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Teaching and Learning Enhancement (TALE) Center

TALE Teaching Tip:

Making Student Learning Objectives Relevant and Transparent

Student Learning Objectives (SLOs), Goals, Outcomes: Is there a Difference?

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, what the desired results are going to be.

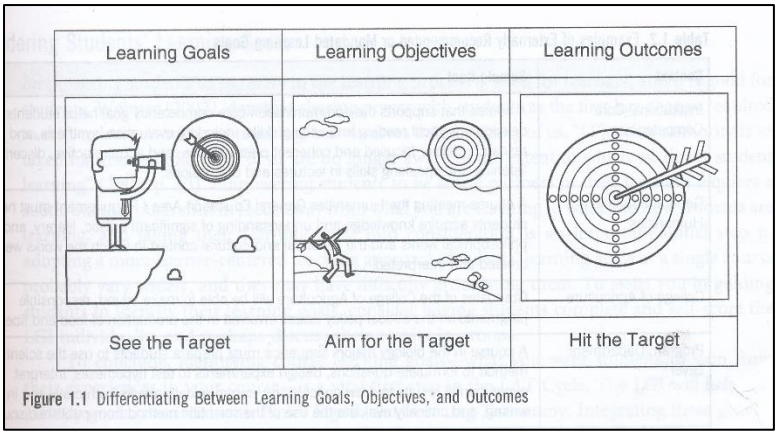

Figure 1.1 Differentiating Between Learning Goals, Objectives, and Outcomes

From Elizabeth F. Barkley and Claire Howell Major, *Learning Assessment Techniques: A Handbook for College Faculty* (San Francisco: Jossey-Bass, 2016), 15.

Two Audiences

In many cases, we write SLOs to seek curriculum approval for course design or redesign. Our primary audience: colleagues and administrators, who are reviewing the course proposal and make presumptions about the relevancy of our goals, objectives, outcomes. Subsequently, the language of our SLOs may persuade colleagues, but how will they be perceived by students if we simply cut-and-paste that language from a master syllabus to a course syllabus? When our students are the audience, our learning objectives, goals, and desired results should be made relevant and transparent.

Research on learning and motivation offers several reasons to make SLOs relevant and transparent.

First, if we engage students in our subject matter in a positive emotional level, they are more likely to learn. L. Dee Fink argues that mobilizing students' affective domains by helping them discover ways to care about their course content or see its human dimensions will increase student engagement.

Second, motivation theories note that tapping into intrinsic motives will improve student engagement more so than extrinsic motivators such as grades, awards, or credentialing. If students' only motivation is extrinsic, they are more likely to cram, not learn, to earn a grade. In *How Learning Works*, the authors maintain that if students' subjective values and expectancies are met, they will deepen learning.

Third, relevant objectives and goals define the significance of what we are doing, which may increase student engagement and learning. Note that simply telling students why a topic or unit is essential, does not guarantee "buy in" any more than a patient follows a doctor's advice, but it's a start. Many of our students take an instrumental approach to their learning – they want to know how assignments and course will benefit them. If we are teaching a general education course, then students may even see the course and its assignments as an obstacle to their career and thereby engage in

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

resistance. Therefore, when we articulate our course objectives, goals, units, and daily lessons, choose language that is relatable and relevant.

Finally, not only should we make our content relevant, we should also be transparent about how to achieve our desired results. Our goals should make "obvious the intellectual practices involved in completing and evaluating a learning task." [2] As experts we know what A-level work looks like, but can we articulate that to students? If you struggle with this, welcome to the "curse of expert knowledge." Our goals should help students uncover our disciplinary ways of knowing. We cannot assume that students know how to read, write, research, etc. in our discipline. In making our goals transparent, helping them to learn how to learn, we will create a more equitable classroom in which every student has the potential to thrive. And it all begins with writing SLOs that are meaningful to students. These SLOs must guide us in every decision we make about assessments, learning activities, and teaching strategies. Rule of thumb: if a student were to ask us why they must learn the content, we should have a persuasive answer that begins with clearly developed SLOs.

Incorporate your SLOs into Teaching, not just your Syllabus

We have many ways to build SLOs into our teaching. To create coherency, it's important to routinely use the language of the SLOs and goals in your daily class meetings. Here's a short list of potential techniques:

- Point to the syllabus when making reference to goals and objectives, it is a road map for learning.
- Start class with a reminder of objectives or goals and how they relate to the desired results.
- Start class with a writing prompt, activity, or problem that sheds light on the significance of daily goals (a.k.a. bell ringers).
- Start a new topic or unit with prior knowledge and perception survey or short quiz to provide focus on the goals.
- Pose a scenario or tell a story that creates dramatic interest or demands a solution that relates to the goals.
- Point out the creative, critical, or practical skills that are being developed which are promised in the SLOs and shed light on disciplinary ways of thinking.
- Use the words of your SLOs and goals in course assignments and feedback to students. (E.g. if I have a learning goal that asks students to support a thesis with corroborating evidence, I do not simply put a question mark in the margins or write "so what?"; I write, "weak corroboration.")
- Encourage students to ponder the stakeholders who might benefit from their mastery of any goal.
- Make time in-class to discuss an upcoming assignment and how it will contribute to the learning goals.
- Make time to explain various aspects of your disciplinary ways of knowing when its appropriate to the content or class activity. (E.g. before my students tackle a film review, over the course of two or three class meetings, I will have spent time answering questions about the assignment, discussing the writing process, looking at examples, etc.)
- End a topic or unit that compares their prior knowledge and perception to their current state of knowledge.
- Encourage students to make connections between earlier objectives and goals through review activities or low-stakes or no-stakes quizzing.
- Use or assign concept maps or flow charts that enables students to make connections during a unit or throughout the semester that align with the language of objectives and goals.
- At the end of class, use a writing prompt, minute paper, etc that encourages students to ponder the essential goals for the day.
- Before each class ends, review goals for the next class meeting or assignment and relate them to the course outcomes. (I have my syllabus and calendar ready to share and relate.)

If the curse of expertise leads you to struggle with making your goals relevant and transparent, many disciplinary organizations offer resources. In addition, consult the department's master syllabus to explore the wording. Yet be open to presenting them to students in ways that are more relatable, relevant, and transparent.

Crafting Student Learning Objectives

1. Our language to craft SLOs should focus on what students will be able to do, value, think, etc.
2. Use **action verbs** that accurately reflect the levels of aspiration.

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[2] Amy B. Mulnix, "The Power of Transparency in your Teaching," *Faculty Focus*, 12 November 2018. (https://www.facultyfocus.com/articles/course-design-ideas/power-transparency-teaching/ accessed on 8 June 2020)

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: [3]

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.

Countless taxonomies are 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.

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 shares L. Dee Fink's "Verbs for Significant Learning Experiences." Table 2 draws together Bloom's taxonomy, the revision by Krathwohl and Anderson, and verbs for the digital age. Tables 3 and 4 provide taxonomies for the affective and psychomotor domains.

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.

Below, please find a chart that matches L. Dee Fink's Significant Learning Taxonomies with performance verbs and potential activities called LAT (Learning Assessment Techniques). Fink's taxonomy is followed by Krathwohl and Anderson's revised taxonomies for the cognitive, affective and psychomotor domains. The cognitive and affective domains match performance verbs with potential learning activities and assessments to help inspire you.

[3] Suskie, *Assessing Student Learning*, 2nd ed., 130.

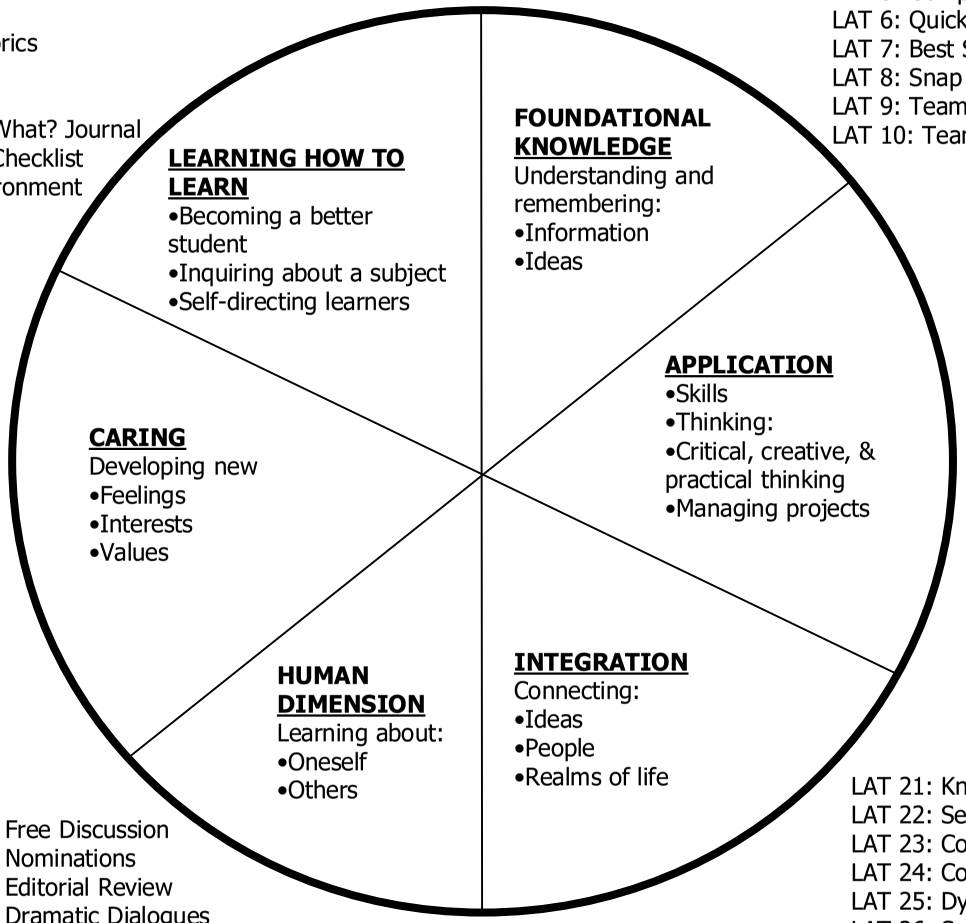
[4] L. Dee Fink, *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses*, rev. ed. (San Francisco: Jossey-Bass, 2013), 89.

L. Dee Fink's TAXONOMY OF SIGNIFICANT LEARNING and *Learning Assessment Techniques**

Each **LAT** outlines steps to implement and examples of how they have been developed for onsite and online teaching. Very practical source that aligns assessments with Fink's taxonomy.

LAT 1: First Day Final
LAT 2: Background Knowledge Probe
LAT 3: Entry and Exit Tickets
LAT 4: Guided Reading Notes
LAT 5: Comprehensive Factors List
LAT 6: Quick Write
LAT 7: Best Summary
LAT 8: Snap Shots
LAT 9: Team Tests
LAT 10: Team Games Tournament

LAT 44: Study Outlines
LAT 45: Student Generated Rubrics
LAT 46: Invent the Quiz
LAT 47: Learning Goal Listing
LAT 48: What? So What? Now What? Journal
LAT 49: Multiple-Task Mastery Checklist
LAT 50: Personal Learning Environment



LAT 11: Prediction Guide
LAT 12: Fact or Opinions
LAT 13: Quotation Commentaries
LAT 14: Insights-Resources-Application (IRA)
LAT 15: Consider This
LAT 16: What's the Problem?
LAT 17: Think-Aloud Problem-Solving Protocols (TAPPs)
LAT 18: Peer Problem Reviews
LAT 19: Triple Jump
LAT 20: Digital Projects

LAT 37: Stand Where you Stand
LAT 38: Three-Minute Message
LAT 39: Issue Awareness Ad
LAT 40: Proclamations
LAT 41: Editorial
LAT 42: Debate
LAT 43: Briefing Paper

LAT 21: Knowledge Grid
LAT 22: Sequence Chains
LAT 23: Concept Maps
LAT 24: Contemporary Issues Journal
LAT 25: Dyadic Essay
LAT 26: Synthesis Paper
LAT 27: Case Study
LAT 28: Class Book
LAT 29: E-Portfolios

LAT 30: Free Discussion
LAT 31: Nominations
LAT 32: Editorial Review
LAT 33: Dramatic Dialogues
LAT 34: Role Play
LAT 35: Ethical Dilemma
LAT 36: Digital Story

*Elizabeth Barkley and Claire Howell Major developed, identified, updated teaching techniques that measure student learning inspired by Fink's *Taxonomy of Significant Learning*. *Learning Assessment Techniques: A Handbook for College Faculty* (2016).

Cognitive Domain

Krathwohl and Anderson's revised Bloom's Taxonomy

Cognitive Domain	Definition	Performance or SLO Verbs	Learning Activities	Assessments
Create	Compile information to generate new solutions	Arrange, calculate, compose, construct, design, develop, devise, formulate, generate, hypothesize, plan, prepare, produce, propose, revise, summarize, synthesize	Brainstorm, decision-making tasks, develop and describe new solutions or plans, design project, performances, presentations, research projects, written assignment	Develop criteria to evaluate product or solution, grant proposal, outline alternative solutions, research proposal
Evaluate	Make judgments based on evidence found	Attribute, argue, assess, check, compare, conclude, contrast, criticize, critique, defend, examine, justify, measure, recommend, support, reflect	Debates, compare and contrast with charts, tables, diagrams, concept map, journal, pros and cons list, mind map, review paper	Argumentative or persuasive essay, debates, discussions, presentation, provide alternative solutions, report
Analyze	Break down information to look at relationships	Categorize, contrast, compare, criticize, debate, differentiate, experiment, inspect, infer, investigate, organize, outline, question, separate, test	Case studies, compare and contrast with charts, tables, diagrams, concept map, debates, discussions, flowchart, graph, group investigation, mind map, questionnaires, report/survey, think-pair-share	Analysis paper, case study, evaluation criteria, critique hypothesis, procedures, etc, muddiest point, one-minute paper, research paper, review paper
Apply	Apply knowledge to different situations	Calculate, complete, demonstrate, execute, illustrate, implement, modify, organize, practice, prepare, solve, show, use, write	Calculate, case studies, concept map, creating examples, demonstrations, flipped classroom, gallery walk, gamification, group work, lab experiments, map, problem-solving tasks, short answers, role play	Discussion board post, e-Portfolio, lab reports, one-minute paper, Presentation, problem-solving tasks, short answers
Understand	Translate & interpret knowledge	Compare, classify, describe, discuss, explain, give examples, interpret, paraphrase, predict, present, report, rewrite, summarize	Case studies, concept map, demonstrations, diagrams, flowcharts, group discussions, mind map, matrix activity, paly/sketches, summarize, think-pair-share	Concept map, create a summary, essay, diagrams, infographics, matrix activity, play/sketches, summarize, think-pair-share
Remember	Retain, recall, & recognize knowledge	Arrange, define, identify, indicate, label, list, match, memorize, recall, recite, recognize	Flashcards, highlight key words, list, memory activities, reading materials, watching presentations and videos	Clicker questions, fill-in-the-blanks, label, match, multiple choice, quizzes, true and false questions

Source: https://uwaterloo.ca/centre-for-teaching-excellence/resources/teaching-tips/blooms-taxonomy-learning-activities-and-assessments

Affective Domain

Krathwohl and Anderson's revised Bloom's Taxonomy

Affective Domain	Definition	Performance or SLO Verbs	Learning Activities	Assessments
Characterization	Value that will control the outcome & behavior	Act, arrange, behave characterize, defend, display, exemplify, function, incorporate, influence, justify, listen, maintain, modify, practice, preserve, perform, propose, question, revise	Critical reflection, group projects, self-report goals (personal and academically)	Criteria for group projects, self-evaluation, SMART goals
Organization	Integrating & comparing values, ordering them according to priorities	Adapt, arrange, categorize, classify, compare, complete, defend, explain, establish, formulate, generate, identify, integrate, modify, order, prepare, rank, relate	Analyze and contrast (with charts, tables, diagrams), concept map (report formal and informal experiences & identify skills)	Develop realistic aspirations, prioritize time to meet goals, focus groups, questionnaires, ability to solve new problems
Valuing	Finds value and worth in one's learning & is motivated to continue	Accept, approve, complete, choose, commit, describe, debate, demonstrate, differentiate, explain, establish, identify, initiate, justify, prepare, refute	Debates, opinionated writing piece, reflection exercises, reflection paper, self-report	Attendance, neatness & carefulness (with minimal errors) of submitted work, meet deadlines, proposals of new plans, questionnaire, rating scale, reflection piece, report on extra-curricular activities, ungraded paper
Responding	Actively participating & engaging to transfer knowledge	Agree to, answer, ask, assist, clarify, communicate, contribute, cooperate, discuss, help, indicate, inquire, participate, question	Active participating in classroom activities, brainstorm ideas, group discussions, present in front of audience, problem solving activities, role-play, written assignments (essays/reports/etc)	Answer questions, ability to follow procedures, critical questioning, feedback & peer evaluation, one-minute paper, questionnaires, willingness to participate
Receiving	Being willing to listen & be aware to receive knowledge	Acknowledge, ask, attend, choose, describe, follow, give, identify, listen, name, reply, select	Attend focus groups, listen as audience to a presentation, read articles/papers/textbooks, watch a video	Feedback forms, fill-in-the-blanks, knowledge survey, list, match memory tests, one-minute paper, qualitative interviews, test activities (recall and verbalize actions), write summary on key points of presentation

Source: https://uwaterloo.ca/centre-for-teaching-excellence/resources/teaching-tips/blooms-taxonomy-learning-activities-and-assessments

Psychomotor Domain
Krathwohl and Anderson's revised Bloom's Taxonomy

Psychomotor Domain	Definition	Performance or SLO Verbs	Learning Activities	Assessments
Origination	Create new procedures and solutions to approach various situations	Arranges, builds, combines, composes, constructs, creates, designs, formulates, initiates, makes, modifies, originates, re-designs		
Adaptation	Skills strongly developed & can be modified in different situations	Adapts, alters, changes, modifies, rearranges, reorganize, revise, varies		
Complex-Overt Response	Expert level, high proficiency, & performs with accuracy	Assembles, builds, calibrates, constructs, dismantles, display, fastens, fixes, grinds, heats, measures, mends, mixes, operates, organizes, performs, sketches		
Mechanism	Intermediate level, develops proficiency & action becomes habitual	Assembles, constructs, dismantles, displays, fastens, fixes, grinds, measures, mends, mixes, organizes, sketches		
Guided Response	Beginner level, learns through trial & error by practicing	Assembles, attempts, builds, copies, follows, imitates, reacts, reproduces, responds, traces, tries		
Set	How ready one is to act (physically, mentally, emotionally & spiritually)	Arranges, begins, demonstrates, displays, explains, moves, prepares, proceeds, reacts, responds, shows, states		

Source: https://uwaterloo.ca/centre-for-teaching-excellence/resources/teaching-tips/blooms-taxonomy-learning-activities-and-assessments

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.