

Student learning outcomes (SLOs) might have negative connotations when associated with outcomes assessment. Yet clearly articulated SLOs can bring focus to your teaching, communicate to students what is important, and help outsiders understand your course and program.

For a more thorough discussion with action verbs and a description of student learning behavior, see [EdPsychInteractive](#). In 2001, L. W. Anderson and D. R. Krathwohl revised Bloom's taxonomy. The levels of their taxonomy are remember, understand, apply, analyze, evaluate, and create. Some representations of Bloom's taxonomy match the cognitive level to numerous action verbs and learning activities. Table 1 draws together Bloom's taxonomy, the revision by Krathwohl and Anderson, and verbs for the digital age. Tables 2 and 3 provide taxonomies for the affective and psychomotor domains.

Is there a difference between goals, objectives, and outcomes? Educators have difficulty reaching agreement on this question. As a rule, **goals** broadly state what a program or course wants to achieve e.g. problem-solving and writing skills. **Objectives** define or describe specific skills at the course level. On the other hand, "**learning outcomes**" "... describe how students will be different because of a learning experience. ... The knowledge, skills, attitudes, and habits of mind that students take with them from a learning experience."¹ In short, outcomes refer to what has been achieved. Learning outcomes and goals are used inter-changeably by some.

The key to crafting learning goals, objectives, and outcomes is to find the sweet spot: be neither too vague nor too specific. Linda Suskie illustrates with an example from information literacy:²

Too vague: Students will demonstrate information literacy skills.

Too specific: Students will be able to use the college's online services to retrieve information.

Better: Students will locate information and evaluate it critically for its validity and appropriateness.

Student learning goals should explain "**why**" the outcome is important, and this is the advantage of Suskie's third example.

Some phrases that are often considered too vague: "students will learn, know, understand, etc." These terms are "fuzzy" because they may carry several meanings. For example, to understand might mean that students will memorize, recall, or be able to use information; these are not synonymous cognitive skill levels.

Whether we use goals, objectives, or outcomes, **first**, our language to craft SLOs should focus on what students will be able to do, value, think, etc. **Second**, use **action verbs** that accurately reflect the levels of aspiration. Countless taxonomy is available; many of these match action verbs to learning activities or types of assignments. The most famous is Bloom's taxonomy (1956), which groups behavior into affective, psychomotor, and cognitive domains; the cognitive domain is the most well-known among these. The original levels of Bloom's taxonomy of the cognitive domain are knowledge, comprehension, application, analysis, synthesis, and evaluation.

VALUE Rubrics, General Education Points, and Course Proposals: At Bloomsburg University credits to graduate are calculated separately from points earned to fulfill the "MyCore" General Education. When a course is proposed to earn general education points, faculty must demonstrate how their course will contribute to one or more of the ten goals by incorporating action verbs from Bloom's taxonomy and explain how they will assess student learning by consulting and adapting the [AACU's VALUE rubrics](#).

Table 1: Cognitive Domain

Level of Cognition	Action Verbs	Student Learning Activities	Learning Goal Statement
Knowledge (Bloom):	Define, describe, draw, identify, label, locate, memorize, name, recite, recognize, select, state, write	Information gathering Activities: A definition, a dictionary, events, films, magazine articles, newspapers, radio, recordings, television shows, text readings, video, podcasts, vodcasts, slidecasts	Student will define the 6 levels of Bloom's taxonomy of the cognitive domain.
Remember (Krathwohl and Anderson Revision)	Definition: To retrieve relevant knowledge from long-term memory. Verbs: Recognize; recall ▶▶ Verbs for the Digital Age: ³ Bullet point, highlight, bookmark, social network, social bookmark, search, google		

¹ Linda Suskie, *Assessing Student Learning: A Common Sense Guide*, 2nd ed (San Francisco: Jossey-Bass, 2009), 117.

² Suskie, *Assessing Student Learning*, 2nd ed., 130.

³ Andrew Churches, "Bloom's Digital Taxonomy," http://orgs.bloomu.edu/tale/documents/blooms_taxonomy_revised_digitally.pdf

Comprehension Level 1 (Bloom):	Change, match, confirm, express, illustrate, match, paraphrase, restate, transform	Confirming Information Gathering Activities: Analogy, causal relationship, conclusion or implication based on data, outline, summary	Student will explain the purpose of Bloom's taxonomy of the cognitive domain.
Comprehension Level 2 (Bloom):	Extend, distinguish, compare, infer, generalize, defend, explain, predict, relate	Confirming Use of Knowledge Activities: Cartoon, collage, diagrama, drama, graph, photograph, poster, skit, speech, story, own statement, podcast, vodcast, slidecast	
Understand (Krathwohl and Anderson Revision):	Definition: To construct meaning from instructional message, including orial, written, and graphic communication. Verbs: Interpret (clarify, paraphrase, represent, translate); Exemplify (illustrate, instatiate); Classify (categorize, subsume); Summarizing (abstract, generalize); Infer (conclude, extrapolate, interpolate, predict); Compare (contrast, map, match); Explain (construct models) ▶▶ Verbs for the Digital Age: ⁴ Advanced search, boolean search, blog journaling, tweet, categorise, comment, annotate, subscribe		
Application (Bloom):	Apply, change, choose, classify, collect, discover, dramatize, draw, interpret, make, model, modify, paint, prepare, produce, report, show	Making Use of Knowledge Activities: Creating a cartoon, drama, video, forecast, list, map, meeting, mobile, painting, paper, a project, puzzle, question, diagram, illustration, photograph, sculpture, solution, and shifting smoothly from one gear to another	Student will write an instructional objective for each level of Bloom's taxonomy.
Apply (Krathwohl and Anderson Revision):	Definition: To carry out or use a procedure in a given situation Verbs: Execute; Implement (use) ▶▶ Verbs for the Digital Age: Run, load, play, operate, hack, upload, share, edit		
Analysis (Bloom)	Analyze, categorize, classify, compare, construct, contrast, differentiate, distinguish, examine, infer, investigate, point out, research, select separate, sudivide, survey, take apart	Taking Apart Activities: Break down an argument, draw a conclusion, graph, identify parts of a propaganda statemetn, model, queionnaire, report, survey, syllogism	Student will compare and contrast the cognitive and affective domains.
Analyze (Krathwohl and Anderson Revision):	Definition: To break material into its constituent parts and determine how the parts relate to one another and to an overall structure or purpose Verbs: Differentiate (discriminate, distinguish, focus, select); Organize (finding coherence, integrate, outline, parse, structure); Attribute (deconstruct) ▶▶ Verbs for the Digital Age: Mash, link, tag		
Synthesis (Bloom):	Add to, combine, construct, create, design, develop, formulate, hypothesize, invent, organize, originate, plan, produce, role-play, what if	Putting Together Activities: A play, article, book , cartoon, game, invention, poem, report, song, story, formulate a hypothesis or question, set of rules, principles, or standards, speculate on or plan an alternate course of action	Student will design a classification scheme for writing educational objectives that combines the cognitive, affective, and psychomotor domains.
Create (Krathwohl and Anderson Revision):	Definition: To put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure Verbs: Generate (hypothesize); Plan (design); Produce (construct) ▶▶ Verbs for the Digital Age: Program, film, animate, blog, video blog, mix/remix, create wikis, publish, videocast, podcast, direct, produce		
Evaluation (Bloom):	Apprise, assess, compare, consider criticize, critique, judge, reocmmend, relate, solve, summarize, weigh	Judging the Outcome Activities: Comparison of standards, conclusion, court trial, editorial, establishment of standards, evaluation, group discussion, recommendation, self-evaluation, survey, valuing	Student will judge the effectiveness of writing objectives using Bloom's taxonomy.
Evaluate (Krathwohl and Anderson Revision):	Definition: To make judgments based on criteria and standards Verbs: Check (coordinate, detect, monitor, test); Critique (judge) ▶▶ Verbs for the Digital Age: Comment, review, post, moderate, collaborate a blog		

⁴ All lists for "Verbs for the Digital Age" originate from Andrew Churches, "[Bloom's Digital Taxonomy](#)"; for a more recent discussion of adapting Bloom's taxonomy to modern expectations, Educational Origami, [Bloom's Digital Taxonomy](#).

Outcomes Assessment and the Affective Domain: The cognitive and psychomotor domains are easier to quantify if you are being asked to measure and report results, whereas measuring outcomes in the affective domain presents challenges. At the highest level, how would you know if students internalized values? Yet, when we think about students embracing our disciplinary standards and becoming life-long learners, incorporating the affective domain into our goals, objectives, and outcomes are the heart of our vocation as teachers.

Table 2: [Affective Domain](#)

Level	Verbs
Receiving Phenomena: Awareness, willingness to hear, selected attention	Ask, choose, describe, follow, give, hold, identify, locate, name, point to, select, sit, erect, reply, use
Responding to Phenomena: Active participation on the part of the learners. Attends and reacts to a particular phenomenon. Learning outcomes may emphasize compliance in responding, willingness to respond, or satisfaction in responding (motivation)	Answer, assist, aid, comply, conform, discuss, greet, help, label, perform, practice, present, read, recite, report, select, tell, write
Valuing: The worth or value a person attaches to a particular object, phenomenon, or behavior. This ranges from simple acceptance to the more complex state of commitment. Valuing is based on the internalization of a set of specified values, while clues to these values are expressed in the learner's overt behavior and are often identifiable.	Complete, demonstrate, differentiate, explain, follow, form, initiate, invite, join, justify, propose, read, report, select, share, study, work.
Organization: Organizes values into priorities by contrasting different values, resolving conflicts between them, and creating a unique value system. The emphasis is on comparing, relating, and synthesizing values.	Adhere, alter, arrange, combine, compare, complete, defend, explain, formulate, generalize, identify, integrate, modify, order, organize, prepare, relate, synthesize
Internalizing Values (characterization): Has a value system that controls their behavior. The behavior is pervasive, consistent, predictable, and most importantly, characteristics of the learner. Instructional objectives are concerned with the student's general patterns of adjustment (personal, social, emotional).	Act, discriminate, display, influence, listen, modify, perform, practice, propose, qualify, question, revise, serve, solve, verify

Table 3: [Psychomotor Domain](#)

Level	Verbs
Perception: The ability to use sensory cues to guide motor activity. This ranges from sensory stimulation, through cue selection, to translation.	Choose, describe, detect, differentiate, distinguish, identify, isolate, relate, select
Set: Readiness to act. It includes mental, physical, and emotional sets. These three sets are dispositions that predetermine a person's responses to different situations (sometimes called mindsets).	Begin, display, explain, move, proceed, react, show, state, volunteer
Guided Response: This is the intermediate stage in learning a complex skill. Learned responses have become habitual and the movements can be performed with some confidence and proficiency.	Assemble, calibrate, construct, dismantle, display, fasten, fix, grind, heat, manipulate, measure, mend, mix, organize, sketch
Complex Overt Response: The skillful performance of motor acts that involve complex movement patterns. Proficiency is indicated by a quick, accurate, and highly coordinate performance, requiring a minimum of energy. This category includes performing without hesitation, and automatic performance.	Assemble, calibrate, construct, dismantle, display, fasten, fix, grind, heat, manipulate, measure, mend, mix, organize, sketch (the verbs are identical to Guided Response, but would include adverbs or adjectives that indicate performance is quicker, better, more accurate, etc.)
Adaptation: Skills are well developed and the individual can modify movement patterns to fit special requirements.	Adapt, alter, change, rearrange, reorganize, revise, vary
Origination: Creating new movement patterns to fit a particular situation or specific problem. Learning outcomes emphasize creativity based upon highly developed skills.	Arrange, build, combine, compose, construct, create, design, initiate, make, originate