

Expanded Taxonomy of Learning

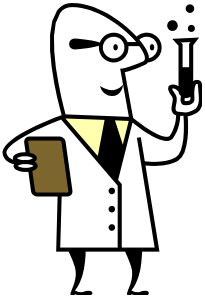
Taxonomy	Definition	Related LEARNING VERBS	What the Student Does	What the Teacher Does	Assessments
Remember	Recall specific bits of information	Tell, list, describe, name, repeat, remember, recall, identify, state, select, match, know, locate, report, recognize, observe, choose, who, what, where, when, cite, define, indicate, label, memorize, outline, record, relate, reproduce, underline	Responds Absorbs Remembers Recognizes	Directs Tells Shows Examines	Students recognize, recall or find information.
Understand	Construct meaning from information	Explain, restate, find, describe, review, relate, define, clarify, illustrate, diagram, outline, summarize, interpret, paraphrase, transform, compare similarities and differences, derive main idea, arrange, convert, defend, discuss, estimate, extend, generalize, give examples, locate, report, translate	Explains Translates Demonstrates Interprets Summarizes	Demonstrates Listens Questions Compares Examines	Students organize previously learned material, rephrase it, describe it in their own words, use it for making comparisons, change from one form of representation to another.
Apply	Use methods, concepts, principles, and theories in new situations	Apply, practice, employ, solve, use, demonstrate, illustrate, show, report, paint, draw, collect, dramatize, classify, put in order, change, compute, construct, interpret, investigate, manipulate, modify, operate, organize, predict, prepare, produce, schedule, sketch, translate	Solves novel problems Demonstrates Uses knowledge constructs	Shows Facilitates Observes Criticizes	Students use previously learned information in order to solve a problem or to complete familiar or unfamiliar tasks.
Analyze	Identify how parts relate to one another or to a larger structure/purpose	Analyze, dissect, detect, test, deconstruct, discriminate, distinguish, examine, focus, find coherence, survey, compare, contrast, classify, investigate, outline, separate, structure, categorize, solve, diagram, determine evidence and conclusions, appraise, break down, calculate, criticize, debate, experiment, identify, illustrate, infer, inspect, inventory, question, relate, select	Discusses Uncovers Lists Dissects Compares and contrasts	Probes Guides Observes Acts as a resource	Students will 1) identify reasons, causes, & motives; 2) consider available evidence to reach a conclusion, inference or generalization; 3) analyze a conclusion, inference or generalization to find supporting evidence.
Evaluate	Judge the value of something based on criteria, processes, or standards	Coordinate, judge, select/choose, decide, debate, evaluate, justify, recommend, verify, monitor, measure, the best way, what worked, what could have been different, what is your opinion, test, appraise, assess, compare, conclude, contrast, criticize, discriminate, estimate, explain, grade, interpret, rate, relate, revise, score, summarize, support, value	Judges Disputes Forms opinions	Accepts Lays bare the criteria Harmonizes	Students judge the merit and value of an idea, a solution to a problem, an aesthetic work, etc.
Create	Generate a coherent functional whole; recognize new patterns	Create, hypothesize, design, construct, invent, imagine, discover, present, deduce, induce, bring together, compose, pretend, predict, organize, plan, modify, improve, suppose, produce, set up, what if, propose, formulate, solve (more than one answer), arrange, assemble, categorize, collect, combine, devise, explain, generate, manage, perform, prepare, rearrange, reconstruct, relate, reorganize, revise, argue for	Generate Hypothesize Plan Design Produce Construct Argues	Reflects Extends Analyzes Evaluates	Students will 1) produce original work or communication; 2) make predictions; 3) solve problems; 4) invent, hypothesize, devise a procedure; argue for a position; present a work of art or music to be judged

Adapted from L. W. Anderson and D. R. Krathwohl (eds). *A Taxonomy for Learning, Teaching and Assessing* (based on Bloom's Taxonomy), 2001.
Retrieved 1/15/08 from <http://www.nltf.com/Library/Expanded%20Taxonomy%20of%20Learning.doc>

Learning Taxonomy – Krathwohl's Affective Domain

<p>Affective learning is demonstrated by behaviors indicating attitudes of awareness, interest, attention, concern, and responsibility, ability to listen and respond in interactions with others, and ability to demonstrate those attitudinal characteristics or values which are appropriate to the test situation and the field of study</p>		
Level and Definition	Illustrative Verbs	Example
<p>Receiving refers to the student's willingness to attend to particular phenomena of stimuli (classroom activities, textbook, music, etc.). Learning outcomes in this area range from the simple awareness that a thing exists to selective attention on the part of the learner. Receiving represents the lowest level of learning outcomes in the affective domain.</p>	<p>asks, chooses, describes, follows, gives, holds, identifies, locates, names, points to, selects, sits erect, replies, uses</p>	<p>Listening to discussions of controversial issues with an open mind. Respecting the rights of others. Listen for and remember the name of newly introduced people.</p>
<p>Responding refers to active participation on the part of the student. At this level he or she not only attends to a particular phenomenon but also reacts to it in some way. Learning outcomes in this area may emphasize acquiescence in responding (reads assigned material), willingness to respond (voluntarily reads beyond assignment), or satisfaction in responding (reads for pleasure or enjoyment). The higher levels of this category include those instructional objectives that are commonly classified under "interest"; that is, those that stress the seeking out and enjoyment of particular activities.</p>	<p>answers, assists, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes</p>	<p>Completing homework assignments. Participating in team problem-solving activities. Questions new ideals, concepts, models, etc. in order to fully understand them.</p>
<p>Valuing is concerned with the worth or value a student attaches to a particular object, phenomenon, or behavior. This ranges in degree from the simpler acceptance of a value (desires to improve group skills) to the more complex level of commitment (assumes responsibility for the effective functioning of the group). Valuing is based on the internalization of a set of specified values, but clues to these values are expressed in the student's overt behavior. Learning outcomes in this area are concerned with behavior that is consistent and stable enough to make the value clearly identifiable. Instructional objectives that are commonly classified under "attitudes" and "appreciation" would fall into this category.</p>	<p>completes, describes, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, shares, studies, works</p>	<p>Accepting the idea that integrated curricula is a good way to learn. Participating in a campus blood drive. Demonstrates belief in the democratic process. Shows the ability to solve problems. Informs management on matters that one feels strongly about.</p>
<p>Organization is concerned with bringing together different values, resolving conflicts between them, and beginning the building of an internally consistent value system. Thus the emphasis is on comparing, relating, and synthesizing values. Learning outcomes may be concerned with the conceptualization of a value (recognizes the responsibility of each individual for improving human relations) or with the organization of a value system (develops a vocational plan that satisfies his or her need for both economic security and social service). Instructional objectives relating to the development of a philosophy of life would fall into this category.</p>	<p>adheres, alters, arranges, combines, compares, completes, defends, explains, generalizes, identifies, integrates, modifies, orders, organizes, prepares, relates, synthesizes</p>	<p>Recognizing own abilities, limitations, and values and developing realistic aspirations. Accepts responsibility from one's behavior. Explains the role of systematic planning in solving problems. Accepts professional ethical standards. Prioritizes time effectively to meet the needs of the organization, family, and self.</p>
<p>Characterization by a value or value set. The individual has a value system that has controlled his or her behavior for a sufficiently long time for him or her to develop a characteristic "life-style." Thus the behavior is pervasive, consistent, and predictable. Learning outcomes at this level cover a broad range of activities, but the major emphasis is on the fact that the behavior is typical or characteristic of the student. Instructional objectives that are concerned with the student's general patterns of adjustment (personal, social, emotional) would be appropriate here.</p>	<p>acts, discriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, serves, solves, uses, verifies</p>	<p>A person's lifestyle influences reactions to many different kinds of situations. Shows self-reliance when working independently. Uses an objective approach in problem solving. Displays a professional commitment to ethical practice on a daily basis. Revises judgments and changes behavior in light of new evidence.</p>

Source: http://assessment.uconn.edu/docs/LearningTaxonomy_Affective.pdf



Psychomotor Domain

Learning Outcomes Related To Skills

Observe	Model	Recognize Standards	Correct	Apply	Coach
Students translate sensory input into physical tasks or activities.	Students are able to replicate a fundamental skill or task.	Students recognize standards or criteria important to perform a skill or task correctly.	Students use standards to evaluate their own performances and make corrections.	Students apply this skill to real life situations.	Students are able to instruct or train others to perform this skill in other situations.
Hear Identify Observe See Smell Taste Touch Watch *Usually no outcomes or objectives written at this level.	Attempt Copy Follow Imitate Mimic Model Reenact Repeat Reproduce Show Try	Check Detect Discriminate Differentiate Distinguish Notice Perceive Recognize Select	Adapt Adjust Alter Change Correct Customize Develop Improve Manipulate Modify Practice Revise	Build Compose Construct Create Design Originate Produce	Demonstrate Exhibit Illustrate Instruct Teach Train

Basic Knowledge
 Basic Skills
 Level

More Sophisticated Skills
 Higher Level Abilities
 Critical Understanding of Performance

Spiritual Domain (transcend self-interest)

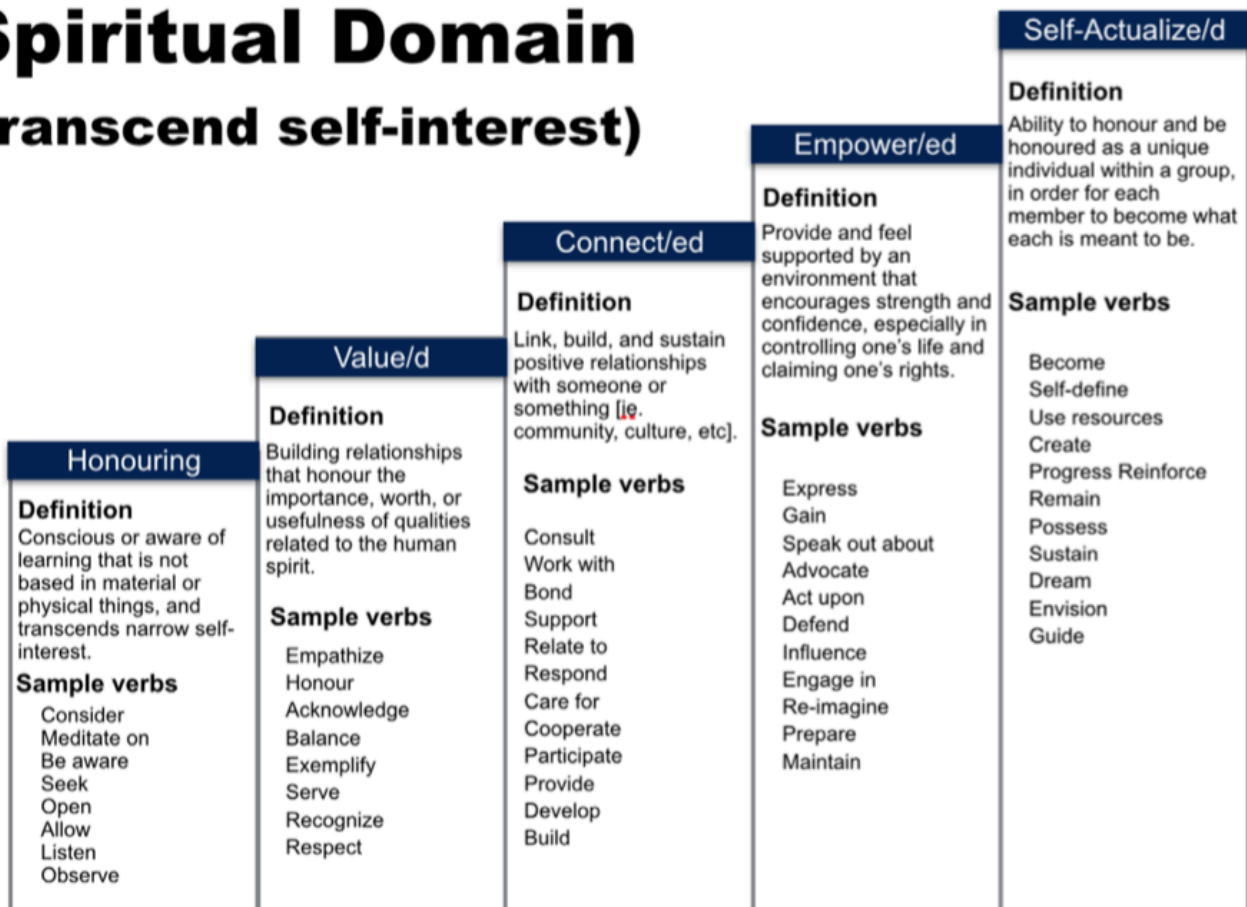


Figure 2. Sample verbs and progression for creating outcome statements.

LaFever, M. (2016). Switching from Bloom to the Medicine Wheel: Creating learning outcomes that support Indigenous ways of knowing in post-secondary education, *Intercultural Education*, DOI: 10.1080/14675986.2016.1240496