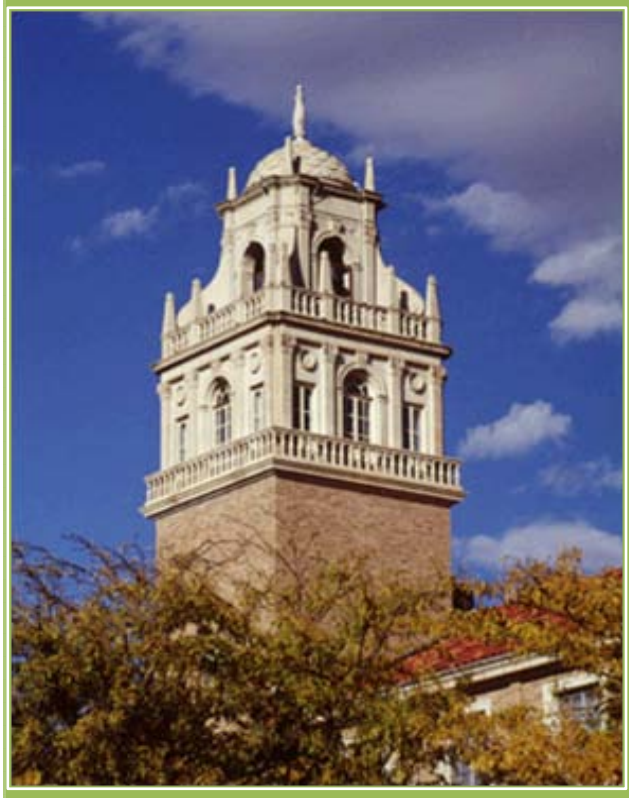
Assessing Student Learning in Degree Programs



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WRITING AND ASSESSING

DEGREE PROGRAM-LEVEL LEARNING OUTCOMES

This handbook is designed to assist faculty and administrators with the process of developing and/or revising expected learning outcomes and methods for assessing those outcomes in their degree programs. This handbook begins by providing basic information related to (1) program-level student learning outcomes; (2) assessing program-level student learning outcomes; and (3) ways assessment data can or should be used to make improvements to degree programs.

Expected Learning Outcomes for this handbook:

After reading and completing this handbook, degree program administrators and faculty should be able to:

- Develop and/or revise the expected student learning outcomes for a degree program;
- Establish benchmarks or thresholds for student performance in relation to those student learning outcomes;
- Select appropriate assessment methods for each student learning outcome;
- Create and/or update an assessment plan that outlines the specific methods that will be used to assess the expected student learning outcomes for a degree program;
- Identify ways that degree programs will use assessment data to make improvements to student learning in that program;
- Integrate the three phases of assessment (planning, assessing, and improving) into this departmental assessment plan; and
- Develop a degree program assessment plan that outlines who will be responsible for assessment activities and when those activities will occur.

OVERVIEW OF ASSESSMENT

What is assessment?

Assessment tells us what our students are learning and how well they are learning that material. Assessment is an ongoing process in which faculty and administrators determine what knowledge and skills students should be learning. Part of the assessment process is to make deliberate, measurable statements about this student learning. These statements are commonly referred to as student learning outcomes.

The assessment process also involves developing and implementing a deliberate plan to determine how students' learning relates to these learning outcomes. A well developed assessment plan includes a variety of assessment methods for each student learning outcome, careful collection and interpretation of the assessment data gleaned from these methods, and using this information to improve student learning.

Why engage in assessment?

Assessment is all about improving student learning and creating a better educational environment. Assessment is not just about keeping accreditation bodies happy. Yes, accreditation agencies require schools to engage in assessment activities. However, these accreditation agencies require schools to engage in assessment for the very reason that the schools themselves should want to be involved in assessment; assessment improves student learning. Indeed, assessment benefits everyone. Assessment is a best practice in higher education AND improves our students' learning. Texas Tech's engagement in the assessment of student learning outcomes will make us a stronger and better institution.

Who is responsible for assessment?

Assessment is not the sole responsibility of any one faculty member or administrator. The best assessment plans include a variety of professionals from various walks of campus life. Assessment is the responsibility of the administration, faculty, and professional staff at Texas Tech University. Degree program-level assessment is the responsibility of all of the faculty, administrators, and relevant professional staff for any given degree program.

When do we "do" assessment?

Assessment is an ongoing process, which means that degree programs should be engaged in assessment throughout the academic year. This doesn't mean that faculty and administrator need to meet weekly or crunch assessment data daily (unless they want to). When we say that assessment is an ongoing process, we mean that in any given academic year, degree programs should be reviewing/revising student learning outcome statements as needed, collecting and/or analyzing assessment data to make inferences about student learning in relation to each learning outcome, and using that information to make adjustments to the degree program to increase student learning.

OUTCOMES AND ASSESSMENT TERMINOLOGY

This publication uses some terminology related to student learning outcomes and assessment. A brief glossary of terms has been provided below for reference purposes.

Assessment - the systematic process investigating student learning through gathering, analyzing and using information about student learning outcomes.

Assessment Method - this term refers to any technique or activity that is used to investigate *what* students are learning or *how well* they are learning.

Assessment Plan – the proposed methods and timeline for assessment-related activities in a given course (*e.g., when are you going to check what/how well the students are learning and how are you going to do that?).*

Course-Level Assessment – this type of assessment focuses on what students are learning in a certain course within a degree program. Course-level assessment can focus on either a single section of a course or all sections of the same course. Course-level assessment data can be used as one source of information for degree-program level assessment.

Degree Program Student Learning Outcome (often abbreviated as SLOs) - what the program faculty intend students to be able to know, do, or think upon completion of a degree program (*synonyms for "student learning outcome" include learning outcome, learning outcome statement, exemplary educational outcomes, and expected learning outcome*).

Direct Assessment Method - direct measures of student learning require students to display their actual knowledge and skills (rather than report what they *think* their knowledge and skills are). Examples of direct assessment methods include objective tests, essays, presentations, and classroom assignments.

Indirect Assessment Method - indirect assessment asks students to reflect on their learning rather than to demonstrate it. Examples include external reviewers, student surveys, exit interviews, alumni surveys, employer surveys, etc.

Benchmarking (please note that a benchmark is called a CRITERION in TracDAT software) - comparing performance to that of one's peers. A benchmark can also be thought of as the minimally acceptable level of performance for an educational outcome.

Degree Program - any major course of study that results in a degree (e.g., Bachelor of Business Administration in Accounting, Bachelor of Science in Computer Engineering, Master of Science in Horticultural and Turfgrass Sciences, Doctor of Philosophy in Educational Psychology, etc.).

Degree Program-Level Assessment - the evaluation of degree program-level student learning outcomes. The results of this assessment are used to make informed changes to the program (e.g., adjustments to pedagogy, curriculum, etc.) to increase student learning and success.

Embedded Assessment – in this type of assessment, faculty or administrators carefully construct an assignment (often with a corresponding scoring rubric) that specifically measures a certain learning outcome.

Formative Assessment – assessment that occurs during a learning experience. This type of assessment allows faculty and administrators to make adjustments to the learning experience to

increase student learning. Examples include midterm exams in the middle of a course, focus groups at the midpoint in a degree program, etc.

Rubric - a scoring and instruction tool used to assess student performance using a task-specific range or set of criteria. To measure student performance against this pre-determined set of criteria, a rubric contains the essential criteria for the task and levels of performance (i.e., from poor to excellent) for each criterion.

Summative Assessment – assessment that occurs at the end of a learning experience (e.g., a comprehensive exam at the end of a degree program, etc.).

Uses for Improvement – this is usually seen as the third stage of the assessment cycle. During the "uses for improvement" stage, faculty and administrators compare assessment data to student learning outcomes to investigate student learning in the degree program.

Glossary terms were adapted from the following resources: http://people.jmu.edu/yangsx/; http://www.oaklandcc.edu/assessment/terminology.htm; and http://www.depts.ttu.edu/opa/resources/Writing_Learning_Outcomes_Handbook3.pdf.

THE ASSESSMENT CYCLE

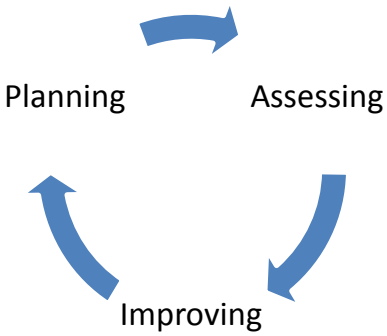
The assessment cycle is best conceptualized as an ongoing process that investigates student learning in a degree program. Since assessment is part of making continuing improvements to the quality of learning in a degree program, this assessment cycle should be an ongoing part of departmental functioning. Here is a brief summary of the different phases of the assessment cycle:

PLANNING PHASE – This is often seen as the beginning phase of assessment. During this phase learning outcomes statements are developed or revised. The planning phase also involves making decisions about the specific assessment-related activities that need to be completed. Establishing timelines and assigning specific personnel to these activities are also common aspects of the planning phase.

During the planning phase for degree program-level assessment, it is important to distinguish between course-level assessment activities and the assessment of the degree program as a whole. Course-level assessment is very specifically and narrowly focused on the knowledge and skills within single courses within a degree program. Degree program-level assessment is much broader than this. Degree program assessment should encompass the knowledge and skills learning in the entire program rather than piecing together examples from different courses. Likewise, it is important to develop unique, broad learning outcomes that represent the entire degree program rather than adopting a few learning outcome statements from different courses.

ASSESSING PHASE – The assessing phase involves selecting the appropriate assessment method(s) for each student learning outcome, implementing those assessments, and analyzing the assessment data to learn more about student performance in relation to the student learning outcomes.

IMPROVING PHASE – This phase is occasionally omitted from assessment discussions, but it is a very important step to include. In fact, the improvement phase is really what assessment is all about. During this phase, faculty and administrators reflect upon the information gathered during the different planning and assessment phases and determine what changes are needed to increase student learning in the degree program. The improving phase also involves the implementation of those changes. Finally, during the improvements phase faculty and administrators may also identify problems with the assessment methods. As such, the improvement phase also involves making adjustments to assessment methodology.



THE PLANNING PHASE

EXPECTED LEARNING OUTCOMES

Expected Learning Outcome (definition)

An expected learning outcome is a formal statement of what students are expected 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 develop, learn, or master during a degree program (Suskie, 2004). Expected learning outcomes are also often referred to as "learning outcomes", "student learning outcomes", or "learning outcome statements".

Simply stated, expected learning outcome statements describe:

- What faculty members want students to ***know*** at the end of the degree program, *AND*
- What faculty members want students ***to be able to do*** at the end of the degree program.

Learning outcomes have three major characteristics:

1. They specify learning that is ***observable***
2. They specify learning that is ***measurable***
3. They specify learning that is completed by the ***students/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).

WRITING EFFECTIVE LEARNING OUTCOME STATEMENTS

Selection of Action Words for Learning Outcome Statements

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

Examples of good 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, or evaluate*

There are some verbs that are unclear in the context of an expected learning outcome statement (*e.g., know, be aware of, appreciate, learn, understand, comprehend, become familiar with*). These words are often vague, have multiple interpretations, or are simply difficult to observe or measure (American Association of Law Libraries, 2005). As such, 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 are stated in a manner that 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 the following way:

- *Upon completion of the degree students should 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.*

INCORPORATING CRITICAL THINKING SKILLS INTO EXPECTED LEARNING OUTCOMES STATEMENTS

Many degree programs want to incorporate words that reflect critical or higher-order thinking into their learning outcome statements. Bloom (1956) developed a taxonomy outlining the different types of thinking skills people use in the learning process. Bloom argued that people use different levels of thinking skills to process different types of information and situations. Some of these are basic cognitive skills (such as memorization) while others are complex skills (such as creating new ways to apply information). These skills are often referred to as *critical thinking skills* or *higher-order thinking skills*.

Bloom proposed the following taxonomy of thinking skills. All levels of Bloom's taxonomy of thinking skills can be incorporated into expected learning outcome statements. Recently, Anderson and Krathwohl (2001) adapted Bloom's model to include language that is oriented towards the language used in expected learning outcome statements. A summary of Anderson and Krathwohl's revised version of Bloom's taxonomy of critical thinking is provided below.

Definitions of the different levels of thinking skills in Bloom's taxonomy

1. **Remember** – recalling relevant terminology, specific facts, or different procedures related to information and/or course topics. At this level, a student can remember something, but may not really understand it.

2. **Understand** – the ability to grasp the meaning of information (facts, definitions, concepts, etc.) that has been presented.

3. **Apply** – being able to use previously learned information in different situations or in problem solving.

4. **Analyze** – the ability to break information down into its component parts. Analysis also refers to the process of examining information in order to make conclusions regarding cause and effect, interpreting motives, making inferences, or finding evidence to support statements/arguments.

5. **Evaluate** – being able to judge the value of information and/or sources of information based on personal values or opinions.

6. **Create** – the ability to creatively or uniquely apply prior knowledge and/or skills to produce new and original thoughts, ideas, processes, etc. At this level, students are involved in creating their own thoughts and ideas.

(Adapted from information from Ball State University accessed at http://web.bsu.edu/IRAA/AA/WB/chapter2.htm)

NOTE: Since degree program-level student learning outcomes represent the knowledge and skills that we hope graduates to possess, it is likely that at least some of a degree program's outcomes will reflect what is called "higher-order thinking skills" rather than more basic learning. The Application, Analysis, Evaluation, and Creation levels of Bloom's taxonomy are usually considered to reflect higher-order thinking skills.

LIST OF ACTION WORDS RELATED TO CRITICAL THINKING SKILLS

Here is a list of action words that can be used when creating the expected student learning outcomes related to critical thinking skills in the degree program. These terms are organized according to the different levels of higher-order thinking skills contained in Anderson and Krathwohl's (2001) revised version of Bloom's taxonomy.

REMEMBER	UNDERSTAND	APPLY	ANALYZE	EVALUATE	CREATE
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 examples	Graph	Infer	Justify	Integrate
Read	Infer	Interpolate	Outline	Measure	Modify
Recall	Paraphrase	Manipulate	Point out	Rank	Order
Recite	Predict	Modify	Relate	Rate	Organize
Recognize	Rewrite	Operate	Select	Support	Plan
Record	Summarize	Prepare	Separate	Test	Prescribe
Repeat		Produce	Subdivide		Propose
Reproduce		Show	Utilize		Rearrange
Select		Solve			Reconstruct
State		Subtract			Related
Write		Translate			Reorganize
		Use			Revise
					Rewrite
					Summarize
					Transform
					Specify

(Adapted from information from Kansas State University accessed at

http://www.k-state.edu/assessment/Learning/action.htm)

KEEP IT SIMPLE

It is usually best to keep degree program outcome statements as simple as possible. Overly specific and complex learning outcomes statements can be very difficult to assess because degree programs need to gather assessment data for each type of knowledge or skill that is named in a program-level student learning outcome.

Example of a Fashion Merchandising Degree Program-Level Outcome:

Students graduating with a BS degree in Fashion Merchandising will be able to identify and describe the roles the merchant "team" (management, merchant, planner, allocator, support staff) play in the procurement and distribution of merchandise to the multiple channels of retail outlets (Hicklins, 2009).

This outcome would require assessment of the following:

- *Identification of the roles that management plays in the procurement of merchandise;*
- *Identification of the roles that management plays in the distribution of merchandise;*
- *Identification of the roles that merchants play in the procurement of merchandise;*
- *Identification of the roles that merchants play in the distribution of merchandise;*
- *Identification of the roles that planners play in the procurement of merchandise;*
- *Identification of the roles that planners play in the distribution of merchandise;*
- *Identification of the roles that allocators play in the procurement of merchandise;*
- *Identification of the roles that allocators play in the distribution of merchandise;*
- *Identification of the roles that support staff plays in the procurement of merchandise;*
- *Identification of the roles that support staff plays in the distribution of merchandise;*
- *Description of the roles that management plays in the procurement of merchandise;*
- *Description of the roles that management plays in the distribution of merchandise;*
- *Description of the roles that merchants play in the procurement of merchandise;*
- *Description of the roles that merchants play in the distribution of merchandise;*
- *Description of the roles that planners play in the procurement of merchandise;*
- *Description of the roles that planners play in the distribution of merchandise;*
- *Description of the roles that allocators play in the procurement of merchandise;*
- *Description of the roles that allocators play in the distribution of merchandise;*
- *Description of the roles that support staff plays in the procurement of merchandise; and*
- *Description of the roles that support staff plays in the distribution of merchandise.*

Possible Paraphrase of this Fashion Merchandising Degree Program-Level Outcome:

Students graduating with a BS degree in Fashion Merchandising should be able to summarize the roles the merchant team plays in the procurement and distribution of merchandise.

Paraphrases such as this one shouldn't change the overall goal of the learning outcome or really even the type of assessment data that is collected. It just helps departments avoid being bogged down with the minutia of assessment.

SAMPLE STUDENT LEARNING OUTCOME STATEMENTS

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 ideas of what well-stated and measurable program-level student learning outcomes might look like.

Students completing a (bachelors, masters, or doctoral) degree in _____ should be able to:

- Demonstrate knowledge of the fundamental concepts of the discipline
- Utilize skills related to the discipline
- Communicate effectively in the methods related to the discipline
- Conduct sound research using discipline-appropriate methodologies
- Generate solutions to problems that may arise in the discipline
- Other areas as appropriate

BENCHMARKS

Benchmarks state the level of performance that is expected of students. Each benchmark can be thought of as the minimally acceptable level of performance for an educational outcome. Degree programs should develop a benchmark for each student learning outcome for their program.

NOTE – TracDat software uses the term "Criterion" as a synonym for "Benchmark".

There are two general types of benchmarks:

The first type of benchmark compares students to other groups or populations. This type of benchmark is typically used when there is an established assessment instrument that is used in a field. This assessment instrument is often regionally or nationally developed and used at other institutions or agencies (e.g., the bar exam for attorneys) or when professional licensure is required for the field.

> *Graduating seniors from the education degree program will score at or above the state mean on the Texas Teachers Certification Exam.*

The second type 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.

> *70% of graduating seniors will be able to articulate their personal philosophy of education.*

Selecting the numerical "threshold" of acceptable performance:

When determining the "threshold" for each degree program-level student learning outcome, faculty and administrators should discuss what number reflects the best threshold of performance for that learning outcome. Although this is not an absolute rule, benchmarks are frequently set at a level that correlates to average performance, which is acceptable performance to graduate for most degree programs. Of course, this number may be different based on the type of degree program (e.g, highly specialized or graduate programs).

Faculty and administrators do not always need to select a number reflective of average performance for their benchmarks. Sometimes, faculty and administrators choose to use existing data as a baseline benchmark against which to compare future performance. They might also use data from a similar degree program as a benchmark threshold. In this case, this similar degree program is often chosen because it is exemplary and its data are used as a target to strive for, rather than as a baseline (Hatry, van Houten, Plantz, & Greenway, 1996). These options are also viable options for establishing benchmark thresholds.

Whichever process degree program faculty and administers use to set benchmark thresholds, it is important to choose a number that is meaningful in the context of the degree program and its learning outcomes.

TIPS FOR DEVELOPING DEGREE PROGRAM-LEVEL LEARNING OUTCOMES STATEMENTS

- Limit the total number of student learning outcomes to 5 – 10 statements for the entire degree program

- Make sure that each learning outcome statement is measurable

- Focus on overarching or general knowledge and/or skills gained from the entire degree program rather than focusing on what happens in any one individual course

- Create statements that are student-centered rather than faculty-centered (e.g., “upon completion of this program students should 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

THE ASSESSING PHASE

BRIEF OVERVIEW OF PROGRAM-LEVEL ASSESSMENT

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

In other words, assessment is the process of investigating:

(1) ***what*** students are learning, and

(2) ***how well*** they are learning it in relation to the stated *expected learning outcomes* for the degree program.

TIPS FOR DEVELOPING PROGRAM-LEVEL ASSESSMENT PLANS

- Each student learning outcome should have *at least* one assessment strategy (although more than one is often preferable since more instruments increase the reliability of your 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

- Be sure to establish timelines for gathering and analyzing program assessment data on a regular basis (at least once per academic year)

- Remember that if your program decides to collect data from graduating seniors, it is best to collect data as close to graduation as possible (fall, spring, and summer if appropriate)

- It is also helpful to assign specific personnel for these tasks

SELECTION OF ASSESSMENT METHODS

It is important that *at least* one appropriate assessment method is selected for each degree program-level student learning outcome. Generally speaking, there are two types of assessment methods. ***Direct assessment methods*** are measures of student learning that require students to display their actual knowledge and skills (rather than report what they *think* their knowledge and skills are). Because direct assessment taps into students' actual learning (rather than perceptions or learning) it is often seen as the preferred type of assessment. As such, degree program faculty and administrators should look at incorporating some direct assessment methods into their assessment plans. In contrast, ***indirect assessment methods*** ask students to reflect on their learning rather than to actually demonstrate it. Indirect assessment methods can often provide very useful information regarding student learning in a degree program.

Both direct and indirect assessment methods can provide useful insight into students' experiences and learning in a program. Direct and indirect assessment methods each have unique advantages and disadvantages in terms of the type of data and information they can provide. As such, many degree program faculty and administrators choose to incorporate both types of assessment into an assessment plan.

Examples of Direct Assessment Methods:

- Comprehensive exams
- Embedded assignments (projects, papers, presentations, performances, etc.)
- Internal/external juried review of performances and exhibitions
- Internship and/or clinical evaluations
- Locally developed exams
- Portfolio evaluation
- Pre and posttests
- Regionally or nationally developed tests/exams (for example, certification exams, licensure exams, etc.)
- Senior thesis or major project

Examples of Indirect Assessment Methods:

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

TracDat software lists the following possible degree program assessment methods:

- Assignment of Project in a Capstone Course
- Case Studies
- Course-Level Assessment
- Discipline-Specific Certifications/Licensure
- Dissertation
- Employer Survey
- Exhibit
- Field Placement/Internship
- Focus Groups
- Master's Comprehensive Exam
- Peer Assessments
- Performance
- Portfolio Review
- Professional Development Activities
- Qualifying Exam
- Standardized Test
- Survey – Alumni
- Survey – Student
- Thesis

There are, of course, many other commonly used degree-program assessment methods. If your degree program uses another type of assessment, the Office of Planning and Assessment can help you customize TracDat to fit your assessment methodology.

ANALYZING ASSESSMENT DATA

It is recommended that degree programs incorporate the analysis of all assessment data as a regular part of departmental functioning. The data gathered for each student learning outcome should be analyzed and evaluated either on 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 method(s) measure each student learning outcome
- Areas for more focused assessment
- Ways that learning outcomes may need to be revised
- Areas that may need to be investigated in the next phase of assessment – the Improving Phase

THE IMPROVING PHASE

IMPROVING PHASE

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

This quote sums up the importance of the "Improving Phase" of assessment. A lot of time can be spent in developing student learning outcomes and gathering data, and occasionally people stop there. It is important to "close the loop" and make sure that assessment data for each student learning outcome is reviewed and used to make improvements to degree programs that will increase the quality of students experiences and learning. In fact, many assessment experts consider this phase to be the most important part of assessment.

Walvoord (2004) recommends setting aside at least one faculty meeting a year to discuss the degree program's student learning outcomes and assessment plan as one of the easiest ways to make the improvements phase a routine departmental function. This meeting should be at least two hours long and focus on the degree program's student learning outcomes, assessment data, and improvements that can be made. 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 held should be beneficial.

Some 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 student learning outcome
- Review assessment results to determine programmatic strengths and areas for improvement
- Decide if different assessment methods are needed in order 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
- Specific strategies regarding the implementation of the action plan
- Review what needs to be done as the assessment cycle heads back to the Planning Phase (e.g., do student learning outcome need to be revised?, are different assessment methods necessary?, etc.)

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