The institution *identifies expected outcomes, assesses the extent to which it achieves these outcomes, and provides evidence of improvement based on analysis of the results* in each of the following areas: (***Institutional Effectiveness***)
- 3.3.1.1 *educational programs, to include student learning outcomes*
 - 3.3.1.2 administrative support services
 - 3.3.1.3 *educational support services*
 - 3.3.1.4 research within its educational mission, if appropriate
 - 3.3.1.5 community/public service within its educational mission, if appropriate

What are we assessing?

Programs of Study

Subject	Degree	Program	Teacher Cert.	Page
Accounting	BBA	Option		40
Agricultural Science With Following Options:	BS	Area, Major, Minor		129
Agribusiness		Option		122
Agriculture Economics		Option		123
Agricultural Education		Option		124
Agronomy		Option		131
Animal Science		Option		122
Equine Science		Option		125
General Agriculture		Option		126
Golf Course Management		Option		122
Horticulture		Option		122
Veterinary Science		Option		128
Veterinary Technology		Option		129
Agricultural Technology With Following Options:	AAS	Associate		121
Agribusiness		Option		122
Agricultural Production		Option		131
Equine Technology		Option		130
Ornamental Horticulture		Option		130
Art	BA	Area, Major, Minor	Yes	78
Biological Science (Teaching)	BS	Area	Yes	137
Biology (Non-Teaching Major)	BS	Area, Minor		136
Business and Information Technology Education	BBA	Option	Yes	44
Business Information Systems	BBA, AAB	Option, Minor		43

MSU 2007-08 Curriculum Audit

Review of audit reports by *Jill Ratliff, Director of Institutional Effectiveness* and *Dr. Charles Patrick, SACS Coordinator*. *Three issues were addressed in our review:*

- 1. In Criterion #3.C.3 (Curriculum, Outcomes) and #4 (Quality of Program Outcomes) of the Curriculum Audit, student outcomes were clearly identified and addressed.*
 - 1. Student outcomes were not identified or addressed.*
 - 2. Student outcomes were indirectly identified or defined.*
 - 3. Student outcomes were identified, but not clearly addressed.*
 - 4. Student outcomes were clearly identified and addressed.*

II. An analysis using data was provided for student outcomes.

- 0. No analysis/data related to student outcomes was provided.*
- 1. A limited analysis was provided but with minimal data and/or did not address all outcomes*
- 2. An analysis was provided with some data but not included in a plan of action in the executive summary.*
- 3. An analysis of at least five years of data was provided but with limited connection to a plan of action in the executive summary.*
- 4. A thorough analysis of at least five years of data on all program outcomes was described and connected to a plan of action which was included in the executive summary.*

III. Program outcomes (in MSU Catalog) matched the student outcomes in audit report.

- 0. No student outcomes were identified.*
- 1. Program outcomes (catalog) were not identified in audit report.*
- 2. Program outcomes were identified in audit report.*
- 3. Program outcomes were identified with student outcomes, but no match was clearly stated.*
- 4. Program and student outcomes were identified and clearly matched.*

Results



- I. In Criterion #3.C.3 (Curriculum, Outcomes) and #4 (Quality of Program Outcomes) of the Curriculum Audit, student outcomes were clearly identified and addressed.*

Avg. = 2.113 Max. = 4 Min. = 1

- II. An analysis using data was provided for student outcomes.*

Avg. = 1.132 Max. = 4 Min. = 0

- III. Program outcomes (in MSU Catalog) matched the student outcomes in audit report.*

Avg. = 1.830 Max. = 4 Min. = 0

Student Learning: Continuous Improvement Process (CIP)

1. Organize for continuous improvement of student learning
 - Identify the key faculty/players in your academic program. While one or more persons may lead the CIP, it is critical that all faculty assume responsibility for designing, implementing, and carrying out the assessment process.



2. Define and articulate the **mission** of your academic program.

- The **mission** is a broad statement of the program's purpose. Your program's mission statement links you to the overall mission of MSU.
- Review the University's mission and identify how your program supports MSU's mission.
- The program's mission should reflect the contribution provided by your program to the education and careers of students/others who specifically encounter your program.



Mission – MSU Examples

- **Social Work** - Social work is a human service profession that assists the needs of society in several areas, including gerontology, health care, mental retardation, child welfare, correctional rehabilitation, mental health, income maintenance, home health, hospice, domestic violence, homelessness, and alcoholism/substance abuse. The BSW Program is fully accredited by the Council on Social Work Education and prepares students as generalist practitioners for entry-level professional practice with individuals, marital couples, families, small groups, organizations, practitioners, and entire communities.
- **Engineering Technology** - The program provides students with the knowledge and understanding of rigorous, analytical methods for technical problem solving in an industrial setting. The development of such competencies is essential to the preparation of skilled technical professionals who can undertake tasks requiring greater depth and understanding of advanced technology. The Engineering Technology program aims to prepare graduates who will fill advanced engineering technology positions in business and industry.

MSU Examples - AIMS (the old system)

Unit Plans and Assessments Inquiry

Academic Affairs

Bio & Environ Sci

Status: Final

Plan Year: 2004 - 2005

Last Revision: 11/10/2005

Mission Statement

The mission of the Department of Biological and Environmental Sciences is to provide progressive, flexible, and high quality programs of instruction allowing students to be competitive and productive professionals in a technological and science-based society. Being a broad-based department, it supports other science based curricula, the general education studies program, as well as specific pre-professional programs, teacher training, and the development of practicing biologists and environmental scientists. The faculty continually pursues academic education, professional development, and research in the belief that learning is a life-long process. Academic excellence and student success, excellent advising, support of enrollment and retention programs, and the development of productive partnerships are departmental goals that reflect a commitment to quality academic programs and contribute significantly to the Department's mission.

3. Define the goals of your program

- Goals are broad statements that describe the overarching long-range intended outcomes of an academic program.
- Goals are usually not measurable and need to be further developed as separate outcomes.





Questions to ask:

- What is the primary function of your academic program?
- What core activities are involved?
- What should those you serve experience after interacting with your program?

Consider connecting program goals to MSU ASPIRE goals

- **A**cademic Excellence
- **S**tudent Success
- **P**roductive Partnerships
- **I**mproved Infrastructure
- **R**esource Enhancement
- **E**nrollment and Retention Gains

ASPIRE

MSU Strategic Plan 2006-2010

Goal 1 - Academic Excellence

How will we develop, deliver, and maintain superior academic programs?



1. We will develop and maintain a culture of excellence through:

- ▶ Quality instruction with high standards of teaching and learning
- ▶ Effective admission standards and general education requirements
- ▶ Scholarship, undergraduate and graduate research, and creative activities
- ▶ Periodic review of all academic programs and annual assessment of student learning outcomes
- ▶ Regional accreditation and national accreditation in all available academic disciplines and professional programs
- ▶ International education and study abroad opportunities

2. We will recruit and retain superior faculty through:

- ▶ A culture that fosters diversity, scholarship and quality instruction
- ▶ Competitive salary and benefits
- ▶ Professional development opportunities
- ▶ Effective instructional support services
- ▶ Quality technology and library services
- ▶ Quality classroom and research space

3. We will expand accessibility to academic programs through:

- ▶ Online and other distance learning technologies
- ▶ On-site delivery of targeted programs
- ▶ Flexible scheduling

Goal 2 - Student Success

How will support services fulfill student academic and co-curricular needs?

1. We will create a campus environment and student life program that:

- ▶ Encourages and supports involvement
- ▶ Values diversity
- ▶ Promotes and celebrates student academic and co-curricular
- ▶ Prepares graduates to successfully live, work, and contribute to society

2. We will strive to provide support and funding comparable to peer institutions for student activities, athletics and other co-curricular activities.

Goal 3 - Productive Partnerships

How will we utilize partnerships to benefit the people, communities and economy within the MSU service region?

1. We will strengthen and expand relationships with public schools and KCTCS institutions to facilitate:

- ▶ Alignment of the curriculum
- ▶ Enhanced student preparation
- ▶ Shared recruitment and student support services

2. We will collaborate with new and existing partners to achieve the following objectives:

- ▶ Livable communities
- ▶ Innovative economy



4. Define your SLOs



Student Learning Outcomes [SLOs]:

- are more specific statements and reflect the broader goals.
- should focus more on student learning than development and process.
- primarily will describe what the program is going to do and what its impact will be on students and other key stakeholders (alumni, parents, employers, etc.)

Adapted from University of Central Florida



Student Learning Outcomes

- What will my students know?
- What will they understand?
- What will they be able to do with their knowledge at the end of the course or degree program?

(Huba & Freed, 2000)

- Learning outcomes are statements of what is expected students will be able to do as a result of participating in a learning activity..... a class, a project, an educational program, an individual interaction, or a health services visit.

Important --- You should

- Identify a list of potential outcomes supporting the academic program's mission and goals.
- Develop/write **3-5 student learning outcomes** to assess this year, probably based on one or two program goals.
- Keep your list of outcomes to refer back to next year after initial outcomes have been accomplished or you have reached a plateau.



Writing SLOs - Bloom's Taxonomy

- **Cognitive:** mental skills (*Knowledge*)
- **Affective:** growth in feelings or emotional areas (*Attitude*)
- **Psychomotor:** manual or physical skills (*Skills*)

- Bloom B. S. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York: David McKay Co Inc.
- Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1973). *Taxonomy of Educational Objectives, the Classification of Educational Goals. Handbook II: Affective Domain*. New York: David McKay Co., Inc.
- Simpson E. J. (1972). *The Classification of Educational Objectives in the Psychomotor Domain*. Washington, DC: Gryphon House.

Bloom's Taxonomy - Cognitive

<p>Knowledge: Recall data or information.</p>	<p>Examples: Recite a policy. Quote prices from memory to a customer. Knows the safety rules.</p> <p>Key Words: defines, describes, identifies, knows, labels, lists, matches, names, outlines, recalls, recognizes, reproduces, selects, states.</p>
<p>Comprehension: Understand the meaning, translation, interpolation, and interpretation of instructions and problems. State a problem in one's own words.</p>	<p>Examples: Rewrites the principles of test writing. Explain in one's own words the steps for performing a complex task. Translates an equation into a computer spreadsheet.</p> <p>Key Words: comprehends, converts, defends, distinguishes, estimates, explains, extends, generalizes, gives Examples, infers, interprets, paraphrases, predicts, rewrites, summarizes, translates.</p>
<p>Application: Use a concept in a new situation or unprompted use of an abstraction. Applies what was learned in the classroom into novel situations in the work place.</p>	<p>Examples: Use a manual to calculate an employee's vacation time. Apply laws of statistics to evaluate the reliability of a written test.</p> <p>Key Words: applies, changes, computes, constructs, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses.</p>

<http://www.nwlink.com/~donclark/hrd/bloom.html>

Bloom's Taxonomy-Action Verbs Requiring Cognitive Outcomes (Ideas)

<https://seaver.pepperdine.edu/cte/content/Blooms-Taxonomy-Action-Verbs.pdf>

			Critical Thinking		Evaluation
					Judge
			Synthesis		Appraise
			Design		Estimate
			Analysis	Plan	Evaluate
			Compare	Compose	Revise
			Application	Distinguish	Propose
			Use	Differentiate	Formulate
			Comprehension	Employ	Diagram
			Express	Interpret	Analyze
Knowledge	Restate	Dramatize	Categorize	Collect	Measure
Define	Identify	Sketch	Appraise	Construct	Compare
Repeat	Explain	Practice	Experiment	Create	Value
Name	Recognize	Illustrate	Test	Setup	Assess
Recall	Discuss	Operate	Contrast	Organize	
List	Describe	Demonstrate	Inspect	Prepare	
Relate	Tell	Apply	Debate	Manage	
Record	Locate	Schedule	Inventory	Predict	
Underline	Report	Show	Question		
Outline	Review	Translate	Examine		
Delineate	Summarize	Interpret	Criticize		
Specify		Solve	Relate		
State		Sketch	Solve		
Label			Calculate		
Match			Critique		
			Classify		

Outcomes --- Verbs to Avoid

- Appreciate
- Become aware of
- Become familiar with
- Know
- Learn
- Understand



SMART SLOs



- **S**pecific – Be clear about what your students need to be able to accomplish, as well as when, where or how. Use action words or concrete verbs – i.e. increase, promote, reduce, locate, etc.
- **M**easurable – Write your outcome so that it is quantifiable and a target can be set, so that you can determine if it has reached the outcome.
- **A**chievable – Know the outcome is something that your students can accomplish.
- **R**ealistic – Make sure that the outcome is practical in that it can be achieved in a specific time frame or for a specific amount of money.
- **T**ime-bound – When will the outcome be done? Identify a specific time frame.

Writing SMART SLOs:

To write SMART student learning outcomes, the following approach is recommended:

Condition

Audience

Behavior

Degree

<http://www.dartmouth.edu/~saper/docs/Outcome%20Development.pdf>

Condition

Audience

Behavior

Degree

Example Student Learning Outcome:

By successfully completing CHEM 111 and 112 (grade of 'C' or higher in each), students will demonstrate the ability to analyze sample laboratory data and locate three probable error sources.

Condition

Audience

Behavior

Degree

Condition

By successfully completing CHEM 111 and 112
(grade of 'C' or higher in each),

Audience

Behavior

students will demonstrate the ability to analyze
sample laboratory data and locate

Degree

three probable error sources.

Examples - **Student Learning Outcomes**

- Not so good:
 - ...will appreciate the benefits of exercise
- Better
 - ...will value exercise as a health activity
- Best
 - ...will identify three health-related effects exercise has on the body

5. Identify appropriate **assessment measures**



- **Direct methods** ask students to demonstrate their learning while **indirect methods** ask them to reflect on their learning.
- **Direct methods** include examining student work such as exams, essays, presentations and classroom assignments.
- **Indirect methods** involve gathering information through means other than looking at actual samples of student work, such as surveys, interviews, and focus groups.

Doctor Visit Example

- When going to a medical doctor for the first time, you must fill out a form that asks questions like: *Am I taking any medications and which ones? Have I ever had a major operation, and if so, for what purpose? Has anyone in my family ever had a serious disease, like cancer? Why am I seeing the doctor? What are my symptoms?*
- That's a survey, an _____ assessment.
- So then I see the doctor and she listens to my heart, thumps my knee, and looks in my ears and eyes. She asks for a urine and blood sample. She orders up a test, such as a colonoscopy.
- These are all _____ assessments.

Doctor Visit Example

- In short, the doctor's *indirect* assessments gave her some indications, but no evidence. She had to actually look at or listen to physical evidence to have a *direct* assessment.



What are appropriate direct and indirect assessment measures?

- **Embedded Assessment.** Departments demonstrate efficient planning when they embed the measures into existing coursework. The program faculty agree on the courses in which this data collection should occur and collectively design the strategy to measure the outcome. Then the results are used to provide feedback about student progress within the program.
- What types of measures could be used here?
- Examples:
 - Acceptable production of an APA-style experimental paper
 - Questions embedded in final exams that directly address an SLO
 - Common questions on exams/assignments across multiple sections of same course
 - Rubrics

What are appropriate direct and indirect assessment measures?

- **Milestone.** Programs may designate gate-keeping courses as opportunities to capture specific skills levels. Capstone courses may routinely provide an assessment opportunity that reflects development up to that point.
- What types of measures could be used here?

Example Rubric – Communication

Interpersonal Communication: Understanding issues and trends in a multicultural non-sexist society; demonstrating sensitive awareness and knowledge of own cultural background and that of others; being skilled in working effectively with individuals from diverse cultural backgrounds; exemplary listening and responding skills.

Criteria	Levels of Achievement			
	Exemplary	Proficient	Marginal	Unacceptable
Nature of humankind	Demonstrates a positive and optimistic view of the nature of humankind.	Demonstrates a fairly positive and mostly optimistic view of the nature of humankind.	Demonstrates a slightly positive and somewhat optimistic view of the nature of humankind.	Demonstrates a negative and pessimistic view of the nature of humankind.
Organizational and personal goals	Pursues goals with high energy and assertion.	Pursues goals actively and rather assertively.	Pursues goals with low energy and with prompting from others.	Fails to set goals.
Shared Goals	Works toward shared goals in a highly cooperative manner.	Works toward shared goals in a cooperative manner.	Works toward shared goals in a less than cooperative manner.	Not cooperative in working toward shared goals.
Sensitivity	Interacts with others with deep sensitivity to interpersonal nuances.	Interacts with others with sensitivity to interpersonal nuances.	Interacts with others with some sensitivity to interpersonal nuances.	Interacts with others with no sensitivity to interpersonal nuances.

Example Rubric – Business Strategy

TRAIT	Unacceptable (0,1)	Acceptable (2,3)	Exemplary (4,5)	Score
Identifies the corporate strategy	Does not identify and summarize the corporate strategy, is confused or identifies a different or inappropriate strategy	Identifies the main strategy(ies) and subsidiary, embedded, or implicit aspects of the strategy	Identifies not only the basics of the strategy, but recognizes nuances of the strategy	
Key assumptions	Does not surface the assumptions that underlie the strategy	Identifies most of the key assumptions	Identifies and questions the validity of the key assumptions that underlie the strategy	
Evidence of strategy	Simply lists examples of actions or behaviors that represent the strategy. Does not discuss the relevance of these actions or behaviors.	Discusses the relevance of actions and behaviors representing the strategy(ies)	Discusses nuances of the examples in some detail	
Conclusions, implications, and consequences	Fails to identify conclusions, implications, and consequences of the strategy	Identifies and discusses conclusions, implications, and consequences	Objectively reflects upon own analysis of the corporate strategy	

Rubric Sources

- Article Review Rubric [DOC](#) | [PDF](#)
- Business Strategy Analysis Rubric [DOC](#) | [PDF](#)
- Case Analysis Rubric [DOC](#) | [PDF](#)
- Critical Thinking Rubric [DOC](#) | [PDF](#)
- Decision-Making Rubric [DOC](#) | [PDF](#)
- Ethical Considerations Rubric [DOC](#) | [PDF](#)
- Global Perspective Rubric [DOC](#) | [PDF](#)
- Leadership Rubric [DOC](#) | [PDF](#)
- Oral Communication Rubric [DOC](#) | [PDF](#)
- Oral Communication Rubric II [DOC](#) | [PDF](#)
- Team Cooperation Rubric [DOC](#) | [PDF](#)
- Writing Rubric [DOC](#) | [PDF](#)
- Writing Rubric II [DOC](#) | [PDF](#)

The University of Scranton Kania School of Management
<http://academic.scranton.edu/departments/assessment/ksom/>

Rubric Sources

The screenshot shows the Winona State University website. The header includes the university logo and navigation icons for Directory, Webmail, Register, Search, and Sitemap. Below the header is a navigation bar with links for Home, Contact, and About Us. The main content area is titled 'ASSESSMENT AND RESEARCH' and features a sub-section 'Assessment Resources' with the heading 'Sample Rubrics'. A left sidebar contains a list of links: Assessment Tool, Faculty Vita, NCA Portal, Student Surveys, Databook, Program Review, and Assessment Resources. The main content area lists various rubric sources, including ABET Scoring Rubrics (U Delaware), Academic and Social Integration (U South Dakota), Ad Analysis (U Cal Irvine), Argument Analysis (University of Central Florida), Art History Writing (Goshen College), Artistic Expression (Parker Schools), Assessment Plans (Georgia State), Assessment Plans (Kansas State), Art Project (Zimmerworks), Article Reviews (with sub-links for Article Review, Article Review (Mission College), and Article Review - Interdisciplinary (University of North Florida)), Analysis - primary source (Pearson / Prentice Hall), Analysis - Feature Article (Catholic Forum), Backwards Design (Utah Education Network), Biology Research Proposal (Albany College of Pharmacy), Book Report (Seton Hall), Brochure, Business Presentation (MarkED), and Business Strategy Analysis (University of Scranton) - under Assessment Tools. A Case Studies section follows, listing links for Ethics Case (Penn State), Diversity (Fort Hayes), Case Study - Engineering (Clemson), Case Analysis (U Dayton), Group Case Study (U Toronto), and Case Study (Idaho State).

Winona State University

<http://www.winona.edu/air/rubrics.htm>

Assessing SLOs – Indirect Measures

GLOBAL PERSPECTIVES INSTITUTE INC (GPI)

GPI
Welcome
Interpretative Guide & Sample Report
Manual
Ordering the GPI
Development of the GPI
Resources
About Us
Admin Login

Welcome

We have developed the Global Perspective Inventory (GPI) to measure a person's global perspective, with an emphasis on the importance of cultural influences. We have developed the GPI with the idea that all persons –students, faculty, staff--- are on a journey of life, in which they keep asking three major questions: How do I know? Who am I? and How do I relate to others?

In our pluralistic society answering these questions of life now requires a global perspective. We no longer can think in terms of living in a world in which we can or should avoid learning, meeting, and living with others with very different cultural backgrounds, habits, perspectives, customs, religious beliefs, and aspirations. In short, we live in a global world, in which multiple perspectives about on knowing, sense of identity, and relationships with others are distinct and serve as powerful influences in our society.

“How do I know?” reflects the **Cognitive** dimension. Cognitive development is centered on one's knowledge and understanding of what is true and important to know. It includes viewing knowledge and knowing with greater complexity and no longer relying on external authorities to have absolute truth.

“Who am I?” reflects the **Intrapersonal** dimension. Intrapersonal development focuses on one becoming more aware of and integrating one's personal values and self-identity into one's personhood.

“How do I relate to others?” reflects the **Interpersonal** dimension. Interpersonal development is centered on one's willingness to interact with persons with different social norms and cultural backgrounds, acceptance of others, and being comfortable when relating to others.

- <http://www.gpinv.org/index.html>

What should I use to assess student learning – to measure stated outcomes?

- **Classroom/Course Data**

- Objective Tests
- Essay Tests
- Embedded Questions and/or Assignments

- **Individual Projects/Performance Assessment**

- Written Products (e.g., term papers, lab reports, critiques)
- New Oral Presentations (e.g., speeches, role plays)
- Graphic Tests and Displays
- Poster Presentations
- Structural/Situational Assessments

- **Summative Performance Assessment**

- Standardized Tests
- Locally-Developed Exams
- Capstone Experiences
- Internships
- Portfolios
- Case or Longitudinal Studies

- **Self-Assessment/Reflection**

- Student Journals
- Collaboration
- Research Teams
- Group Projects (e.g., written and oral)
- On-Line Group Activities (e.g., chat traffic)

- **Interviews and Surveys**

- Satisfaction Measures (e.g., alumni, seniors, employers, etc.)
- Performance Reviews
- Exit Interviews
- External Examiner Interviews
- Focus Groups

- **Archival Measures**

- Analysis of Transfer Patterns
- Demographic Data Analysis
- Alumni Database
- Library Use Statistics

CLASSROOM/COURSE DATA

http://www.apa.org/ed/eval_strategies.html

NATURE OF CATEGORY:

This collection of assessment strategies involve methods that instructors have traditionally used to judge classroom performance (e.g., essay and objective testing) as well as approaches that reflect more recent attention to assessment-driven teaching-learning processes. These include embedded assessment strategies in which departments identify specify classes in which to embed assessments that are endorsed and designed by the department as well as classroom assessment techniques articulated by Cross and Angelo (1993).

Responsible assessment plans will include strategies that make developing evidence of quality dependent on measures of particular target behaviors, rather than on more global measures such as grades.

Recommendations:

Faculty who are new to accountability mandates often protest that other kinds of assessment activity are unnecessary. They advocate course grades as a meaningful index of student learning. Grades that reflect classroom performance do constitute one important source of data about student learning. However, most accrediting agencies recognize that solely relying on grades is not adequate evidence of learning quality.

Responsible assessment plans will include strategies that make developing evidence of quality dependent on measures of particular target behaviors, rather than on more global measures such as grades.

OBJECTIVE TESTS

(multiple choice, true-false, fill-in-the-blank items)

Advantages:

- + displays good psychometric properties
- + facilitates rapid feedback through ease of scoring
- + develops norms
- + inexpensive
- + comprehensive
- + improves test validity through item analysis
- + facilitates differential group scoring

Disadvantages:

- usually involves testing low level knowledge
- constructing high quality test questions difficult
- question banks are often of poor quality
- can be compromised by student test banks that may foster differential access

Recommendations:

Although constructing solid objective tests that tap deeper levels is not impossible, it is challenging. Instructors need to help students understand how objective testing can be designed to go after different levels of knowledge. Some find that teaching students Bloom's taxonomy as an organizer that faculty might intuitively use to create more targeted challenges will help students understand questions as challenging rather than picky.

http://www.apa.org/ed/eval_strategies.html

Selecting Assessment Measures

MATURE

- **M**atch
- **A**ppropriate
- **T**arget
- **U**seful
- **R**eliable
- **E**ffective/**E**fficient

Source: University of Central Florida (2005) Administrative Assessment Handbook
http://oeas.ucf.edu/doc/adm_assess_handbook.pdf

Match **ATURE**



- Match the Outcome with the appropriate assessment method. Successful and useful assessment cannot be achieved if you do not align the assessment method with the Outcome that you are trying to assess.

Outcome: Students will demonstrate an understanding of the services provided by offices that are involved in the intent to graduate process.

- Example of an assessment method that does not match the Outcome you are assessing:

Assessment method: Students will successfully download the intent to graduate form.

- Example of an assessment method that matches the Outcome you are assessing:

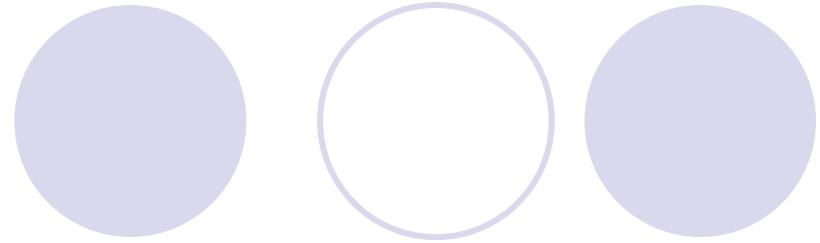
Assessment method: After the workshop session, students will achieve a 90% or higher on the set of questions related to the services provided by offices that assist in the intent to graduate process.



M Appropriate TURE

- Consider measures that provide you with information that is easily interpreted and unambiguous and that can be used to improve where necessary.
- Determine beforehand if there are available resources to assist in the collection of data on the chosen measure. Consider assessment methods for which data might already exist. The Office of Institutional Research may have information that could be useful for your assessment plan. Avoid selecting assessment methods that require complicated data collection techniques, when possible.

MA Target URE



- Each measure should be directed. It should specify, when possible, the desired level of performance (level of satisfaction, productivity, efficiency, performance).
- Numerical scores or percentages are best here.
- The use of rubrics are suggested for more qualitative or subjective evaluations to establish/develop a numerical basis.





MAT Useful RE

- Choose assessment measures/methods that will provide you with useful and useable information. The measure that you are trying to assess should not only be interesting but one that would allow you to make inferences about the progress toward the **Student Learning Outcome**.
- Assessing state requirements or the achievement of a goal or the completion of an activity may not provide evidence about student learning.

MAT Useful RE



Student Learning Outcome: By successfully completing CHEM 111 and 112 (grade of 'C' or higher in each), students will demonstrate the ability to analyze sample laboratory data and locate three probable error sources.

- Example of assessment measure that **will not** provide useful information:
 - Measure: Number of students completing CHEM 111 & 112 with a grade of 'C' or higher will be tracked for three semesters.
- Example of assessment measure that **will** provide useful information:
 - Measure: Once per semester, an in-class group assignment in CHEM 111 and individual out-of-class assignment in CHEM 112 will require students to analyze sample laboratory data, locate probable error sources, and describe those sources in writing. A record of the results will be maintained by the course instructors for comparison and analysis.
- Note: The first example measure shows that data are being collected, but not useful data. The second example provides information that can be used to determine if the SLO is being accomplished and to what level.

MATU Reliable E

- The measure is based on tested, known methods.
- A reliable assessment measure is one that yields consistent responses over time. The method selected should be one that provides dependable, consistent results time after time. The instrument should be clearly worded and not ambiguous. The time available to complete the instrument should be consistent with its length.





MATUR Effective and Efficient

- Each approach accurately and concisely measures the **Outcome**.
- Two assessment methods are recommended for each **Outcome**. Two methods provide a higher level of accuracy and reliability.
- Attempt to utilize a combination of **direct** and **indirect** assessment methods.
- Multiple questions on a survey may be relevant to one **Outcome** (e.g., quality of advising). However, questions on a survey may also be directed at and provide evidence for multiple **outcomes**.

Example

Mission → Goal → Outcome → Measure → Target

- **MSU Goal #1 – Academic Excellence**: We will develop and maintain a culture of excellence through high quality instruction and learning.
- **Academic Program Goal**: The students of the baccalaureate level biology program will develop proficient technical writing capabilities.
- **Outcome**: Students completing 300 & 400-level courses with a laboratory component will demonstrate their ability to proficiently write laboratory reports.

Example

A diagram consisting of four circles in a horizontal line. The first and third circles are filled with a light purple color, while the second and fourth are hollow. A yellow rectangular box with a black border is positioned to the right of the fourth circle, containing the text 'Direct Measure'. A black arrow points from the top-right corner of this box to the first bullet point of the text below.

**Direct
Measure**

- **Outcome:** Students completing 300 & 400-level courses with a laboratory component will demonstrate their ability to proficiently write laboratory reports.
- **Assessment Measure #1:** Once per semester, biology faculty teaching 300 & 400-level lab courses will rate a sample of student lab reports using a common rubric. The sample size shall be at least 30% of the number of students in the classes and be representative of the grade distribution. Professor Doe will prepare aggregate results of the data.
- **Target:** The rating on the rubric for 80% of student lab reports will be an average of at least 3.25 (of 4 possible). No rating will be below an average of 3.0.

Example: Lab Report Rubric

	1 Beginning or incomplete	2 Developing	3 Accomplished	4 Exemplary
Abstract/Summary	Several major aspects of the experiment are missing, student displays a lack of understanding about how to write an abstract	Abstract misses one or more major aspects of carrying out the experiment or the results	Abstract references most of the major aspects of the experiment, some minor details are missing	Abstract contains reference to all major aspects of carrying out the experiment and the results, well-written
Introduction	Very little background	Some introductory information,	Introduction is nearly complete,	Introduction complete and well-
http://www.winona.edu/air/resourcelinks/No%20Carolina%20assess_lab_rubric.doc				
Results, data, figures, graphs, tables, etc.	Figures, graphs, tables contain errors or are poorly constructed, have missing titles, captions or numbers, units missing or incorrect, etc.	Most figures, graphs, tables OK, some still missing some important or required features	All figures, graphs, tables are correctly drawn, but some have minor problems or could still be improved	All figures, graphs, tables are correctly drawn, are numbered and contain titles/captions.
Discussion	Very incomplete or incorrect interpretation of trends and comparison of data indicating a lack of understanding of results	Some of the results have been correctly interpreted and discussed; partial but incomplete understanding of results is still evident	Almost all of the results have been correctly interpreted and discussed, only minor improvements are needed	All important trends and data comparisons have been interpreted correctly and discussed, good understanding of results is conveyed
Conclusions	Conclusions missing or missing the important points	Conclusions regarding major points are drawn, but many are misstated, indicating a lack of understanding	All important conclusions have been drawn, could be better stated	All important conclusions have been clearly made, student shows good understanding
Spelling, grammar, sentence structure	Frequent grammar and/or spelling errors, writing style is rough and immature	Occasional grammar/spelling errors, generally readable with some rough spots in writing style	Less than 3 grammar/spelling errors, mature, readable style	All grammar/spelling correct and very well-written
Appearance and formatting	Sections out of order, too much handwritten copy, sloppy formatting	Sections in order, contains the minimum allowable amount of handwritten copy, formatting is rough but readable	All sections in order, formatting generally good but could still be improved	All sections in order, well-formatted, very readable

Example



**Indirect
Measure**

- **Outcome:** Students completing 300 & 400-level courses with a laboratory component will demonstrate their ability to proficiently write laboratory reports.
- **Assessment Measure #2:** Employers of program graduates will be surveyed annually on the technical writing abilities of graduates. Professors Fire and Ice are responsible for contacting employers and aggregating results.
- **Target:** 85% of employers will indicate they are satisfied or very satisfied with program graduates.

Each measure/target should include:

1. **what** criteria has been identified with an established measurable level of success
2. **who** will complete the particular measure
3. **when** will the measure be completed





Assessment – Example

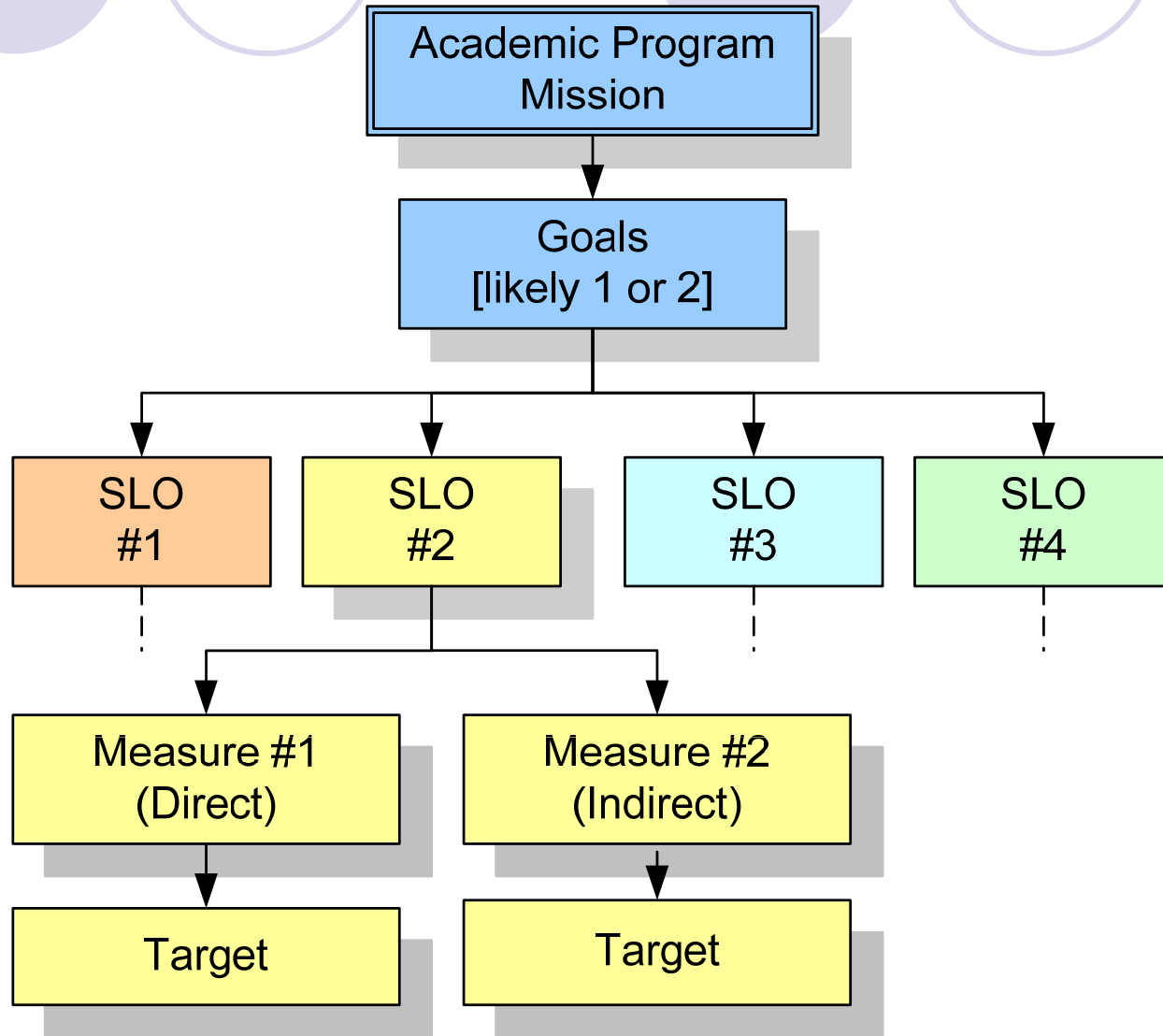
Example

- ***Outcome:***

- ***Assessment Measure:***

- ***Target:***

Components - Assessment Plan



6. Establish schedule for assessments

- Assessments can occur:
 - Yearly (or every 2 - 3 years)
 - ***Each semester*** (typical for academic programs assessing SLOs)
 - Each month
- Choose a time frame that gives you a clear picture without overdoing it.



7. Submit your plan for review.

- All 2008-09 academic program plans need to be entered into WEAVE and approved by **Sept. 30th** this year.

SEPTEMBER 2008						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				



8. Implement the Plan

Remember to assign responsibility for the aggregation of results to specific individuals. Provide a due date for that data.



9. Analyze findings from your assessment

- What questions do you intend to answer with your assessments?
- Are you interested in obtaining information about how your students are improving throughout a program (value added)? Or, would you rather determine whether or not your students are meeting certain standards or proficiencies expected of them by the time they graduate?

9. Analyze findings from your assessment

These six common perspectives provide some direction in how to interpret and report your assessment findings.

- **Standards-based:** Are your students meeting your standards?
- **Benchmarking:** How do your students compare to peers?
- **Best Practice:** How do your students compare to the best of their peers?
- **Value-added:** Are your students improving?
- **Longitudinal:** Is your program improving?
- **Capability:** Are your students doing as well as they can?

(Suskie, p.107)

Suskie, L. 2004. *Assessing Student Learning: A common sense guide*. Bolton, MA: Anker Publishing, Inc.

9. Analyze findings from your assessment

- Celebrate when you achieve a target!
- Come to a clear understanding of areas that still present opportunities for growth and improvement.
- Enter findings into WEAVE and upload supporting documentation.



10. Use your results



- Program faculty should meet annually or more often to discuss SLOs, measures, targets, and findings so that data-driven improvements can be made on a continuous basis.
- This meeting is a critical step that must be documented. Minutes of these meetings need to be recorded and maintained.
- Data-driven improvements might include:
 - Revisions in curriculum or individual course content
 - Reallocating resources among courses/programs
 - Revamping laboratory/clinical procedures/streamlining processes
 - Modifying or expanding relations with public or external agencies/companies.



Using Results - Examples

- *“This assessment confirms our recommendations contained in the 2006 assessment report. We have added a new course, Internal Auditing and Controls to the required Accounting core under the new Professional Accounting Program, effective fall, 2007.”*
- *“After results were gathered, the 4 classroom instructors and 6 clinical supervisors met. Results were discussed, and the following changes were implemented: 1) Increased problem-solving situations were included in the classroom and the clinic, 2) Increased decision-making situations were included in the clinic, 3) Decision making was discussed with the students after student course experiences.”*



Using Results - Examples

- *“Some of us have changed our syllabi. In one case, for example, a professor teaching one of the junior-level writing courses has included points for peer review of writing, one extra paper, and graded topic clearance for papers. The capstone course was changed from a series of unconnected journal assignments to a portfolio-type course, in which all work was aimed at the final paper.”*
- *“As planned, one area has revised one class to provide more rigorous and pointed instruction in writing, especially in the essential writing skills of analysis, interpretation, and evaluation.”*

Timeline of Events --- 2009-2010

- By **May 1st**, academic program faculty need to check that assessment data results are in WEAVE to assure data is aggregated/prepared for the May meetings.
- By **May 15th (or end of semester)**, all program faculty meet within their unit to: (1) discuss previous year's outcomes and assessment data/results, (2) develop plans of action to address any targets that were not met, and (3) adjust existing and/or develop new unit outcomes, assessment methods and targets. This meeting could be a departmental faculty meeting to discuss all programs.
- By **May 30th**, all academic program plans of action, adjusted/new outcomes, adjusted/new assessment methods, and targets uploaded to WEAVE and approved for current academic year.

Note: These are final dates for completion. Program faculty are encouraged to finalize data aggregation and analysis and upload new plans as early as possible.



Resources

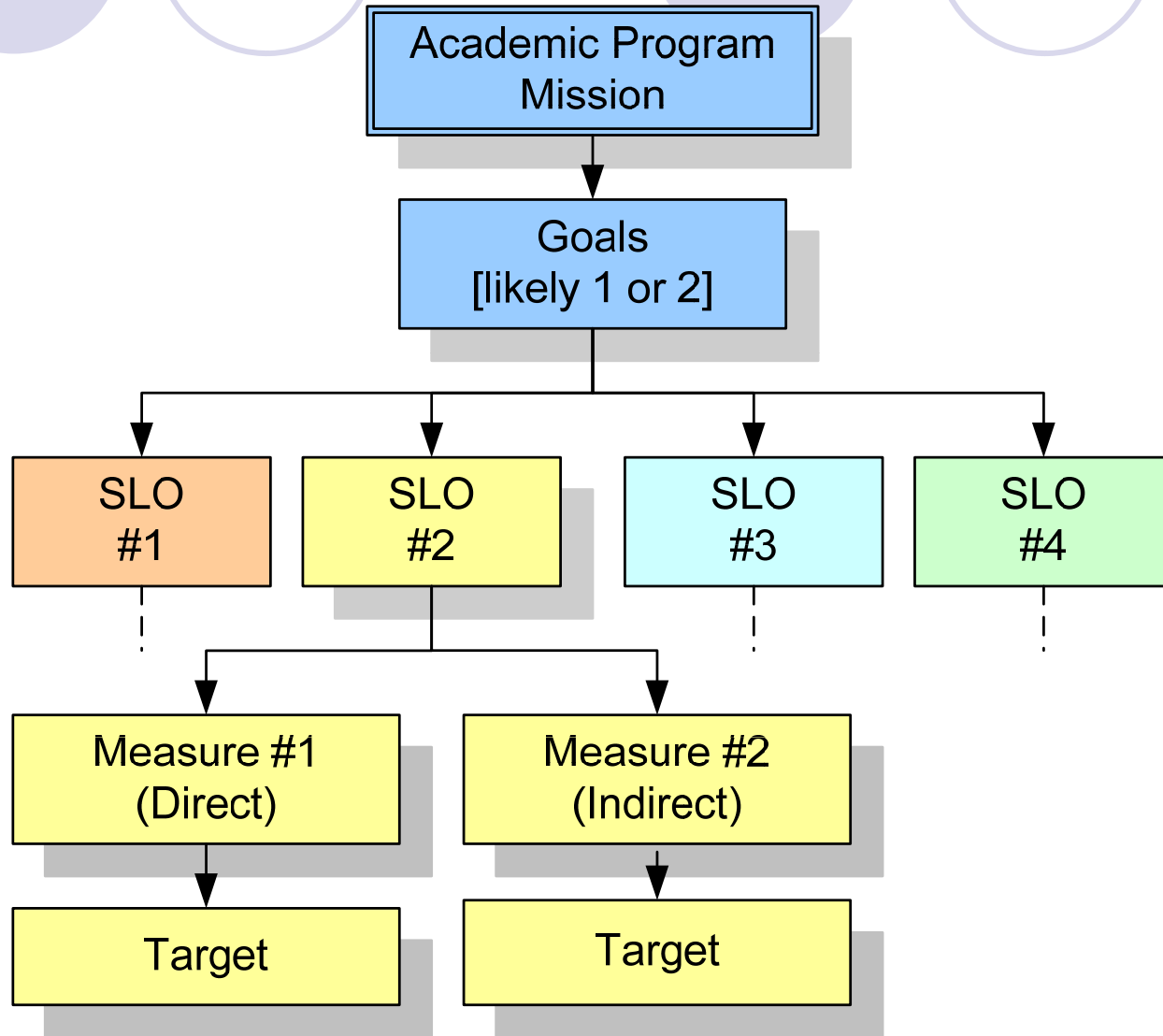
- Allen, M.J. 2004. *Assessing Academic Programs in Higher Education*. (Anker)
- Angelo, T. & P. Cross. 1993. *Classroom Assessment Techniques*. (Jossey-Bass)
- Bresciani, Marilee. 2006. *Outcomes-Based Academic and Co-Curricular Program Review: A Compilation of Institutional Good Practices* (Stylus)
- Erwin, T.D. 1991. *Assessing Student Learning and Development*. (Jossey-Bass). This is an exhaustive, but brief, nuts-and-bolts book that includes student development as well as academic consideration.
- Huba, M. & J. Freed. 2000. *Learner-Centered Assessment on College Campuses* by Mary (Allyn & Bacon)
- Morehead State University. 2007. *A Quality Enhancement Guide for Administrative Support Units*. Office of Institutional Effectiveness.
<http://www.moreheadstate.edu/files/units/ira/WEAVEMSUDraft2.pdf>
- NC State University/University Planning and Analysis: Internet Resources for Higher Education Outcomes Assessment
<http://www2.acs.ncsu.edu/UPA/assmt/resource.htm>
- Nichols, J.O. and Nichols, K.W. 2005. *A Road Map for Improvement of Student Learning and Support Services Through Assessment*. (Agathon Press)
- Nichols, J.O. 1995. *A Practitioner's Handbook for Institutional Effectiveness and Student Outcomes Assessment Implementation*. 3rd Ed. (Agathon Press). The strength of Nichols is in its “let’s get it done” approach and in the institutionalization of the IE process.

Resources



- Palomba C. & T. Banta. 1999. *Assessment Essentials: Planning, Implementing, Improving* (Jossey-Bass)
- Schuh, J.H. and Upcraft, M.L. 2001. *Assessment practice in student affairs: An applications manual*. (John Wiley & Sons, Inc.)
- Suskie, Linda. 2004. *Assessing Student Learning*. (JB - Anker Series)
- Walvoord, B. 2004. *Assessment Clear and Simple: A Practical Guide for Institutions, Departments and General Education*. (Jossey-Bass)
- Walvoord, B. & G. Anderson. 1998. *Effective Grading: A Tool for Learning and Assessment* (Jossey-Bass)
- University of Central Florida, Administrative Assessment Handbook. (2005). http://oeas.ucf.edu/doc/adm_assess_handbook.pdf

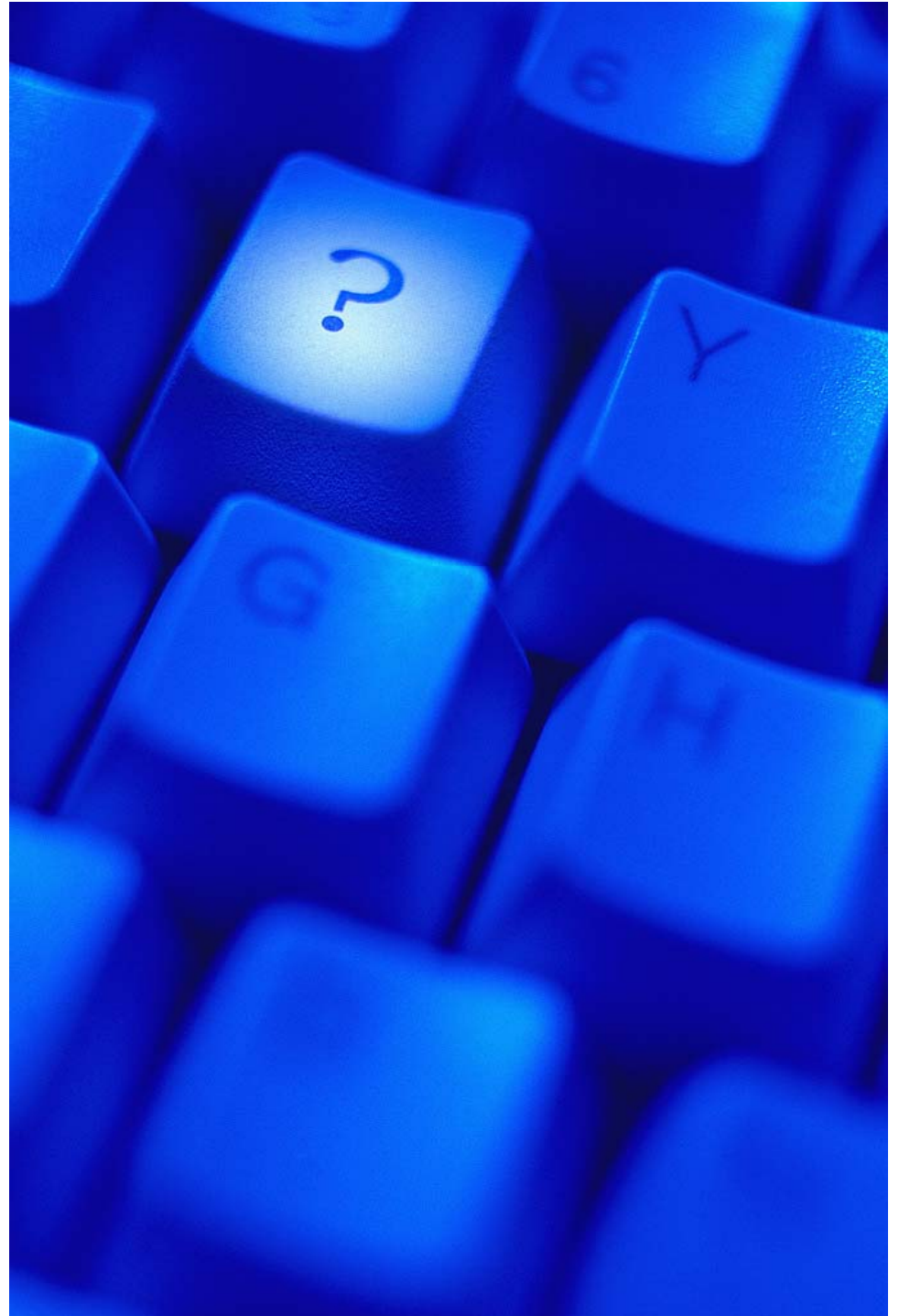
Components - Assessment Plan



Assessment Plan Rubric

Assessment Plan Elements	Very Good 4	Acceptable 3	Developing 2	Undeveloped 1
Student learning outcomes (SLO)	Four (or five) SLOs are clearly stated using the proper format (ABCD).	At least three SLOs are clearly stated using the proper format (ABCD).	SLOs are stated but are less than 3 and/or are unclear in 1 or more format items.	SLOs are not stated in an acceptable format.
Assessment measure for each outcome	At least 2 measures are identified for each SLO.	At least 1 measure is identified for each SLO.	Measures are identified for some SLOs	Measures are not identified or adequately described.
Direct assessment measures	At least 1 direct measure is specified for each SLO.		1 or more SLOs are not measured directly.	No direct measures are identified.
Assessment measure targets	Numerical targets are identified for each measure.	Measurable targets are identified for each measure.	Targets are either not measurable or not identified for each measure.	Targets are not identified or not measurable for all measures.

Questions
???



WEAVE Workshops

Monday, Sept. 15 th	9:10-10:10 a.m.	301 ADUC
Tuesday, Sept. 16 th	1:50-2:50 p.m.	301 ADUC
Wednesday, Sept. 17 th	3:00-4:00 p.m.	301 ADUC

