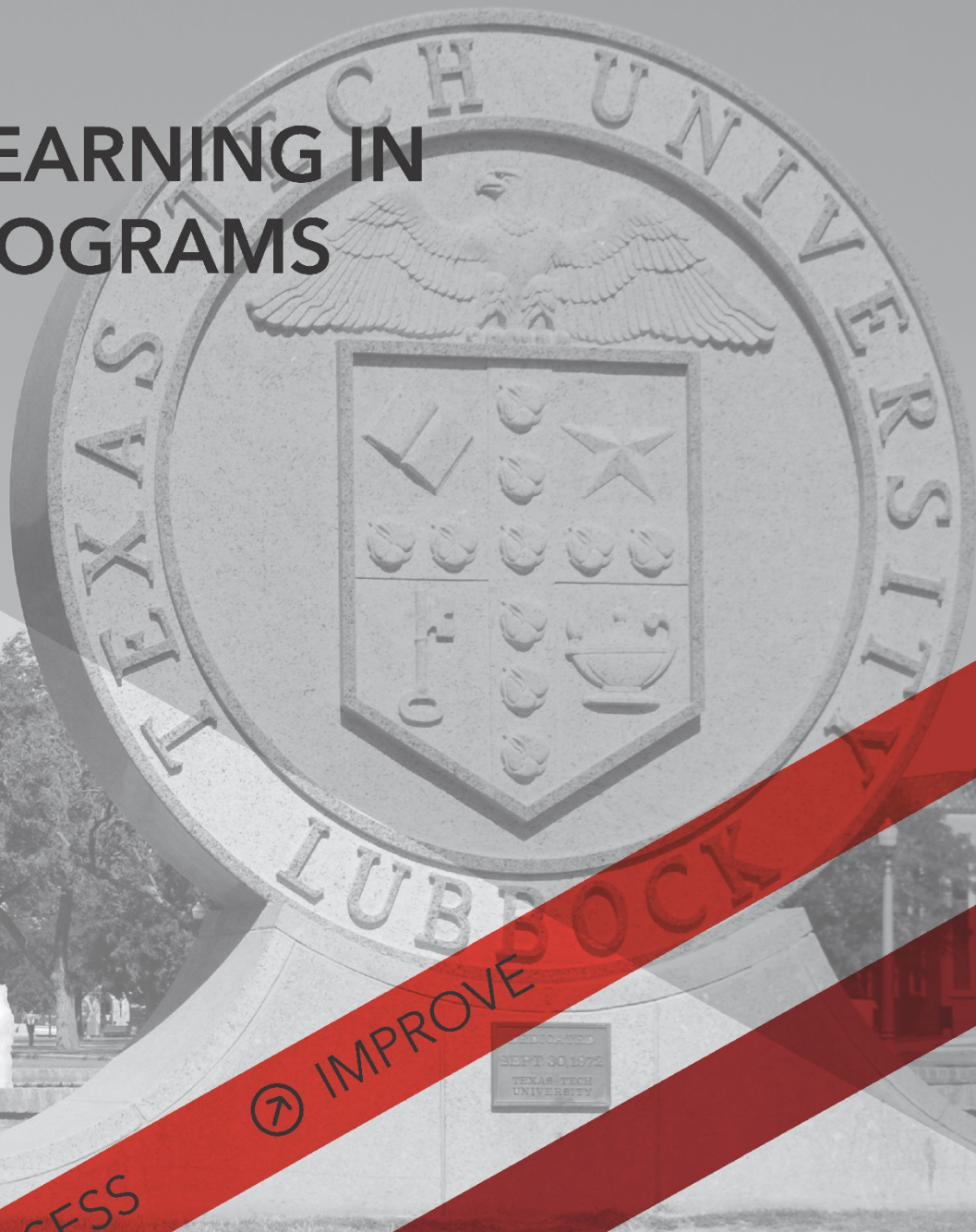


# ASSESSING STUDENT LEARNING IN DEGREE PROGRAMS



PLAN

ASSESS

IMPROVE



TEXAS TECH UNIVERSITY  
Office of Planning & Assessment

**Created by**

**Texas Tech University**

**Office of Planning and Assessment**

**Administration Building 237**

**806.742.1505**

**Summer 2018**

## Contents

Writing and Assessing Degree Program-Level Learning Outcomes .....	1
Expected Learning Outcomes for this handbook .....	1
Overview of Assessment.....	2
What is assessment?.....	2
Why engage in assessment? .....	2
Who is responsible for assessment?.....	2
When do we “do” assessment? .....	2
Outcomes and Assessment Terminology.....	3
The Assessment Cycle.....	5
THE PLANNING PHASE .....	6
Expected Learning Outcomes .....	7
Writing Effective Learning Outcome Statements .....	8
Keep it Simple.....	12
THE ASSESSING PHASE .....	14
Assessment Methods.....	15
Developing Assessment Methods .....	15
Selection of Assessment Methods.....	16
Benchmarks.....	18
Analyzing the Assessment Data.....	19
THE IMPROVING PHASE .....	20
Improving Phase.....	21

\*If you need further assistance or would like consultation in developing your program-level assessment plan, please contact the Office of Planning and Assessment at 742-1505.

## Writing and Assessing Degree Program-Level Learning Outcomes

This handbook is designed to assist faculty and administrators with the process of developing and 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;
- Select appropriate assessment methods for each student learning outcome;
- Establish benchmarks or thresholds for student performance in relation to student learning outcomes;
- 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 programs;
- Integrate the three phases of assessment (planning, assessing, and improving) into a departmental assessment plan; and
- Outline who will be responsible for assessment activities and a schedule of assessment of activities.

## Overview of Assessment

### What is assessment?

Assessment tells us what and how well our students are learning. 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 create deliberate, measurable objectives about student learning. These objectives are commonly referred to as student learning outcomes (SLOs).

The assessment process also involves developing and implementing a plan to determine how students will learn based upon SLOs. A well-developed assessment plan includes a variety of means of assessment for each SLO, review and evaluation of results, and using the results to improve student learning.

### Why engage in assessment?

The engagement of Texas Tech University in the assessment of student learning outcomes demonstrates our reputation as a strong and competing institution. Assessment is a best practice in higher education to improve student learning to create a better educational environment. Assessment is not just about maintaining good standing with accreditation agencies. Although assessment is a requirement for the accreditation of universities, 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 and benefits everyone.

### Who is responsible for assessment?

Assessment is not the responsibility of any one faculty member or administrator within a degree program. The best assessment plans include a variety of professionals from different aspects 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 staff for the degree program.

### When do we “do” assessment?

As assessment is an ongoing process, degree programs should be engaged in assessment throughout the academic year. This does not 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 and revising student learning outcome statements as needed, collecting and analyzing assessment data to make inferences about student learning in relation to each learning outcome, and using results to make adjustments to the degree program to increase student learning.

## Outcomes and Assessment Terminology

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

**Assessment** - the systematic process of determining educational objectives through gathering, using, and analyzing information about student learning outcomes to make decisions about programs, individual student progress, or accountability (Erwin, 1991, as cited in James Madison University, 2003; Oakland Community College, 2008).

**Assessment Method** - technique used to collect data associated with assessment. Methods may include such techniques as: course project, graduate survey, portfolio, external licensing exams, etc. (Oakland Community College, 2008).

**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?*) (Texas Tech University, n.d.). The formal development process for measuring student learning outcomes including data collection and analysis procedures (Grand State Valley University, 2010).

**Benchmarking** (Note: **Benchmark** is called a **CRITERION** in Nuventive Improve software) - expected levels/skills for an educational outcome. A benchmark must be quantifiable, typically stated as a percentage or number (Oakland Community College, 2008).

**Course-Level Assessment** – collecting assessment data information within the classroom because of the opportunity it provides to use already in-place assignments and coursework for assessment purposes. This involves taking a second look at materials generated in the classroom so that, in addition to providing a basis for grading students, these materials allow faculty to evaluate their approaches to instruction and course design (Palomba & Banta, 1999, as cited in James Madison University, 2003).

**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** - evaluation of determined student learning outcomes that informs changes in pedagogy and curriculum to increase student success (Oakland Community College, 2008).

**Degree Program Student Learning Outcome** (abbreviated as SLOs) - the specific measurable goals and results that are expected, subsequent to a learning experience. These outcomes may involve knowledge (cognitive), skills (behavioral), or attitudes (affective) that provide evidence that learning has occurred as a result of a specified course, program activity, or process. A Student Learning Outcome refers to an overarching goal for a course, program, degree or certificate (Oakland Community College, 2008).

**Direct Assessment Method** - direct measures of student learning require students to display their knowledge and skills as they respond to the instrument itself. Examples of direct assessment methods include objective tests, essays, presentations, and classroom assignments (Oakland Community College, 2008).

**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. This assessment occurs simultaneously with learning, such as projects, portfolios and exhibitions. It occurs in the classroom setting, and, if properly designed, students should not be able to tell whether they are being taught or assessed. The tasks or tests are developed from the curriculum or instructional materials (Oakland Community College, 2008), including questions from assessment instruments or from existing tests of existing courses; the paucity of number of questions can affect reliability (Wilson & Sloane, 2000, as cited in James Madison University, 2003).

**Formative Assessment** – assessment that provides feedback to the teacher for the purpose of improving instruction. In other words, it is an assessment which is used for improvement (individual or program level) rather than for making final decisions or for accountability (Oakland Community College, 2008). Examples include midterm exams in the middle of a course, focus groups at the midpoint in a degree program, etc.

**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, curriculum and syllabus analysis, etc. (Oakland Community College, 2008).

**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 (Oakland Community College, 2008).

**Summative Assessment** – a culminating assessment, which gives information on students' mastery of content, knowledge, or skills. The gathering of information at the conclusion of a course, program, or undergraduate career to improve learning or to meet accountability demands (Oakland Community College, 2008).

**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.

## The Assessment Cycle

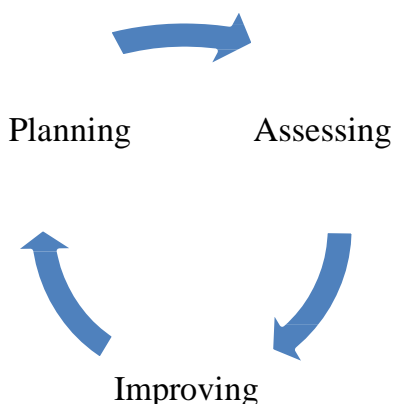
The assessment cycle is best conceptualized as an ongoing process that investigates student learning in a degree program. Since assessment involves making continuing improvements to the quality of learning in a degree program, this cycle should be incorporated into the assessment process of a program. The following provides 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 for each SLO. Other common aspects of the planning phase are establishing timelines and assigning specific personnel to these activities.

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 specifically and narrowly focused on the knowledge and skills within single courses within a degree program. Degree program-level assessment is much broader than course-level assessment. Degree program assessment should encompass the knowledge and skills intended to be learned in the entire program rather than from an individual course. 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 most commonly omitted from assessment discussions, but it is one of the most important steps in the assessment process. During this phase, faculty and administrators reflect upon the information gathered from the different planning and assessment phases to determine the necessary changes to increase student learning in the degree program. Additionally, the improving phase involves the implementation of changes. For example, faculty and administrators may identify problems with the assessment methods and adjust the means of assessment.





# **THE PLANNING PHASE**

## Expected Learning Outcomes

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” (SLOs), 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 (American Association of Law Libraries, 2005; Texas Tech University, 2010):**

1. They specify learning that is *observable*.
2. They specify learning that is *measurable*.
3. They specify learning that is done 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). **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 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 (American Association of Law Libraries, 2005).

#### **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*

Alternatively, 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, 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 (American Association of Law Libraries, 2005).

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.*

In addition, 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 look like.

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

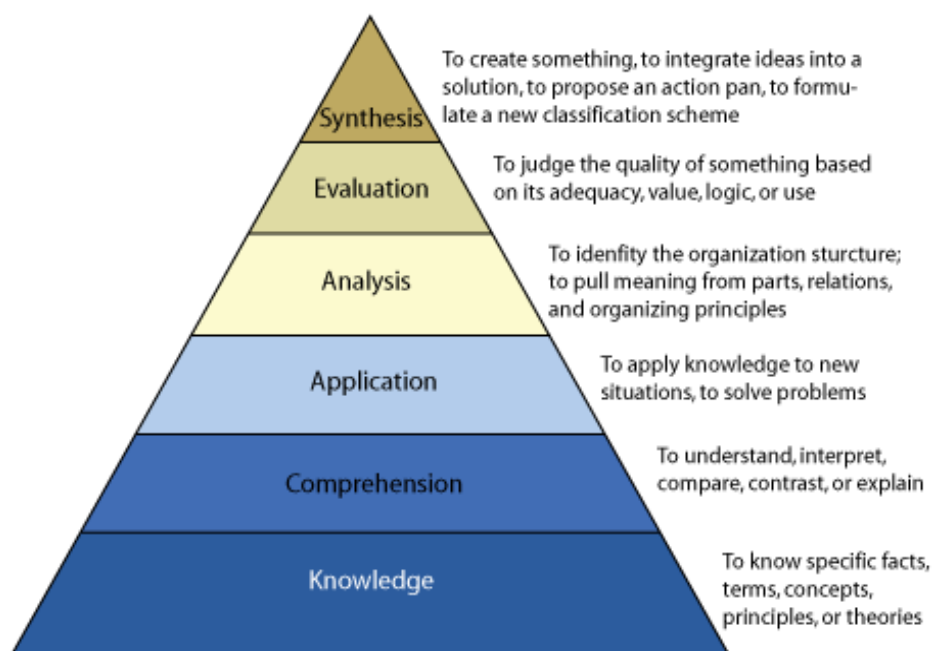
- Demonstrate knowledge of the fundamental concepts of the discipline
- Utilize skills related to the discipline
- Communicate effectively in the methods related to the discipline
- Conduct sound research using discipline-appropriate methodologies
- Generate solutions to problems that may arise in the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

## *Incorporating Critical Thinking Skills into Expected Learning Outcome Statements*

To demonstrate the students are learning valuable skills, degree programs need 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 used 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, or 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*.

Anderson and Krathwohl (2001) adapted Bloom's model to include language that oriented toward 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 (as cited in University of Virginia, 2012):***



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:*

The following contains 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 (Kansas State University, 2003). 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.

<b>KNOWLEDGE</b>	<b>COMPREHENSION</b>	<b>APPLICATION</b>	<b>ANALYSIS</b>	<b>EVALUATION</b>	<b>SYNTHESIS</b>
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
					Specify
					Summarize
					Transform

## 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 difficult to assess because degree programs need to gather assessment data for each type of knowledge or skill 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 should not 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.

**Tips:**

- Limit the total number of student learning outcomes to 3-5 statements for the entire degree program.
- Make sure that each learning outcome statement is measurable.
- Focus on the expectation of overarching or general knowledge and/or skills gained from the entire degree program before graduation rather than focusing on what happens in any one individual course (American Public University System, 2012).
- 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**

## Assessment Methods

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 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.

## Developing Assessment Methods

- Each SLO should have *at least* one assessment method
  - Note: More than one assessment is preferable as 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)
- 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 to select at least one appropriate assessment method for each degree program-level SLO. There are two types of assessment methods (Texas A&M University, n.d.). **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) (Oakland Community College, 2008). As direct assessment measures students' actual learning rather than perceptions of learning, it is often seen as the *preferred* type of assessment. In contrast, **indirect assessment methods** ask students to reflect on their learning rather than to actually demonstrate it (Palomba & Banta, 1999, as cited in Texas A&M University, n.d.).

The practice of both direct and indirect assessment methods serves as useful insight to determine strengths and weaknesses of student learning in a degree program (Maki, 2004, as cited in Texas A&M University, n.d.). Direct and indirect assessment methods 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 in direct methods, it is difficult to interpret the specific knowledge and skills gained from student learning (Texas A&M University, n.d.).

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

- Case Studies
- Comprehensive exams
- Embedded assignments (projects, papers, presentations, performances, etc.)
- Grading with criteria or rubrics
- External examiners/peer review
- Internal/external juried review of performances and exhibitions
- Internship and/or clinical evaluations
- Locally developed exams
- Portfolio evaluation
- Pre- and post-tests
- Regionally or nationally developed tests/exams (i.e., GRE Subject exams, certification exams, licensure exams, etc.)
- Reflective journal
- Senior thesis or major project

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

- Alumni survey
- 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

### **Nuventive Improve software lists the following possible degree program assessment methods:**

- Capstone Assignment/Project
- Case Studies
- Class Discussions
- Course-Level Assessment
- Discipline-Specific Certifications/Licensure
- Dissertation

- Employer Survey
- Essays
- Exhibit
- Field Placement/Internship
- Focus Groups
- Master's Comprehensive Exam
- Oral Exam
- Peer Assessments
- Performance
- Portfolio Review
- Pre/Post-Tests & Evaluations
- Professional Development Activities
- Qualifying Exam
- Standardized Test
- Student Projects
- Study Abroad Experience
- 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 Nuventive Improve to fit your assessment methodology.*

## 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.

*Note – Nuventive Improve 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. The benchmark 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 to compare future performance. They might also use data from a similar degree program as a benchmark threshold. Using a similar degree program is often chosen because it is exemplary. The data functions as a target goal, rather than as a baseline (Hatry, van Houten, Plantz, & Greenway, 1996).

Whichever process degree program faculty and administrators use to set benchmark thresholds, it is important to select a benchmark that is meaningful in the context of the degree program to measure the improvement of institutional performance (Grand Valley State University, 2010).

## Analyzing the Assessment Data

It is recommended that degree programs incorporate the analysis of all assessment data as a routine 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)*

The improving phase may be one of the most significant aspects of the assessment phases. The improving phase involves reviewing the results to improve the quality of students' experiences and learning. It is important to learn from the assessment results to "close the loop" rather than simply 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 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 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 SLO.
- 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 transitions back to the Planning Phase (e.g., Do student learning outcomes need to be revised? Are different assessment methods necessary? etc.)

\*If you need further assistance or would like consultation in developing your program-level assessment plan, please contact the Office of Planning and Assessment at 742-1505.



## REFERENCES

- American Association of Law Libraries. (2005). Archived: Writing learning outcomes. Retrieved from <http://www.aallnet.org/Archived/Education-and-Events/cpe/outcomes.html>
- American Public University System. (2012). *Student learning outcomes assessment*. Retrieved from <http://catalog.apus.edu/2012/graduate/academic-information/learning-outcomes.htm>.
- Anderson, L. W., & Krathwohl, D. R. (Eds.). (2001). *A taxonomy of learning, teaching, and assessment: A revision of Bloom's taxonomy of educational objectives*. New York, NY: Longman.
- Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of educational goals*. New York, NY: Longman.
- Chaffey College. (n.d.). *Frequently Asked Questions (FAQ)*. Retrieved from <http://www.chaffey.edu/slo/faq.html>.
- Erwin, T. D. (1991). *Assessing student learning and development: A guide to the principles, goals, and methods of determining college outcomes*. San Francisco: Jossey-Bass.
- Grand Valley State University. (2010). *Aspects of GSVU assessment*. Retrieved from <http://www.gvsu.edu/assessment/aspects-of-gvsu-assessment-13.htm>
- Hatry, H., van Houten, T., Plantz, M. C., & Greenway, M. T. (1996). *Measuring program outcomes: A practical approach*. Alexandria, VA: United Way of America.
- James Madison University. (2003). In *Dictionary of Student Outcome Assessment*. Retrieved from <http://people.jmu.edu/yangsx/>.
- Kansas State University. (2003). *Action verb list – Suggested verbs to use in each level of thinking skills*. Retrieved from <http://www.k-state.edu/assessment/toolkit/outcomes/action.html>
- Oakland Community College. (2008). *Terminology & Definitions*. Retrieved from <https://www.oaklandcc.edu/assessment/terminology.htm#assessment>
- Palomba, C. A. & Banta T. W. (1999). *Assessment essentials: Planning, implementing, and improving assessment in higher education*. San Francisco, CA: Jossey-Bass.
- Palomba, C. A. & Banta, T. W. (Eds.). (2001). *Assessing student competence in accredited disciplines: Pioneering approaches to assessment in higher education*. Sterling, VA: Stylus.
- Siebold, R. & Beal, M. (2005). Online course development guide: The workbook. Presented at The Teaching Professor Conference in Shaumburg, IL.
- Suskie, L. (Ed.) (2001). *Assessment to promote deep learning: Insight from AAHE's 2000 and 1999 Assessment Conferences*.
- Suskie, L. (2004). *Assessing student learning: A common sense guide*. Bolton, MA: Anker.

- Texas A&M University. (n.d.). *Direct and indirect methods of assessment*. Retrieved from <http://assessment.tamu.edu/resources/methods.html>.
- Texas Tech University. (n.d.). *Outcomes and assessment terminology*. Retrieved from <http://www.tlhc.ttu.edu/content/asp/assessment/pages/pg02.pdf>
- Texas Tech University. (2005). *Texas Tech University 2005-06 Undergraduate and Graduate Catalog Volume LXXXII*. Lubbock, TX: Office of Official Publications.
- Texas Tech University. (2010). How do I create an effective syllabus? Retrieved from <http://www.tlhc.ttu.edu/teach/TLHC%20Teaching%20Resources/EffectiveSyllabus.asp>.
- University of Connecticut. (n.d.). *Assessment primer: Goals, objectives, and outcomes*. Retrieved from <http://assessment.uconn.edu/primer/goals1.html>
- University of South Carolina. (n.d.). *Example of program-specific learning outcomes*. Retrieved from [http://kudzu.ipr.sc.edu/effectiveness/outcomes\\_pf.htm](http://kudzu.ipr.sc.edu/effectiveness/outcomes_pf.htm) .
- University of Virginia. (2012). *Planning Assessments*. Retrieved from <http://avillage.web.virginia.edu/iaas/assess/process/plan.shtm>.
- Walvoord, B. E. (2004). *Assessment clear and simple: A practical guide for institutions, departments and general education*. San Francisco, CA: Jossey-Bass.
- Wilson, M., & Sloane, K. (2000). From principles to practice: An embedded assessment system. *Applied Measurement in Education*, 13(2), 181-208.