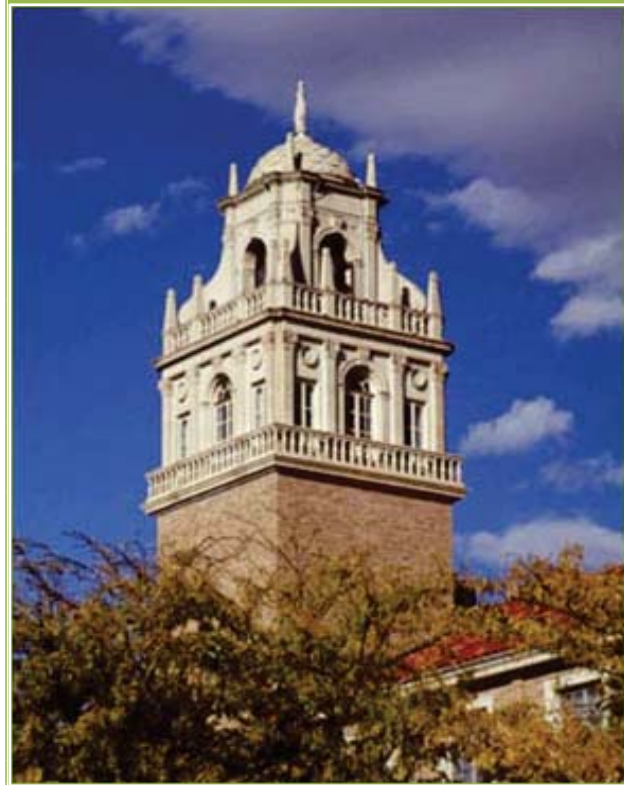


# Assessing Student Learning in Degree Programs



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# 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