



Learning Outcomes

Learning Outcomes

Writing outcomes should be the first step in the development or revision of any program or course. While content is inherent to all teaching, structuring instruction around outcomes rather than content can ensure that programs and courses don't simply cover content but that students acquire the necessary understanding and skills tied to the content. With the expected learning outcomes in mind from the beginning, teachers can select the content, assignments, and teaching activities that will best achieve those outcomes. This may mean dividing a course or a program into units based not on the material covered but on the knowledge and skills the students develop.

Levels of Learning Outcomes

The statements of what we want to achieve with our educational endeavors have multiple names. Various literatures refer to *goals*, *outcomes*, and *objectives* when talking about intended learning. At Southwestern, we have chosen to forgo these distinctions in favor of simply talking about *outcomes* at various level. We use the terms *institutional level outcomes*, *discipline and program level outcomes*, *course level outcomes*, and *class or lesson level outcomes*.

- **Institutional Level Outcomes** define the overall student learning experience at the college. These outcomes describe what the student will *be* as a result of their Southwestern experience. Measurement of these outcomes is usually indirect or by proxy means.
- **Discipline and Program Level Outcomes** are statements of intended learning for a group of courses. They are more specific than institutional outcomes but not tied to specific content or activities. Rather, they tend to state what the student will be able to *do* as a result of their participation in the program. Assessing these outcomes is achieved through a combination of direct and indirect measures.
- **Course Level Outcomes** describe the intended results of an entire course experience. They are often described in terms of skills or competencies, that is, what students will *do*, but add to this what students must *understand* first.
- **Class or Lesson Level Outcomes** are statements of intended learning for a single lesson plan for a specific day in a specific course. Lesson level outcomes define the specific experiences that students will have as they engage with specific content material. Outcomes at this level focus on what students need to *know* and *understand* in order to *do* and *be*. Course and class level outcomes tend to be assessed using more direct measures.

Classroom outcomes should accomplish the course outcomes. The outcomes for the course, along with the outcomes for all the courses in a program of study combine to accomplish the outcomes of the program or discipline or institution.

The Process for Defining Outcomes

Many instructors know what they're trying to achieve, but struggle to articulate it on paper or align course activities to their desired outcomes. This is a process for writing learning outcomes in a way that will powerfully impact your courses.

Defining good outcomes is dependent on several factors. First you must determine the context and level of the outcomes your course addresses. Just as courses are couched within a program or discipline, course outcomes are couched within an environment of other outcomes, all of which need to be aligned. Next there are multiple types of outcomes which need to be defined at each level. These outcomes are framed in terms of what students will do (performance outcomes) and not in terms of material to be taught. Finally each performance outcome, of each



Learning Outcomes

type, at each level, needs to be measurable in some way. We therefore need a process that addresses the levels, the types, the articulation, and the means of measurement.

Context and Level

The first step is to review outcomes at the professional and institutional level. Many disciplines have standards which are useful in contextualizing your course standards. Institutional outcomes as embodied in mission statements are helpful as well. Discipline and program outcomes should also be considered.

The next step is to determine what can be assumed about prior student skills and knowledge as they come into your course. Having looked at the bigger picture and at where your course fits in, you can begin to define the scope of your course outcomes.

Course level outcomes are those statements which describe how a student will be different 2-3 years after having taken the course, as a result of their experience in the course. These broad, general, long-term outcomes envelop more granular statements of what information and skills students will master during the course. These more detailed statements are sometimes referred to as *enabling outcomes* or *learning objectives*. This section focuses at the level of both *course outcomes* and *learning objectives*.

Type

The next task is to define and prioritize specific types of outcomes within the constraints of your course. Give 10 weeks, and the context of overarching objectives and previous student preparation, what would be the most significant results you could help to see from your class? To answer this question, it's important to think about *all* the kinds of significant learning possible, not only content learning.

Articulation

Outcome statements generally contain four elements. More general *course outcome* statements often won't have all of the elements, while class level *learning outcomes* need the specificity. The four elements are often represented as A, B, C, and D; although they don't always appear in that order.

A—Audience
B—Behavior

C—Condition
D—Degree of Mastery

Examples of the ABCD method, in and out of order:

- [A] The student [B] will produce blueprints for a mid-market house [C] using a professional grade software application [D] with final draft accuracy.
- [C] Given a series of Spanish sentences written in past or present tense, [A] the student [B] will rewrite the sentences in future tense [D] with no errors.

Measurement

Outcomes serve to focus and align. Determining the level and type provides focus. Insuring that the outcomes are measurable allows for alignment of course objectives, activities, and assessments. A measureable objective is defined in terms of student *performance*. It answers the question: What will this student *do to demonstrate* mastery of the objective?

Only rarely can mastery be demonstrated with a single form of assessment. Instructors need to think about various ways, formal and informal, direct and indirect, of gathering data about student learning. These might include



Learning Outcomes

traditional testing or quizzing. They might also include self and peer assessment, observations, dialogue, or projects. Measuring student achievement against outcomes provides data on which instructional activities work and which needs reexamined. Not all of this data need be used as part of formal student assessment for a grade.

Refining Learning Outcomes Statements

Careful articulation of the outcomes statement helps instructors focus not only on what will be taught, but on how it will be presented, what the student experience will be, and how students will be assessed on their learning.

Step 1: List the target student abilities or characteristics.

At its most basic level, an effective outcome statement contains just two words, a verb and the object of the verb that describes what you want the student to be able to do such as “write poem,” or “reason analytically,” or “solve equation. More often, the initial draft of an outcome statement takes the form:

The student will be able to: verb + _____.

The choice of the verb is important as it will affect later decisions about how to instruct and measure accomplishment of the outcome. What good verbs have in common is that they are observable; whereas verbs like *understand* and *know* describe no observable action on the part of the students.

360 Action Verbs for Writing Student Learning Outcome Statements in Higher Education

ABSTRACT • ACCOMMODATE • ACKNOWLEDGE • ACTIVATE • ADAPT • ADJUDICATE • ADJUST • ADMINISTER • ADORN • ADVISE
ADVOCATE • AGGREGATE • ALLEGORIZE • AMALGAMATE • AMEND • AMPLIFY • ANALOGIZE • ANALYZE • ANATOMIZE • ANNOTATE
APPORTION • APPRAISE • ARBITRATE • ARGUE • ARRANGE • ARTICULATE • ASCERTAIN • ASSAY • ASSEMBLE • ASSERT • ASSIGN
AUTHENTICATE • AUTHOR • BENEFACT • BLEND • BRAINSTORM • BUDGET • CALIBRATE • CANVASS • CARICATURE • CATALOG
CATEGORIZE • CHALLENGE • CHECK • CHERISH • CHOOSE • CHRONICLE • CIPHER • CITE • CLASSIFY • COLLABORATE • COLLECT
COMBAT • COMMENTATE • COMPARE • COMPETE • COMPILE • COMPOSE • COMPUTE • CONCILIATE • CONCLUDE • CONFIRM
CONJECTURE • CONSERVE • CONSTRUCT • CONSTRUE • CONSULT • CONTEXTUALIZE • CONTRAST • CONTROL • CONTROVERT
CONVERT • CONVINCED • COPY • CORRECT • CORROBORATE • COST • COSTUME • CREATE • CRITIQUE • CROSS-EXAMINE
CUSTOMIZE • DANCE • DEBATE • DEBUG • DECIPHER • DECODE • DECONSTRUCT • DEDUCE • DEFEND • DEFINE • DELEGATE
DELIBERATE • DELINEATE • DEPICT • DERIVE • DESIGN • DETAIL • DETECT • DETERMINE • DEVISE • DIAGNOSE • DICTATE
DIFFERENTIATE • DIRECT • DISAGGREGATE • DISCOURSE • DISCOVER • DISCUSS • DISPOSE • DISSECT • DISTILL • DISTINGUISH
DOLLY • DRAFT • DRAMATIZE • DRAW • DRIVE • DRILL • EDIT • EDUCE • ELICIT • ELIMINATE • ELUCIDATE • EMBELLISH • EMEND
EMPATHIZE • EMPLOY • ENACT • ENCODE • ENGINEER • ENSURE • ENUMERATE • ENUNCIATE • EPITOMIZE • ESPOUSE • ESTABLISH
ESTIMATE • EVALUATE • EVOKE • EXCOGITATE • EXECUTE • EXEMPLIFY • EXERCISE • EXPERIMENT • EXPLAIN • EXPLICITE • EXPLOIT
EXPRESS • EXTRICATE • FABRICATE • FICTIONALIZE • FILTER • FOOTNOTE • FORECAST • FORMULATE • FRAME • GATHER
GENERALIZE • GENERATE • GLEAN • GLOSS • GRAPH • GAUGE • HARMONIZE • HONOR • HYPOTHESIZE • IDENTIFY • ILLUSTRATE
IMPEACH • IMPROVE • IMPROVISE • INCORPORATE • INDUCE • INFER • INITIATE • INQUIRE • INSPECT • INSTANTIATE • INTEGRATE
INTERPRET • INTERPOLATE • INTERROGATE • INTERVIEW • INTRODUCE • INSURE • INVENT • INVEST • JOURNAL • JUDGE • JUSTIFY
LABEL • LAUNCH • LEAD • LEVEL • LOCATE • MAINTAIN • MANIPULATE • MAP • MARKUP • MATCH • MEASURE • MEDIATE • MIMIC
MODEL • MODULATE • MONITOR • MYTHICIZE • NARRATE • NAVIGATE • NETWORK • NOMINATE • NOTATE • NOVELIZE • NURSE
OBEY • OPERATE • OPINE • OPTIMIZE • ORCHESTRATE • ORGANIZE • ORIENT • ORIENTEER • ORNAMENT • OUTLINE • PAINT • PAN
PARAPHRASE • PENETRATE • PERSEVERE • PERSUADE • PETITION • PHOTOGRAPH • PINPOINT • PLAN • PLAY • PLOT • POETICIZE
POLISH • POLL • PORTRAY • POSTERIZE • PRECIPITATE • PREDICT • PRESCRIBE • PRESENT • PRESERVE • PRIORITIZE • PROBE
PRODUCE • PRODUCTIZE • PROFILE • PROGRAM • PROJECT • PROMOTE • PROMPT • PRONOUNCE • PROPOSE • PROTECT • PROTOTYPE
PROVE • PROVOKE • QUALIFY • QUANTIFY • QUANTITATE • QUERY • QUEST • QUESTION • QUOTE • RANK • RATE • RATIONALIZE
RATIOCINATE • REARRANGE • RECALL • RECITE • RECOMMEND • RECONCILE • RECONCILIATE • RECONSTRUCT • RECORD • RECOUNT
RECTIFY • RECYCLE • REDACT • REDUCE • REENACT • REFINE • REHEARSE • REIFY • REORGANIZE • REPAIR • REPRODUCE • RESOLVE
RESPECT • RETRIEVE • REVISE • SELECT • REVERSE-ENGINEER • REVISE • REWRITE • ROLE-PLAY • SAFEGUARD • SCHEDULE • SCORE
SCRIPT • SCULPT • SHAPE • SECURE • SIFT • SIMPLIFY • SIMULATE • SING • SKETCH • SOLICIT • SOLVE • SORT • SPECIFY
SPECULATE • STATE • STEER • STIPULATE • STORYBOARD • STRATEGIZE • STREAMLINE • STYLE • SUBLIMATE • SUBSTANTIATE
SUGGEST • SUMMARIZE • SURVEY • SUSTAIN • SYMBOLIZE • SYMPHONIZE • SYNTHESIZE • TAG • TAILOR • TEACH • TEST
THEORIZE • TOLERATE • TRACE • TRACK • TRAIN • TRANSFER • TRANSFORM • TRANSLATE • TRANSMIT • TRIAGE • TRIANGULATE
TROUBLESHOOT • TRUST • TUNE • TWEAK • TYPIFY • UTILIZE • VALIDATE • VALUE • VERBALIZE • VERIFY • VOTE • WRITE • ZONE • ZOOM

As you begin to write down the list of abilities and characteristics you hope your students will have developed by the end of the lesson, course, or program, you may be tempted to add more detail than just the verb and object, but that part will come later. Remember, this is not a course content outline. A subtractive approach may work well for you in creating this initial list. List every ability or characteristic you hope your students will gain, and then pare it down to those they can realistically gain within the



Learning Outcomes

timeframe and scope of the lesson, course, or program.

Step 2: Organize your list (an outline form works well).

You may have found that while creating the list in step 1 that not all outcome statements have equal weight. Some are large and complex, while others are small and basic. For this reason, one outcome is often really a component of another. For example, the list may have contained “write essay,” “craft thesis,” and “find evidence.” Crafting a thesis and finding evidence are subsets of the larger outcome to write an essay. Make sure that all of the outcomes are at the same level. Disregard outcomes that are prerequisites of subordinate to others. Break up statements that contain more than one goal.

Course Outcomes

Class Outcome

Class Outcome

Class Outcome

Class Outcome

Step 3: Add necessary detail to the outcome statements.

Two-word outcome statements make for a good beginning step because they provide focus. You probably found in step 1 that two words were not quite sufficient to truly define outcomes. Adding a few descriptive words to the statements adds necessary detail and clarity. For example, “solve quadratic equation” is a more useful outcome statement than “solve equation.” You may choose to add additional detail such as the setting, conditions, level of achievement or mastery, or audience information. While the following example contains all of these elements, not all are required in every outcome statement. The following example is built on the two-word phrase “make circuit.” Adjust the detail to capture the appropriate skill level or context for the outcome statement.

Given a battery, light bulb and pieces of wire, the student will demonstrate making an electric circuit by appropriately connecting the pieces so as to light the bulb.

Step 4: Revise for measurability.

Ask yourself what evidence will indicate that students have accomplished the objective and how you will measure that evidence. Note the resulting details in the following outcome statement. For example, *Students will be able to judge the use of rhetorical fallacies* might become *Students will be able to judge the use of rhetorical fallacies in televised political debates*. The degree of detail required here depend largely upon the level of the outcome statement. Higher level outcome statements (institutional and program) will rely more on indirect measurements; whereas, course and class outcome statements will be able to use more direct measures.

Step 5: Fill in learning gaps.

As you review your completed list of lesson, course, or program outcomes, observe any patterns you find. Do your outcome statements include student abilities of various types, or do they tend to focus on only one level or kind of learning? There are various ways of categorizing learning and types of knowledge. Some common types and taxonomies are discussed next.



Learning Outcomes

Learning Outcome Taxonomies

Knowledge is multi-faceted and multi-layered. Taxonomies, or classifications, have been developed to help categorize the different kinds, depths, and locations of learning. These taxonomies aid us in defining how different kinds of knowledge require different instructional strategies or assessments.

Taxonomies of learning usually come in one of three varieties. First, you can organize the many facets of learning from the perspective of the student. Is the learning about what the students *know*, what they can *do*, or what they are *becoming*? This kind of **domain taxonomy** helps you focus on the whole student, not just the student's brain.

Next there are **taxonomies of level** that explore the levels of knowledge. Such taxonomies guide you in helping students reach greater depth or complexity of understanding.

Lastly are **taxonomies of kind**. These help identify the different types of thinking or the many purposes of the thought that constitute student learning.

- **Taxonomies of Learning by Domain.** One of the most common systems for thinking about learning and knowledge is to organize it according to *where the learner experiences it*, the domain. Some learning is clearly mostly about the *mind*. Other learning, however, resides in the student's *value center*, in the judgments or choices that they make based on grounds other than simple rationality. Yet some learning can be thought of as residing in one's *bodies* or *skills* (the piano player whose knowledge of the music is in her fingers). Taxonomies of domain are often therefore split thus:

To Know	To Be	To Do
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While this taxonomy has shown up in many forms, there have been instructive consistencies. For example, this simple model reminds one that acquiring skill (Do) is different from gathering knowledge (Know) and that both rely on integration of learning into a values system—into the life of an individual (Be).

This taxonomy also reminds one that all learning has a personal or affective component (Be) which must be addressed if an instructor hopes to be effective. Further, implicitly asks the question: Why are students learning this? What can they *do* with it?

Once students have mastered a body of knowledge, the taxonomy reminds us to turn attention to how that knowledge impacts the students, how they react to it, or the choices they'd make as a result. Then instruction turns to application of the concepts. In each case, learning has to happen in all the domains. It is never monolithic; it needs to be integrated into a life rather than just a brain.

- **Taxonomies of Learning by Level.** Another means of organizing learning is to categorize it by the *complexity* and *depth* of the cognitive process required. Such taxonomies allow you to think about student learning *sequentially*, as advancing from one level to the next, more complex level. The most well-known taxonomy of this type is Bloom's taxonomy of cognitive outcomes.



Learning Outcomes

BLOOMS TAXONOMY



Bloom reminds us that cognitive learning describes a spectrum of activities from simple remembering (knowledge), through useful *application* of the information, to nuanced *evaluation* based on larger, value-laden contexts. With Bloom in mind, it is easier to create a sequence of activities that leads a student from one cognitive process to the next.

Level	Instructional Methods	Assessment
Knowledge	Before-class assignment	Reading quiz
Comprehension	Discussion	Restate main idea in own words
Application	Group work on examples	Develop a strategy to . . .
Analysis	Lab experience	Explain why x happened. . .
Synthesis	Student demonstrations	Predict the change if . . .
Evaluation	Class Lincoln/Douglas debate	Support your suggestion for a better solution to . . .

This example of Bloom is not meant as an endorsement of this taxonomy over others. No taxonomy is “correct” or universal. Different instructors find different taxonomies of greater or lesser relative value as they think about defining outcomes and designing assessments.

- Taxonomies of Learning by Kind.** Educators often conceive of learning by the type of knowledge generated. For example, learning the vocabulary of a new language is **factual knowledge** and requires instructional methods that emphasize memorization. Learning grammar, however, is **conceptual**



Learning Outcomes

knowledge and requires focus on capturing abstract relationships. Knowing how to put words and grammar together to express ideas in a conversation is **procedural knowledge**. And learning about how you best learn languages, or self-awareness about one's own knowing, is **meta-cognitive knowledge**.

Taxonomies give educators a systematic way to think about learning. It is extremely helpful for instructors to memorize some taxonomies that seem well-adapted to their respective disciplines and teaching goals. The memorized taxonomies help not only in defining outcomes, but in formulating questions, and in designing instruction.

- **Use multiple methods.** No single learning outcome can or should be taught with a single instructional method. Yet some methods lend themselves better than others in accomplishing certain outcomes. Think through the relationship between the outcomes you've identified and the methods you propose using a taxonomy as your guide.
- **Don't get tied down.** All of these taxonomies are ways of structuring thinking. Don't feel that you need to develop outcomes to fit every aspect of a taxonomy. The important thing is to consider learning outcomes in holistic terms.
- **Start simply.** No course can be all things to all people. Pick two or three outcomes for each taxonomy level to insure depth, and one or two domains to insure penetration and retention. When identifying learning outcomes, starting with domain taxonomies is generally easiest.