ASSESSMENT BEST PRACTICES

IMPROVEMENT IN ACTION

Institutional Effectiveness
WEST TEXAS A&M UNIVERSITY

Office of Institutional Effectiveness

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Contents

1. Introduction to Student Learning Assessment……3
   What is Assessment? …….3
   Introduction……3

2. Best Practices for Assessing Student Learning…….…….6

3. Assessment Organization and Responsibilities……..7

4. Creating Strong Student Learning Outcomes……..…9

5. Curriculum Maps……..…25

6. Assessment Glossary……26

"A pig never fattened up only because it was weighed."

-Keston Fulcher, et al.

A Simple Model for Learning Improvement: Weigh Pig, Feed Pig, Weigh Pig

Introduction to Student Learning Assessment

What is Assessment?
Introduction

1. Conceptual Framework for Learning Outcomes Assessment

What is Assessment?

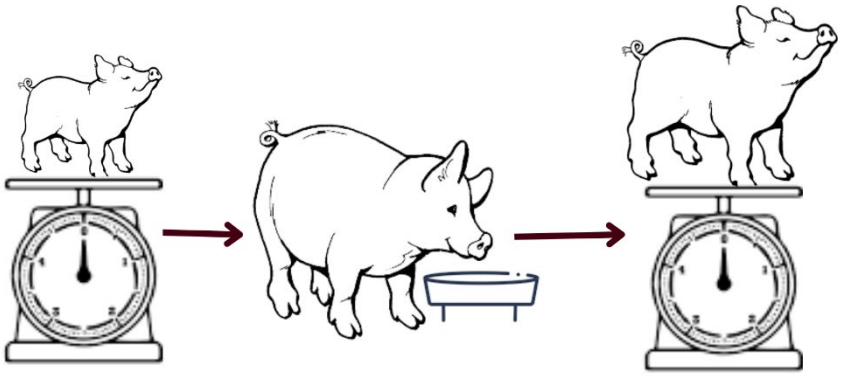
Assessment is the systematic collection of information about student learning, using the time, knowledge, expertise, and resources available, in order to inform decisions that affect student learning.[i] Good assessment shows purpose and includes a meaningful approach to student learning improvement at the post-secondary level. At WT, *Improvement in Action* is tantamount to everything the faculty, staff, and administration at the university attest to and show evidence of on an annual basis.

Purpose of Assessment

Assessment is a tool that is used to help track the steps taken by faculty and staff in achieving improvement of student learning. In order to demonstrate the effectiveness of our institution, it is important to show evidence of our relevancy and effectiveness in our mission. Assessment can offer evidence of the success/failure of our student learning outcomes (SLOs) as they relate to the strategic plan, the goals and objectives of the university and its colleges, and the learning outcomes of our students as they leave our institution and enter the work force.

Weigh Pig, Feed Pig, Weigh Pig

One of the principal concepts of learning and improvement touted in recent years comes from a NILOA (National Institute for Learning Outcomes Assessment) white paper titled, "A Simple Model for Learning Improvement: Weigh Pig, Feed Pig, Weigh Pig." It is written by James Madison University professor Keston Fulcher, as well as his students, Megan R. Good, Chris M. Coleman, and Kristen L. Smith.[ii]



Introduction

Assessment of student learning outcomes to enhance student success is a core value of the ongoing work being done at West Texas A & M University annually. Engagement in assessment of student learning encourages us to think deeply about the outcomes we desire for our students and the educational experiences we create to support achievement of specifically identified outcomes. It further seeks, (1) to make decisions concerning programmatic alterations, (2) to enhance learning, (3) to make decisions concerning programmatic alterations, (4) to enhance learning, and (5) to communicate the quality and effectiveness of our efforts to support and enhance student learning for our many stakeholders.

This handbook was designed to communicate the conceptual framework for assessment at WTAMU and to serve as a guide to programs concerning expectations and processes for continuous improvement practices specifically involving assessment. Additional information with regard to the assessment process, assessment resources, and the work of the University Assessment Committee is available on the Institutional Research and Assessment website.

Programs are encouraged to contact the Assessment Specialist for support in developing and implementing assessment plans.

Basics of Learning Outcomes Assessment at WTAMU

Assessment of student learning achievement to enhance student success and improve teaching and learning is a core value and ongoing activity at West Texas A & M University. WTAMU's goal is to be known regionally and nationally as an institution of higher learning that consistently and continually seeks to improve its academic, student affairs, and student support related programs. There is a growing realization in higher education that it is necessary for institutions to commit to showing their students and families, among other stakeholders, that promises made are being kept (Finley, 2014). WTAMU communicates this commitment through our university and unit mission statements and the student learning outcomes (SLOs) that we identify through our many programs and courses.

The guiding purpose of assessment includes the following:

1. It ensures that our programs are delivering on the message that WTAMU cares most about; that students receive the best education possible, that learning is what is most important

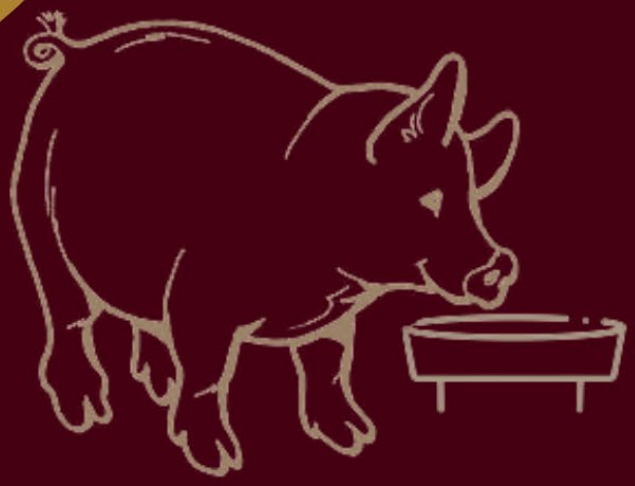
2. It allows us to ensure that student learning is at the appropriate scope, depth, and rigor at the program level (Suskie, October 26, 2010). When good assessment is taking place, institutions are gathering as well as interpreting data in order to determine whether or not a specified program is meeting its prescribed outcomes. Next, we carry these insights forward by making enhancements to the program based on knowledge learned in our programs.

It can further be supposed that assessment is indeed a form of actionable research. In this case, it would not be for the increased development of theoretical knowledge, but to better inform our actions and improvements. It's about gradually getting better, achieving more strengths and eliminating subtle weaknesses below the surface, before they become glaring issues.

"A change is only an improvement when one can demonstrate its positive effect on student learning."

-Keston Fulcher, et al.

A Simple Model for Learning Improvement: Weigh Pig, Feed Pig, Weigh Pig



Best Practices for Assessing Student Learning

Nine Principles of Good Practice for Assessing Student Learning

The assessment of student learning begins with educational values.

1. Assessment is not an end in itself but a vehicle for educational improvement.
2. Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.
3. Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.
4. Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.
5. Assessment works best when it is ongoing not episodic. Assessment is a process whose power is cumulative.
6. Assessment fosters wider improvement when representatives from across the educational community are involved.
7. Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.
8. Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.
9. Through assessment, educators meet responsibilities to students and to the public.

More detail of this practice for assessing student learning can be found at http://www2.indstate.edu/assessment/docs/ninePrinciples.pdf.

"A key facilitating condition is a campus administration that encourages and praises improvement."

-Keston Fulcher, et al.

A Simple Model for Learning Improvement: Weigh Pig, Feed Pig, Weigh Pig

Assessment Organization and Responsiblities

3. Assessment Organization and Responsibilities

President and Provost

- Oversee the tenets of the University Strategic Plan
- Provide leadership and oversight in seeking continuous improvement

Deans and Vice Presidents

- Set goals for their prospective divisions that directly connect to the mission of the University and its strategic plan.
- Assist the office of Institutional Effectiveness), only if intervention is deemed necessary and as a last resort. Emphasis will be placed on entrusting program chairs/directors, alongside faculty and staff members, to conduct assessment that leads to action and ultimately, to improvement.
- Identify and make additional support and resources available as necessary in promotion of a strong commitment to an active assessment culture at WTAMU.
- Oversee and work with Chairs and Directors as they carry out meaningful and sustainable assessment plans that are ultimately directed up toward the university's strategic plan in support of the university's mission.

Office of IE

- Act as an accessible resource for assessment both at the Institutional level for program and general education assessment, as well as at the Individual, Division, or College level.
- Offer educational guidance in the form of individualized training and/or through use of presentations/workshops.
- Provide feedback regarding assessment reporting and data analysis.
- Promote, encourage, and support faculty/staff in the use of WTAMU's assessment management system.
- Provide additional data as requested that promotes and strengthens program assessment.

- Offer additional support through the supply of resources that enhance the assessment and improvement efforts of colleges, departments, programs, and strategic units.
- Interpret and assist the university with regard to expectations of the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) and/or other accrediting bodies as needed.

Faculty/Staff

- Work with the Chairs and Directors to align courses, programs, and learning outcomes with division and institutional goals. The outcomes are used to populate the goals, which in turn contribute to the university's strategic plan.
- Set an individualized routine to collect data, assess and reflect on its value to the overarching success of each program.
- Communicate assessment results to all faculty within the program and seek feedback regarding successful and unsuccessful achievement of desired benchmarks.
- Report results and prescribed actions designed to improve program efficiency.
- **Act on assessment results in the interest of improvement year over year!!**
- In the coming assessment cycle, show evidence of resulting changes due to the action taken using the previous year's data. This is the completion of the assessment cycle.
- As part of the assessment process and as appropriate, engage students in the assessment of divisions/programs offering transparency and appreciation for their contribution to assessment for improvement at WTAMU.

Students

- Seek to complete all assessment projects and surveys to the best of their ability and for the sake of improvement for the future.
- Provide meaningful feedback on division/program functions and other activities as requested by faculty/staff.

"Higher education has an obligation to continuously improve..."

-Keston Fulcher, et al.

A Simple Model for Learning Improvement: Weigh Pig, Feed Pig, Weigh Pig

Creating Strong Student Learning Outcomes

4. Creating Strong Outcomes for Students

Introduction

Because teaching is a primary mission of West Texas A & M (WTAMU), evidence of student learning is a measure of our success as an educational institution. Regional accrediting agencies across the United States require that universities provide evidence of student learning and program improvement to demonstrate their effectiveness as educational institutions.[iii] Student Learning Outcomes (SLOs) specifically inform what students will know and be able to do because of completing their degree program. A program goal is a broad statement of what a program intends to accomplish.

Developing S.M.A.R.T. (SMART) Goals for Academic Programs

SMART goals are specific, measurable, attainable, relevant, and time-sensitive or limited. This model for goal development can be helpful when developing academic program goals. Here are the basic components of SMART goals and guiding questions for developing them.

Specific

- What do we want to accomplish?
- What are the specific reasons, purposes, and/or benefits of accomplishing the goal?
- Who is involved in the process?
- What are the identifiable requirements and the constraints?

Measurable

- It is necessary to establish solid criteria for measuring a program's progress toward the attainment of a goal
- Measurable goals use active verbs to describe specific expectations
- Measuring progress helps programs to stay on the right path, reach target dates, and experience achievement successes
- Guiding questions: How much are we looking for? How many would we seek? How will we know when it's been accomplished?

Attainable

- Goals should be realistic and attainable
- Though a goal should stretch at team to achievement, it should not be extreme
- Theoretically, an attainable goal may cause goal-setters to identify previously overlooked opportunities to bring themselves closer to the achievement of their goals

Relevant

- Choose goals that matter.
- Remember, goals that are important to your college leadership are those most likely to receive support.
- Relevant goals can drive a program forward to improvement
- Goals that matter
    1. Are worthwhile
    2. Are set at the right times
    3. Get assigned to the right personnel
    4. Can be upgraded whenever necessary

Time-Sensitive

- Goals should be grounded within a time frame and/or cycle
- Commitment to a deadline helps focus the team
- How to set good time limits
    1. Set a timeframe for goal completion.
    2. Set a timeline of activities that become benchmarks for achieving the goals in place.

Student Learning Outcomes are Expectant

An expected learning outcome is a formal statement of what faculty intend for students to take away from or to learn in a degree program. Expected learning outcome statements refer to specific knowledge, practical skills, areas of professional development, attitudes, higher-order thinking skills, etc. that faculty members and administrators expect students to learn and master by the completion of their chosen degree program (Suskie, 2004). Expected learning outcomes are generally referred to as “learning outcomes,” “student learning outcomes” (SLOs), or “learning outcome statements.”

Simply stated, expected learning outcome statements describe what faculty member want students to:

- Know at the end of the degree program, AND
- Be able to do at the end of the degree program.

Learning outcomes have three major characteristics (American Association of Law Libraries, 2005; Texas A&M University-Central Texas, 2010). They specify learning that is

1. Observable,
2. Measurable, and
3. Performed by the students or learners (rather than the faculty members).

Student learning outcome statements should possess all three of these characteristics so that they can be assessed effectively (Suskie, 2004). **Measurable** SLOs are "specific, demonstrable characteristics – knowledge, skills, values, attitudes, interests" that provide evidence that SLOs are being met (University of Connecticut, n.d.).

Writing Effective SLO Statements

When stating student learning outcomes, it is essential to use verbs that describe precisely what the learner(s) will be able to *know* or *do* upon completion of the degree program.

Examples of strong action words to include in expected learning outcome statements: compile, identify, create, plan, revise, analyze, design, select, utilize, apply, demonstrate, prepare, use, compute, discuss, explain, predict, assess, compare, rate, critique, outline, and evaluate.

Avoid unclear verbs in the context of an expected learning outcome statement (*e.g., know, be aware of, appreciate, learn, understand, comprehend, and become familiar with*). These words are often vague, too difficult to observe or measure, or have multiple interpretations. Consequently, it is best to avoid using these terms when creating expected learning outcome statements.

For example, please look at the following learning outcomes statements:

- Upon completion of the degree, students should understand basic human development theory.
- Graduates of the degree program should appreciate music from other cultures.

Both of these learning outcomes as stated will make them difficult to assess. Consider the following:

- How do you observe someone "understanding" a theory or "appreciating" other cultures?
- How easy will it be to measure "understanding" or "appreciation"?

These expected learning outcomes are more effectively stated as:

- Upon completion, students will be able to summarize the major theories of human development.
- Graduates of the degree program should be able to critique the characteristics of music from other cultures.

Also, the following is a list of some of the common areas for degree program-level student learning outcomes. These examples are meant to serve as examples of well-stated and measurable program-level student learning outcomes.

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Incorporating Critical Thinking Skills into Expected Learning Outcome Statements

Programs need to include words that reflect critical or higher-order thinking into their learning outcome statements to demonstrate the students are learning valuable skills. Bloom (1956) developed a taxonomy outlining the different types of thinking skills used in the learning process. Bloom argued that people use different levels of thinking skills to process different kinds of information and situations. Some of these are basic cognitive skills such as memorization, or complex skills

such as creating new ways to apply information. Practitioners define these skills as *critical thinking skills* or *higher-order thinking skills*. Anderson and Krathwohl (2001) adapted Bloom's model to include language oriented toward expected learning outcome statements

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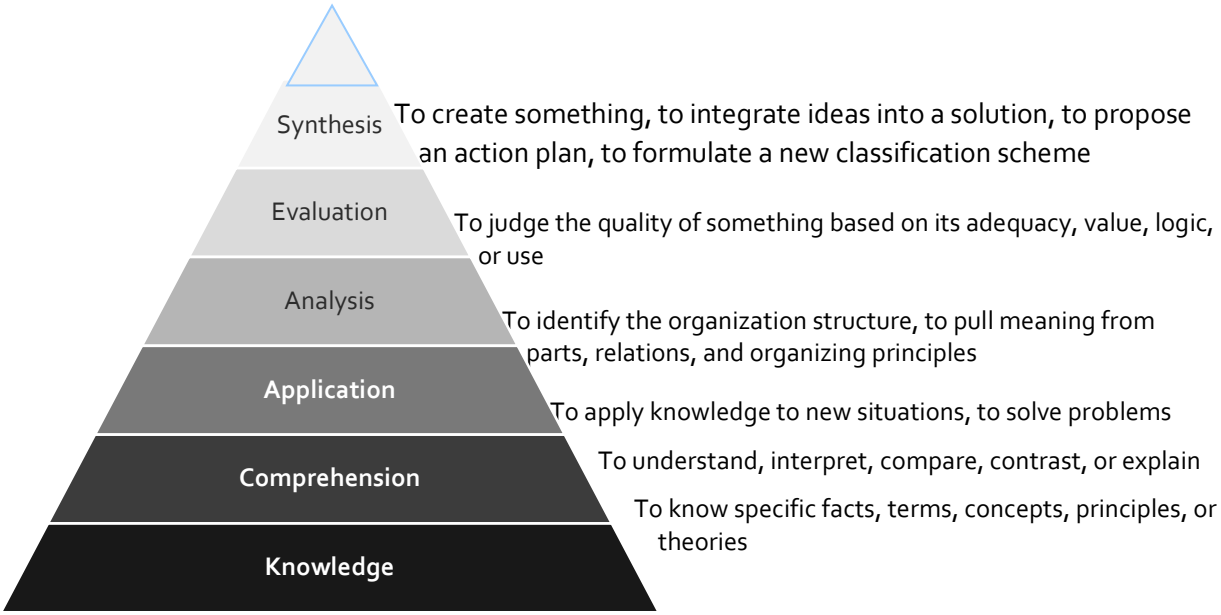
DEFINITIONS OF THE DIFFERENT LEVELS OF THINKING SKILLS IN BLOOM'S TAXONOMY



Higher-Order Thinking: Program-level student learning outcomes represent the knowledge and skills graduates possess. Therefore, at least some of a program's outcomes will reflect what is called "higher-order thinking skills" rather than more basic learning. The Application, Analysis, Evaluation, and Synthesis levels of Bloom's taxonomy are usually considered to reflect higher-order thinking skills.

ACTION WORDS RELATED TO CRITICAL THINKING SKILLS

The following list of action words is powerful when creating the expected student learning outcomes related to critical thinking skills in programs (Kansas State University, 2003) and organized according to the different levels of higher-order thinking skills.

Knowledge	Comprehension	Application	Analysis	Evaluation	Synthesis
Count	Associate	Add	Analyze	Appraise	Categorize
Define	Compute	Apply	Arrange	Assess	Combine
Describe	Convert	Calculate	Breakdown	Compare	Compile
Draw	Defend	Change	Combine	Conclude	Compose
Identify	Discuss	Classify	Design	Contrast	Create
Label	Distinguish	Complete	Detect	Criticize	Drive
List	Estimate	Compute	Develop	Critique	Design
Match	Explain	Demonstrate	Diagram	Determine	Devise
Name	Extend	Discover	Differentiate	Grade	Explain
Outline	Extrapolate	Divide	Discriminate	Interpret	Generate
Point	Generalize	Examine	Illustrate	Judge	Group
Quote	Give	Graph	Infer	Justify	Integrate
Read	examples	Interpolate	Outline	Measure	Modify
Recall	Infer	Manipulate	Point	Rank	Order
Recite	Paraphrase	Modify	out	Rate	Organize
Recognize	Predict	Operate	Relate	Support	Plan
Record	Rewrite	Prepare	Select	Test	Prescribe
Repeat	Summarize	Produce	Separate		Propose
Reproduce		Show	Subdivide		Rearrange
Select		Solve	Utilize		Reconstruct
State		Subtract			Related
Write		Translate			Reorganize
		Use			Revise
					Rewrite
					Specify
					Summarize
					Transform

Keep It Simple

Keep program outcome statements as simple as possible. Overly specific and complex learning outcomes statements can be difficult to assess because programs need to gather assessment data for each type of knowledge or skill in a program-level student learning outcome.

Tips

- Limit the total number of student learning outcomes to 3-5 statements for the entire degree program. (Minimum of two for WTAMU students).
- Make each learning outcome statement measurable.
- Focus on the expectation of overarching or general knowledge and skills gained from the entire degree program before graduation rather than focusing on what happens in any one individual course.
- Create student-centered rather than faculty-centered statements (e.g., "upon completion of this program students will be able to list the names of the 50 states" versus "one objective of this program is to teach the names of the 50 states").
- Incorporate or reflect the institutional and college missions and purposes as appropriate.
- Incorporate various ways for students to show success (outlining, describing, modeling, depicting, etc.) rather than using a single statement such as "at the end of the degree program, students will know_____ as the stem for each expected outcome statement.

Measurement of SLOs

Assessment involves the systematic collection, review, and use of evidence or information related to student learning (Palomba and Banta, 1999). Assessment helps faculty and program administrators understand how well students are mastering the knowledge and skills in the degree program. Assessment is the process of investigating:

1. What students are learning, and
2. How well students are learning the stated expected program learning outcomes.

Developing Good Measures

- Each SLO should have *at least* two assessment methods because multiple methods increase the reliability of findings
- Incorporate a variety of assessment methods into your assessment plan
- Identify the target population (e.g., all seniors, graduating seniors, alumni, faculty, etc.) for each assessment activity

- Establish timelines for gathering and regularly analyzing program assessment data (at least once per academic year)
- Collect data from graduating seniors as close to graduation as possible
- Assign specific personnel to each task

Selecting Good Measures

Select at least two appropriate measures for each degree program-level SLO. There are two types of assessment methods (Texas A&M University, n.d.). ***Direct assessment*** measures student learning by requiring students to display actual knowledge and skills (rather than report what they *think* their knowledge and skills are) (Oakland Community College, 2008). As direct assessment measures students' actual learning rather than perceptions of learning, practitioners often view the method as the *preferred* type of assessment. In contrast, ***indirect assessment*** asks students to reflect on their learning rather than to demonstrate it (Palomba & Banta, 1999, as cited in Texas A&M University, n.d.).

The practice of using both direct and indirect measures serves to provide useful insights in determining strengths and weaknesses of student learning in a degree program (Maki, 2004, as cited in Texas A&M University, n.d.). Direct and indirect measures each have unique advantages and disadvantages in terms of the type of data and information yielded. While indirect methods often provide an understanding of data yielded by direct methods, it is difficult to interpret the specific knowledge and skills gained from student learning with indirect methods (Texas A&M University, n.d).

Examples of Direct Assessment Methods: (Texas A&M University, n.d)

- Capstone Assignment/Project
- Case Studies
- Class Discussions
- Comprehensive exams
- Course-Level Assessment
- Dissertation
- Embedded assignments (projects, papers, presentations, performances, etc.)

- Essays
- Exhibit
- External examiners/peer review
- Field Placement/Internship
- Grading with criteria or rubrics
- Internal/external juried review of performances and exhibitions
- Internship and clinical evaluations
- Locally developed exams
- Oral Exam
- Performance
- Portfolio evaluation
- Pre- and post-tests
- Professional Development Activities
- Qualifying Exam
- Reflective journal
- Regionally or nationally developed tests/exams (i.e., GRE Subject exams, certification exams, licensure exams, etc.
- Senior thesis or major project
- Study Abroad Experience
- Thesis

Examples of Indirect Assessment Methods: (Texas A&M University, n.d)

- Alumni survey
- Exit interviews
- Focus groups
- Graduation and retention rates
- Job/graduate school placement statistics
- Peer Assessments
- Surveys sent to students, faculty, alumni, employers, etc. that assess perceptions of the program

Targets (Benchmarks)

Benchmarks state the level of performance expected of students. Each benchmark is the minimally acceptable level of performance for an educational outcome (Grand Valley State University, 2010). Degree programs should develop a benchmark for each student-learning outcome for their program.

A strong benchmark compares student performance on a given student learning outcome to a specific performance level. In this type of benchmark, degree programs typically select a percentage of their students who should exhibit competent performance for student learning outcomes.

Example: *90% of graduating seniors will be able to articulate their philosophy of education.*

Important: It is always better to set higher targeted outcomes that can be measured over three year or greater time periods, than to set lower, more easily attainable benchmarks. It is far better to be perceived as striving toward higher standards, rather than simply seeking to achieve the status quo.

Analyzing Your Data

Degree programs should incorporate the analysis of all assessment data as a routine part of program management. The data gathered for each student-learning outcome should be analyzed and evaluated on either a semester or annual basis.

Analysis of assessment data should help departments identify the following:

- What students are learning in relation to each student learning outcome
- How well students are learning the material that relates to those outcomes
- How well the selected assessment methods measure each student learning outcome
- Areas for more focused assessment
- Ways to revise learning outcomes
- Areas to investigate in the next phase of assessment – the Improving Phase

Closing the Loop and on to Improvement

Assessment per se guarantees nothing by way of improvement; no more than a thermometer cures a fever (Marchese, 1987)

The improving phase is the purpose of assessment and involves reviewing the results to identify strategies to improve the quality of students' experiences and learning. It is essential to learn from the assessment results to "close the loop" rather than merely maintaining the benchmark or criterion (Chaffey College, n.d.).

Walvoord (2004) recommends at least one faculty meeting a year to discuss the degree program's student learning outcomes and assessment plan. This meeting should be at least two hours long and focus on the degree program's student learning outcomes, assessment data, and potential improvements. It is not necessary to wait to schedule this meeting until the assessment plan and data are "perfect." Assessment is a work in progress, and any meeting should be beneficial.

Possible topics for this meeting include:

- Share assessment data analysis results with program faculty and staff.
- Discuss these assessment results as they relate to each SLO.
- Review assessment results to determine programmatic strengths and areas for improvement.
- Decide if the program needs different assessment methods to obtain more targeted information.
- Determine how assessment results can be used to make improvements to the program (e.g., changes to the curriculum, provide professional development for teaching personnel in certain areas, etc.)
- Develop an action plan to implement these improvements.
- Implementation of specific strategies to execute the action plan.
- Review what needs to be done as the assessment cycle transitions back to the Planning Phase (e.g., Do faculty need to revise student learning outcomes? Are different assessment methods necessary? etc.)

Annual Improvement Narrative

Each year, an assessment narrative should be filed in the WHOA (Weave Home for Outcomes Assessment) repository. It should consist of the following template.

Process – What actions were taken (based on previous program year's planning) to achieve each Student Learning Outcome. Data derived from direct and indirect assessment measures should be considered. A minimum of two outcomes should be discussed and planned for each year, though data should be collected for all outcomes annually.

Positives – In perusing the data collected, what impact did each outcome have on student learning during the academic year. Were targets met, and if not, was the data more encouraging in some parts of the measurement than in other parts? Discuss the strong points in this area.

Negatives – In the same manner as above, look over the data and share your program's discussion of the shortcomings in your data results as you measure the effectiveness of your outcomes.

Action Plans – Based on the data gathered and considering your positives and negatives, faculty should determine a course of action that will improve outcome results in the coming academic year.

Important: At least two outcomes should include action plans for the following year. If you are not analyzing the other outcomes during this year, it should be noted when analysis and improvement will be considered for the others moving forward. It is recommended that all outcomes should be analyzed and adjusted for improvement at least every other year.

Improvement

Evidence of improvement occurs when actions taken in the current year bear results in the following year, and then are adjusted for year three, based upon data extracted from changes that were made. This is the standard. This makes assessment meaningful and useful for our students and their learning. Anything else would understandably be considered baseless and unnecessary.

"The challenge for higher education is to coordinate resources to focus on 'fattening the pig'"

-Keston Fulcher, et al.

A Simple Model for Learning Improvement: Weigh Pig, Feed Pig, Weigh Pig

Curriculum Maps

5. Curriculum Maps

Academic programs state the expected learning outcomes in a program's major and map those outcomes to the courses defined in the degree requirements published in the University Catalog. Each course is identified as introducing, developing or mastering/reinforcing an outcome or group of outcomes. Each program outcome should be associated with a course, and each course should be associated with an outcome. Only prescribed courses are required to be associated with program level outcomes. However, more detailed curriculum maps are encouraged.

Detailed Curriculum Maps

It would be even more beneficial if programs chose to engage in detailed curriculum maps that include all the courses (including lower-level general education courses and electives and emphasis and concentration courses) listed or indirectly referenced in the University Catalog.

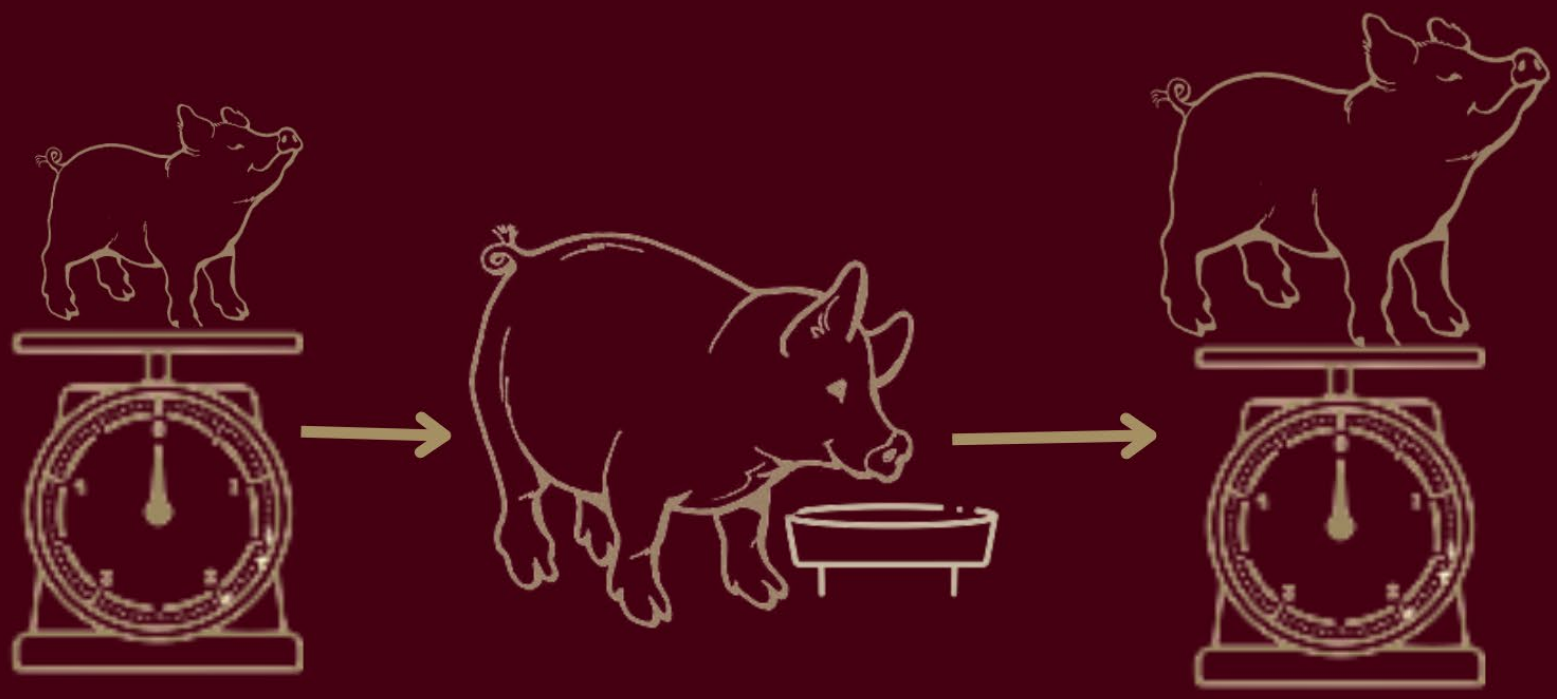
The learning outcomes for these courses are mapped to program learning outcomes, and the assignments of these courses should be mapped to the course learning outcomes and consequentially to the program level learning outcomes. Program faculty should consider and evaluate if the frequency and extent of the inclusion of outcomes in course assessments adequately provide students the ability to obtain the program level learning outcome by the conclusion of the program. Program faculty should carefully evaluate course-level learning outcomes and assignments that do not directly or indirectly support the program level learning outcomes.

For academic programs only, each year in the Fall, develop or review the program's curriculum map by identifying the program's core courses as listed in the University Catalog and indicating the relationship to the program's learning outcomes. The curriculum map aligns prescribed courses in the program's major to the program's learning outcomes by indicating where the outcome is introduced, practiced, or reinforced.

Ideally, the curriculum introduces each outcome in at least one course, but in some instances, those courses may be offered at the lower level and not listed. There is no restriction from listing the lower-level courses in a program on the curriculum map. The THECB ACGM includes the general outcomes for all lower-level courses.

Curriculum maps detailed in this way will be:

- **Comprehensive**: The map consists of all program learning outcomes.
- **Courses**: The map includes all the prescribed courses listed for the major in the current catalog.
- **Course Alignment**: The map associates each course with at least one outcome.
- **Outcome Alignment**: The map associates each outcome with at least one prescribed course.
- **Progressive**: The map demonstrates an intentional approach to introducing, reinforcing, and mastering learning outcomes.



Assessment Glossary

6. **Assessment Glossary** (Suskie, 2018)

Assessment

Deciding what we want our students to learn and making sure they learn it.

Closing the Loop

The fourth step of the teaching learning-assessment cycle. In the fourth step, evidence of student learning is used to understand and improve student learning by improving the other steps in the cycle: Establishing learning goals, ensuring sufficient learning opportunities, and assessing learning.

Action Research

A distinct type of research whose purpose is to inform and better one's own practice rather than make road generalizations.

Institution

Institutions of high education go by many names: College, university, institute, seminary, and academy, among others. Many people in higher education, including many accreditors use the generic term institution to refer to all of these entities. But that term can also be a bit off-putting. Students in the United States do not "go to institution"; they go to college. So this book uses college as generic term to refer to a two or four year college, or any other institution of high education.

Liberal Arts

The *liberal arts* are those studies addressing knowledge, skills, and competencies that cross disciplines, yielding a broadly educated, well rounded individuals. The term liberal comes from *liber*, the Latin word for "free"; in the Middle Ages, a liberal arts education was for the free individual, as opposed to an individual obliged to enter a particular trade or professions. Today many people use the term *liberal arts and science* or simply *art and sciences* to make clear that the liberal arts compromise study of the science as well as the arts and humanities. The Association of American College and universities, a leading advocate of liberal arts education, refers to liberal arts as liberal education.

Co-curricular Experiences

Are out of classroom experiences that help students achieve meaningful learning goals in concert with academic study.

Direct and indirect Evidence of Student Learning

Direct evidence of student learning is the kind that would convince a skeptic that students indeed have learned what they need to persist, graduate, transfer, obtain jobs, and otherwise succeed. *Indirect* evidence is less compelling evidence of student learning.

Validity

The usefulness of information on whatever an assessment is intended to assess. There several forms of validity. The most important when assessing student achievement of the learning goals it is intended to assess, and consequential validity, which is how well the evidence can be used to inform meaningful, substantive decisions and solve problems.

Floor and Ceiling

The *floor* of an assessment is the lowest possible score or rating; the *ceiling* is the highest possible score or rating.

Reliability

The consistency or dependability of an assessment tool such as test, rubric, or survey. There are several kinds' reliability. Interrater Reliability is the consistency between two raters. Internal consistency is the consistency among items in a test or survey that are all supposed to assess the same thing.

Hard and Soft Skills

Hard skills are career-specific skills required for a specific occupation. *Soft skills* are the generalizable, transferrable skills that are applicable to a wide range of careers and are often required to advance beyond a specific position.

Bloom's Taxonomy

Bloom's Taxonomy divides learning into three domains: Cognitive, affective (attitudes and values), and psychomotor (athletic skills, laboratory skills, and so on). Cognitive skills are organized into a hierarchy of six categories: remember, understand, apply, analyze, evaluate, and create. Many people still refer to the original names called knowledge, comprehension, application, analysis, evaluation, and synthesis.

Program Learning Goals

Programing learning goals are so important that they are addressed throughout the curriculum. Accordingly, every student in the program must take at least two courses that help him or she achieved the program learning goal – even in associate degree and certificate programs.

Institutional Learning Goals

Institutional learning goals are learning goals that every student at a college, regardless of program, is expected to achieve by graduation.

Curriculum Alignment

Curriculum alignment is ensuring that your course, program, or general education curriculum is designed to give every student enough opportunity to achieve its key learning goals. It is an important way to make sure that you keep your promises to your students that they will achieve those learning goals.

Backwards Curriculum Design

Backwards Curriculum Design develops a course, program, or other learning experience by first articulating its key learning goals, then designing the course or program so student achieve and demonstrate those learning goals. Some faculty have describe it as first writing the final assignment or exam for a course, then designing the course so that students who complete all its learning activities successfully can earn an A on the final assignment or exam.

Competency-Based Programs

Competency-Based Programs, a recent arrival on the United States higher education scene, replace traditional courses with a set of learning activities designed to help students achieve and demonstrate the program's learning goals. Students' progress through the program not by completing courses but by completing the learning activities.

Capstones

A *capstone* is a holistic activity that students complete as they approach the end of a learning experience. Capstones give students an opportunity to see the big picture: To integrate, synthesize, apply, and reflect on what they have learned throughout their studies.

High Impact Practices

High Impact Practices (HIPs) are educational experiences that make a significant difference in student learning, persistence, and success because they engage student actively in their learning. They include: first year learning, learning communities, writing-intensive courses, collaborative learning experiences, service learning, undergraduate research, field experiences, and capstone courses and projects.

Curriculum Map

A *curriculum map* is a chart identifying the key learning goals addressed in each of the curriculum's key elements or learning activities.

Learning- Centered

Learning-Centered classrooms are those in which students are actively engaged in their learning, and where faculty and students share responsibility for learning. A learning centered college actively fosters these practices.

Stewardship

Stewardships is the prudent, effective, and judicious care and use of resources entrusted by others.

Accountability

Accountability is assuring your stakeholders of effectiveness of your college, program, service, or initiative.

Student Success

There's no widely accepted definition of student success, but it might be helpful to think of it as students' success in achieving their goals, which may include any of the following: 1.Developing new skills that will eventually lead to a high standard of living; 2. Earning a degree or certificate and persisting in their studies until they do so; 3. Transferring successfully to another college to continue their studies. *Student Success* may be measured through metrics such as retention, graduation, transfer, and job placement rates, grades, course repeat rates, and eventual earnings as well as through assessments of student learning.

Blind Scoring and Double Scoring

In *blind scoring*, identifying information is removed from samples of student work before the work is assessed with a rubric by an assessment committee or other

group. In *double scoring*, two faculty or staff members assess each sample of student work, the two ratings are compared, and if they differ sometimes a third person assesses the work.

Embedded Assessments and Add-On Assessments

Embedded Assessments are course assignments and learning activities that can provide evidence of student achievement of program, general education, or institutional learning goals. A paper that students write in advanced course. For example, can show not only what they have learned in that course but also the writing skills that they have developed throughout program.

Summative and Formative Assessments

Summative assessments are those completed at the end of a course, program, or other learning experience. *Formative* assessments are those undertaken while student learning is taking place rather than at the end. Because formative assessments are done midstream, faculty and staff can use evidence from them to improve the learning of current students by making immediate changes to classroom activities and assignments and by giving students prompt feedback on their strength and weaknesses. Summative evidence of student learning can be used to improve the learning of future student cohorts.

Error Margin

An *error margin* isn't really an error; it's a phenomenon that exists because even a good random sample is unlikely to mirror all students precisely. It's an estimate of the maximum difference between the percentage observed in the sample and true percentage of all students from whom the sample was drawn. An outcome that "84 percent of student papers were satisfactory, with an error margin of plus or minus seven percent" means that those conducting the assessment are very sure (95 percent sure) that between 77 percent and 91 percent (84 percent plus and minus seven percentage of papers from all students are satisfactory.

Academic Freedom

Academic Freedom is the right to engage in research, scholarship, inquiry, and expression without fear of repercussion.

Rubric

A *rubric* is a written guide for assessing student work. At a minimum, it lists the things you're looking for when you assess student work.

Checklist

A *checklist* is a list of traits that should be present in student work. It does not assess the frequency or quality of those traits.

Rating Scale Rubric

A *rating scale rubric* is a checklist with a rating scale added to show the frequency or quality of each trait that should be present in student work.

Analytic Rubric

An *analytic rubric* replaces the checkboxes of a rating scale rubric with clear, brief definitions of each level of performance for each trait.

Holistic Scoring Guide

A *holistic scoring guide* provides short narrative descriptions of the characters of work at each performance level, enabling faculty and staff to make an overall judgement about the quality of work. They yield only global scores of overall student performance.

Structured Observation Guide

A *structured observation guide* is a rubric whose rating scale is replaced with space for comments.

Performance Assessments and Traditional Assessments

Performance Assessments ask students to demonstrates their skills rather than describe or explain those skills through traditional test. Performance assessments have two components: assignment guidelines that tell students what they are expected to do or produce and assessment criteria – usually a rubric used to assess completed work. *Performance assessments* are sometimes called alternative assessments because they are alternatives to traditional test. *Traditional Assessments* are the kind of tests that have been around for decades, if not centuries multiple-choice and other objective tests, essay test, and oral examinations. Students have historically completed traditional assessments in controlled, timed examination settings.

Authentic Assessments

Authentic assessments ask student to complete messy real-world tasks with multiple acceptable solutions, rather than fabricated problems for which there is only one correct answer.

Learning Assessment Techniques (LATs)

Learning Assessment Techniques, or LATs are learning activities organized around the six dimensions of L. Dee Fink's taxonomy learning goals.

Scaffolding

Scaffolding is breaking an assignment into pieces or steps that are progressively challenging and giving students support as they work on each step of the process.

Prompt

A *prompt* is the guidelines for an assignment: The (usually written) statement or question that tells students what they are to do. Prompts are used to communicate virtually everything we ask students to do.

Objective and Subjective Assessments

An *objective assessment* has only one correct answer for each question, while in a *subjective assessment* a variety of answers may be correct.

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Quantitative Assessments

Quantitative assessments are used structured, predetermined response options that can summarized into meaningful numbers and analyzed statistically. Multiple-choice tests, rubrics and rating scales are examples of quantitative assessments.

Test-Wise

Text-wise students are adept at discerning inadvertent clues to correct and incorrect multiple-choice options. This increase their chances of choosing the correct answer, even if they haven't learned what the test is assessing.

Test Blueprint

A *test blueprint* or table of specification is list of the learning goals addressed on the test. It may also list the number of test items assessing each learning goal.

Stems, Option Responses, Distracters, and Foils: The Elements of Multiple-Choice Test Item

The *stem* of multiple-choice test item is the part that ask question. It may be phrased either as a question or as an incomplete sentence. *Responses or options* are the list of choices in a multiple-choice item from which the student chooses an answer. The incorrect option of a multiple-choice items are *distracters or foils* because their purpose is to distract or foil students who don't know the correct answer from choosing it.

Interpretive Exercises

Interpretive exercises, sometimes referred to as integrative item sets, context-dependent or enhanced multiple-choice items, or scenario testing, consist of a stimulus, such as reading passage, vignette diagram, or chart, that students haven't seen before, followed by a set of objective items on that stimulus.

K-Type Items

K-type or complex multiple-choice items consist of a stem followed by options, more than one of which may be correct. Those options are followed by additional options that are combinations of the initial options.

Matching Items

Matching items are set of multiple-choice items with identical options.

True-False Items

True-false or binary items are multiple are choice items with only two options.

Completion or Fill in the Blank Items

Completion items are multiple-choice items with no options. They pose questions that students answer with a word, number, or symbol. *Fill-in-the-blank* items are completion items posed as a sentence with a missing word, number, or symbols.

Portfolio

Portfolios are collections rather than single examples of student learning. Their defining features include a clear educational purpose student participation in

selecting the contents, assessment criteria usually specified in a rubric, and student reflection.

Published and Standardized Instruments

Published instruments are published by an organization and used by multiple colleges. *Standardized* instruments are published instruments that are administered and scored under comparable (standardized) conditions to ensure that scores are comparable across colleges and across time. All students receive the same instructions on competing a standardized instrument and, if there is a time limit for completing the instrument, it is enforced at all administration sites. If a standardized instrument asks students for writing samples that are scored using rubrics, the scorers are trained to ensure scoring consistency. Many published instruments are not standardized. .

Norms

Published instrument *norms* are the results averages, percentile distributions, and the like for groups against which your results may be compared. An instrument publisher may provide norms, for example, for all U.S. college students, for students at community colleges, and for Latino students.

Qualitative Assessments

Qualitative assessments use flexible, naturalistic methods and are usually analyzed by looking for recurring patterns and themes. Reflective writing, online discussion threads, and structured observation guides are examples of qualitative assessments.

Ecosystem Rating Scales

Ecosystem rating scales(also known as goals attainment scaling or gap ask for two ratings, With the second rating giving information on the context or environment in which the first rating is made and thus helping to interpret the first rating.

Surveys

Surveys are systematic efforts to collect information about people by asking them to respond to specific questions about their background, experiences, plans, opinions, and attitudes. Surveys can be rating scales, requests for factual information prompts for reflection and opinion, or a combination of there.

Interviews and Focus Groups

Interviews consist of open-ended questions and sometimes simple rating scales asked by an interview via telephone or in person. *Focus* groups are in person interview of small groups of people.

Benchmarks, Standards, and Targets

There is no popular consensus on what these terms mean. In this book, a *benchmark* or standard for student learning is minimally acceptable student achievement or performance level. A *target* is the proportion of students that should achieve at least that minimally acceptable level.

Performance Indicators, Metrics, Performance Measures, Key Performance Indicators, and Dashboard Indicators

Performance indicators, metrics, and performance measures are quantitative measure of student learning or other aspects of college performance that are distilled down to single numbers such as a percentage or average. Performance indicators that are particularly critical to monitoring quality and effectiveness are called *key performance indicators (KPIs) or dashboard indicators*. When referring to performance indicators, this book generally uses the term measure.

Student Achievement

The 1998 Higher Education Act requires accreditors recognized by the U.S. federal government to require the college they accredit to demonstrate "success with respect to student achievement relation to the intuition's mission, including as appropriate, consideration of course completion, state licensing examinations, and job placement rates". This language remained largely in place through subsequent amendments and acts. The examples in this statement imply that federal government defines student *achievement* as a combination, and job placement.

New Data Analysis Tools: Learning Analytics, Big Data, Data Mining, and Predictive Analytics

These concepts are so new that they don't yet have widely accepted definitions, but here are some stabs at what they mean in high education contexts. Big data refers to large amounts of data on students and student learning that can be analyzed to reveal patterns, trend and relationships. *Learning analytics and data mining* use information science and other techniques to extract, analyze, and report information from big data that can be used to improve student learning and success, individually and collectively. *Predictive analytics* use data mining

techniques to make predictions, such as on the traits of students who will learn best in an online setting or on the traits of students whose quantitative skills will improve most with face to face tutoring.

Institutional Effectiveness and Institutional Assessment

Institutional effectiveness refers to the effectiveness of a college in achieving its mission, goals, and the following responsibilities.

- Meeting stakeholder needs, especially student needs
- Serving the public goods.
- Stewardship
- Accountability

Institutional assessment gauges institutional effectiveness. Because student learning is the heart of most college missions, the assessment of student learning is a major component of institutional assessment.

Items Analysis

Items Analysis is examining the difficulty and discrimination of each multiple-choice test item. It can also include examining the difficulty and discrimination of each option within each items.

Data and Information

Data are a set of numbers (singular is *datum*). *Information* makes clear the story that the numbers are telling.

Data Visualization

Data visualization is presenting data visually to help people understand its meaning and significance.

Program Review

A program review is a comprehensive evaluation of an academic program that is designed both to foster betterment and to demonstrate stewardship and accountability. Programs reviews typically include a self-conducted by the program's faculty and staff, a visit by one or more external reviewers, and recommendations for changes based on the conclusions of the self-study and the reviewer.

[i] Walvoord, 2010, p. 2.
[ii] Fulcher, et al. (2014)
[iii] SACSCOC standard 8.2a lays out the expectation that each academic program "identify expected outcomes, assess the extent to which it achieves these outcomes, and provide evidence of seeking improvement based on analysis of the results for student learning outcomes". (SACSCOC, 2018, pp. 68-70).