

Chapter 1

Transparency and Clearer Targets

WE FACULTY ARE odd. We like school so much we are still here. This makes it easy for us to forget that school is a strange and mysterious place for most students. Not only is it a place from which they hope to leave and never come back (that is generally considered the “normal” view of the world), but it is a place with a unique set of rules. These rules have become obvious to faculty but often appear completely opaque to students as they first encounter them. This disconnect is exacerbated with first-generation students who often lack the network of experienced adults who can answer their questions regarding how all of this is supposed to work.

We know that transparency improves learning, that the more we share about why we have chosen our teaching practices the better students perform, and that these effects are disproportionately greater for students who do not have another source to ask regarding these practices (Winkelmes, 2013). Why do faculty assign only the odd- or even-numbered problems? Why do faculty have us work in groups? Why do faculty scribble all over my paper when they hand it back? These are serious concerns about the code of academia, and the answers are often obvious only to those of us who live here.

Research suggests that faculty can help by explaining to students what they are to do, why we want them to do it, and how it will help them learn (Jonsson & Svingby, 2007). Try being this explicit with students: “Each time you repeat the task with small variations, your brain makes different connections. Practice makes perfect, as you may have experienced in a video game.”

This is especially true on the macrolevel: What are the goals for this class? For most students, the goal is to get an A. If you want your students to aspire to more than this, you need to articulate what else they might want and how it might relate to their longer-term goals. You may also have to outline the steps necessary to reach these goals, clarify what A work looks like, and what behaviors are likely to result in success. Better pedagogy begins with transparency.

Learning Outcomes

When most of us taught our first class, the name of the game was content coverage. We didn't really know how to approach teaching any other way. We tried to get a sense of what content likely belonged in our course, and then we would divide the content into chunks that could then be further divided into days. We'd prepare to share that content with our students with perhaps little thought regarding what they were to do with that content beyond the life span of our introductory course. There are, of course, far better strategies to use to design a course, and the best place to start is with the articulation of learning outcomes.

Bloom's taxonomy of educational objectives (1956) was designed for higher education, but it is now pervasive in curriculum design; even dog trainers use a version of this structure. Anderson and Krathwohl (2001) revised the taxonomy into the form most widely used today. The taxonomy classifies cognitive skills into six levels of increasing complexity. Like a video game, each higher level assumes mastery of all of the previous levels.

- *Remembering*: Retrieving, recognizing, and recalling relevant knowledge from long-term memory
- *Understanding*: Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining
- *Applying*: Carrying out or using a procedure through executing or implementing
- *Analyzing*: Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing
- *Evaluating*: Making judgments based on criteria and standards through checking and critiquing
- *Creating*: Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing (Anderson & Krathwohl, 2001, pp. 67–68)

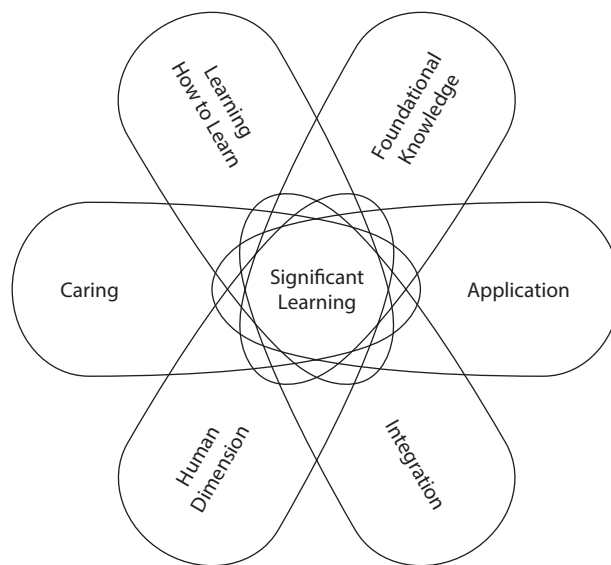
Bloom's levels are a common vocabulary in learning outcomes and the development of instructional activities. This taxonomy can help you articulate, for yourself and your students, what you hope students will

accomplish in your course or from an activity. They can also guide the sequence of what happens in your course. These levels may be obvious to you, but they may be a revelation to your students. Helping them understand that there is a progression of thinking skills that they will develop over time can do a lot to break down resistance to your content, your instructional approach, and even your course. Taking the time to consider what students will be able to do by the end of every course (and even every unit or class session) will improve everything about your design and help you prioritize which investments in new pedagogy will give you the most return for your time.

The increased specificity and the progression of cognitive skills can also help students understand what they are supposed to be learning, and this will help them make appropriate choices about their own approach to your course. Connecting content to levels of thinking can help clarify the order and purpose of specific activities for your students (Chapter 11 provides more on sequence and integration).

FIGURE 1.1

Fink's Taxonomy of Significant Learning



Source: Fink (2013) p. 30.

Dee Fink (2013) proposed another revision to Bloom's linear progression of six levels of cognitive learning with six kinds of related learning that enhance each other:

Foundational knowledge: The facts and principles that constitute course content.

Application: Problem solving, decision making, skills, or creative thinking.

Integration: Interdisciplinarity and the interactions among subjects matter.

Human dimension: Learn about themselves or how to interact with others in life.

Caring: Students change their feelings, interests, or values in relation to a subject.

Learning how to learn: How to we prepare students to continue learning? (Fink, 2013, p. 30)

The more of these six areas a course or program can promote, the more significant the overall learning experience will be for students. Articulating clear objectives that also make sense to students is a challenge, but as with all increases in transparency, it will be especially beneficial to students in the bottom half of your class.

Rubrics

Rubrics are usually discussed as an evaluation tool (see Stevens & Levi, 2005), but using rubrics, or what Walvoord and Anderson (1998) call primary trait analysis (PTA), will move your grading from unstated personal analysis ("It feels like a B") to more explicit criteria that you and your students can articulate together. It can also ease the transition from norm-referenced grading (on a curve) to criterion-referenced scoring (based on defined standards and characteristics). Clarifying standards and expectations will save you time during the grading (and complaining) process, but it is also an important way to contribute to learning (Selka, 2013).

A rubric that is made part of the instructions for an assignment provides a guide to students (Brookhart, 2013). A good rubric should clearly demonstrate to students your criteria and your standards; putting them into a table ensures that you provide both. Note that with the detailed and specific rubric in Table 1.1, the assignment is apparent almost without further instructions.

TABLE 1.1
College Writing Rubric Example

	Absent (0%)	Poor (40%)	Average (70%)	Good (90%)	Great (100%)
Thesis, ideas, and analysis (20%)	There is no thesis or focus.	The thesis is split or unclear. The paper wanders off topic.	The essay is focused around a single thesis or idea.	The thesis is interesting, and there is at least one original perspective in one of the points.	The thesis is original, and there are compelling ideas throughout.
Evidence (30%)	There is almost no detailed evidence to support the thesis.	There is some evidence, but in key places evidence is vague or missing.	There is supporting evidence for most of the claims, but some evidence may be unrelated or vague.	There is supporting evidence for all claims, but it is not as strong or complete in some areas.	There is a variety of support for every claim, and it is strong, concrete, and appropriate.
Organization (20%)	There is little or no organization.	There is some organization, but the paper is "jumpy." It does not have a clear introduction and conclusion, and paragraphs are not focused or are out of order.	The introduction, body, and conclusion are clear, but some paragraphs may need to be focused and/or moved.	Each part of the paper is engaging, but better transitions, more (or fewer) paragraphs, or stronger conclusion are needed.	Each paragraph is focused and in the proper order. The introduction and conclusion are complementary, and the transitions are excellent.
Language maturity (10%)	Frequent and serious grammatical mistakes make the meaning unclear.	Grammatical mistakes slightly interfere with the meaning of the paper.	The writing is clear, but sentence structures are simple or repetitive. There are repeated grammar errors.	The language is clear, with complex sentence structure, but the paper contains minor grammatical errors.	Creative word choice and sentence structure enhance the meaning and focus of the paper.

(continued)

TABLE 1.1
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	Absent (0%)	Poor (40%)	Average (70%)	Good (90%)	Great (100%)
Style/voice (10%)	Writing is very general with no sense of either the writer or audience.	Writing is general, with little sense of the audience or communication of the writer's voice or passion.	The essay addresses the audience appropriately, with some examples of creative expression.	The essay addresses the audience appropriately and is engaging with a strong sense of voice.	There is a keen sense of the intended audience and the author's voice, and the writing conveys passion.
Citations (10%)	The material is presented almost entirely without citations.	There are some citations, but they are either incomplete or inappropriate.	The citations are good, but there are not enough of them	All evidence is cited, but with minor format errors.	All evidence is well cited in appropriate format

Source: Bowen (2012, Table 7.1, pp. 164165).

Rubrics improve transparency and give students a target. Students (especially first-generation college students) are deeply confused about grading and what you want. When you say “critical thinking,” they hear “trick question.” They genuinely believe that writing papers (and school in general) is largely about figuring out how to please different, highly individual, and often quirky people called professors. They do not see this as standards. Students complain that it takes half the semester to discover what individual faculty want. One of the most common complaints is that a student will use the format, style, or type of writing they learned in an earlier class and then get a poor grade on the first paper in the next class for doing what they thought was rewarded previously. A rubric can give students guidance for the first writing assignment, without having to wait for the grade. Rubrics can be highly personal. If you have unusual demands, a rubric is critical in helping your students understand what you want them to do.

Your criteria (the first column on the left) should indicate your priorities and weights. If a creative thesis is more important than a bibliography, then it should be worth more points. If you do not care about voice, eliminate it from the rubric. Across the top are the standards for each criterion: these could be A, B, C, D, and F, descriptive levels, or percentages. Start by writing standards for the highest level of performance and keep them high to provide clarity and give students a target.

Checklists

Another common mystery in academics is how to accomplish a basic task. As faculty, we figured out that more research led to better papers and that we needed to start with reading and a trip to the library. That is hardly obvious, especially in the Internet age. A checklist is a narrative description of the process for producing good work, and it can help your students know the steps you anticipate.

While you should acknowledge different preferences in work styles, we know now that there are “fundamental problems with regard to both the diagnosis of learning styles and the alignment of instruction to these styles” (Kirschner & Merriënboer, 2013, p. 173). For instance, learning the piano is a kinesthetic process and can’t be done through just listening, reading, or watching, regardless of one’s purported learning style. We now know that there isn’t evidence that supports using learning styles conceptions in any way in instruction (Pasher, McDaniel, Rohrer, & Bjork, 2008), and we can jettison that idea in favor of evidence-based practices. We now

know that most learning is about putting in the work; it's about cognitive processing. Many first-year and first-generation students simply don't know which work will be most useful or in what sequence to do it, and that's why providing a checklist that offers an order of progressions for students can have a strong impact.

Advance Organizers

Similar to checklists, advance organizers can help students figure out how to be successful as they work through a module, class, or assignment by allowing them to see what is most important and how things relate to one another. This isn't a new notion. Ausubel (1968) recommended using advance organizers to bridge the gap between what our students already know and what they need to know to be ready to complete a task. They provide students with advance warning of the content that is to come, which enables them to begin to make connections between what they already know and the new information you are providing for them. They facilitate the construction and expansion of mental models and are an excellent first step as you begin to introduce new ideas to students.

An advance organizer can be as simple as providing students with that day's learning outcomes at the start of class or an outline that shows the order in which topics will be explored over the next hour or week, for example. A rubric can also function as an organizer for students. A more elaborate advance organizer might be a visual or graphic that shows how concepts are related to one another, evoking what students already know and connecting those ideas to what is to come. This would be provided at the start of instruction and referenced often to make explicit the relationship of ideas. Yet another advance organizer strategy would be in the form of guidance for students. For example, suggesting that they skim a chapter, or at least look at the section headings, before they read can help them begin to organize new material and make connections to what they already know prior to jumping into the content.

Common Language

Another academic practice faculty take for granted is terminology. We know that while we like to talk about critical thinking, Professor Jones prefers the phrase *mindful learning* and Professor Smith says *discernment and analysis*. We know that these are related concepts. In fact, we are so used to these concepts that we often forget to label them at all. Using labels helps students to clarify that this week's paper, class discussion, problem set, or group activity involves an important and transferable skill called

critical thinking (or whatever common term your department or college chose to use).

Students are not as good at connecting concepts from week to week, or course to course, as we think they are. Using consistent labels and being clear about how they are related to the larger learning goals is another form of transparency that will disproportionately support first-generation and other underrepresented students (Winkelmes, 2013).

This is the most basic preliminary work you should do before designing a course. There are obviously longer and better resources available for each of these topics (see the References at the end of the chapter), but we have included this brief introduction here because even a little bit of advance work will greatly enhance your design process. Both you and your students are more likely to hit the target if you articulate where you want them to aim.

Step-by-Step Guide

Step 1: Clarify for Yourself What You Want Students to Learn

What are the most important things you want students to be able to do in five years? Know that students often remember nothing about a class after five years, so this is a not a trivial exercise.

Step 2: Write Learning Goals for Your Students

Use Bloom's or Fink's taxonomy to write course learning goals and test them with students for clarity:

Remembering (know, define, repeat, describe, identify, recall, list, tell, locate match)

Understanding (comprehend, classify, convert, explain, summarize, predict, discuss, compare)

Applying (demonstrate, modify, arrange, solve, relate, apply, examine, classify, illustrate)

Analyzing (infer, estimate, order, separate, subdivide, distinguish, contrast, categorize)

Evaluating (critique, justify, discriminate, support, conclude, judge, verify, assess, argue)

Creating (synthesize, design, formulate, revise, construct, compose, invent, imagine, propose) (Bloom, 1956)

Consider these examples:

Example 1: Students will learn about the importance of scientific, social, artistic, or political innovations or discoveries.

In this course/major, students will learn to:

- List important discoveries from the past
- Explain the basic disciplinary concepts underlying each discovery
- Apply the concepts of the discipline to classify discoveries
- Analyze novel aspects of each discovery
- Evaluate which current discoveries will have the greatest impact
- Design a strategy to address an important unanswered question in the field

Example 2: Students will learn about musical styles and historical periods.

In this course/major, students will learn to:

- Define the different conventions operating in each style or period
- Compare examples of each style or period
- Classify key practitioners using examples
- Infer the style of unknown practitioners using typical characteristics
- Judge if the most typical exemplar is the most interesting
- Construct an argument as to how and why certain thinkers, artists, or authors cross boundaries

Example 3: Students will learn about entrepreneurship.

In this course, students will learn to:

- Identify reasons to start a new business
- Understand the elements of and rationale for a business plan
- Critique successful and failed business plans
- Create a business plan for a new venture

Example 4: Students will learn about creative autobiographical writing as a journey of self-discovery.

In this course, students will learn to:

- Define their own reasons for writing
- Discuss writing that inspires them
- Demonstrate the ability to communicate what most matters to them

- Judge the best ways to improve their own writing
- Revise their own writing

Step 3: Create Rubrics

Create a rubric for each goal that will provide students with a model and give you a fair and quick way to provide feedback. You can modify rubrics later for individual assignments, but making sure you can identify the goals and how you will recognize them is a good first step.

Step 4: Consider a Checklist for an Assignment

A checklist is a good complement to a rubric. It is a list of steps that you recommend students follow to do good work. Another option is to ask students to create their own checklist and revise it as they work through several sets of similar assignments.

Example: Checklist for a Problem Set

1. Reread the learning outcome for this unit [or problem set].
2. Read [or view] the content explanation.
3. Summarize the key technique or concept in your own words at the top of your paper.
4. Complete all of the problems where you feel confident. *Skip the problems that have you stumped after 5 minutes.*
5. Get together with a friend [perhaps assigned] in the class and compare your summaries of the concept and which problems you thought were easy. [This might also be managed in a virtual community; see Chapter 10.]
6. Investigate any discrepancies in your answers. Note this is a fundamental tenet and process of the scientific method: peer review. If you correct a mistake, that is fine; just make a note of this in the margin.
7. See if you can manage one of the difficult problems together.
8. Note your collaboration and what stumped you about any problems you could not complete.

Step 5: Consider an Advance Organizer for Class

Provide the learning goals to your students at the beginning of each class as a standard part of your practice. Begin your lesson by briefly discussing the learning goals and explaining how they fit together. For complex ideas, consider building a visual to show the relationships among the

various components. Depending on your topic, Venn diagrams may be an easy way to show relationships, but you may also want to consider something more elaborate, like a concept map (see Chapter 6).

Examples

In each chapter of this book, we present specific examples of how these best practices have been modified and applied in various fields in a range of courses at different types of higher education institutions.

Goal Sheets

Sarah Leupen, University of Maryland Baltimore County

To clarify goals, Sarah provides what she calls “goal sheets” based on chapter and course goals. Students are given these documents, and they guide the instruction in the course and student work as they progress through the course. She notes that some of these goals are quite difficult; however, her students “perform well since they know what they are expected to do.”

Course Goals as an Organizational Structure

Anthony Smith, Indiana University South Bend; Jeffery Schwehm, Concordia University

Some faculty include students in the process of goal setting, which can have the additional benefit of increasing student motivation and engagement, as well as ensuring greater clarity regarding the goals (Hugg & Wurdinger, 2007). Others deeply integrate goals into the instructional activities of the course to ensure that the students always have an eye toward the purpose of various course activities. Anthony uses course goals as an organizational structure for his course. He revisits the goals throughout class by referencing them as he provides examples and the students work through his course’s framework. Jeffery ensures his students clearly understand the goals by quizzing them prior to his chemistry activities. Students must make connections between the goals and the purpose of the upcoming activity.

Reinforcing Learning Outcomes

Peter Scott Brown, University of North Florida

Similar to goals, well-crafted learning outcomes that use structures and formats provided by Fink and Bloom can ensure that students know what they are supposed to learn before, during, and after learning events. Peter explicitly states these in his syllabus, during class, and during interactions with students outside class. Such approaches ensure instructional alignment between the outcomes and what takes place during instruction, and students benefit throughout such an approach because they are continually refocused to what is important.

Progressive Learning Outcomes

Chris Mortensen, University of Florida

The creative use of learning outcomes can be used to assist students as they move to more complex cognitive skills, as described by Bloom's taxonomy. Chris implements active learning approaches toward specific learning objectives. These activities are first designed to ensure that students master foundational information before they move to evaluating information and then applying it in new, real-world contexts.

Sequencing Learning Outcomes with Activities

Oana Godeanu-Kenworthy, Miami University; Joe Reinsel, University of Michigan–Flint

Oana, in her course entitled America: Global and Intercultural Perspectives, sequences learning activities with the goal of increasingly moving students to higher-order learning outcomes. A series of brief, lower-level assignments are used as precursors to formal and informal writing assignments. These writing assignments are tailored to target midlevel Blooms outcomes as students journey toward a final project that brings them to acts of evaluating and creating.

As suggested here, final projects are often an exceptional approach for pursuing higher-order learning outcomes. Joe, in his Games and Virtual Art course, specifically focuses on Bloom's "creating" and Fink's "learning how to learn," with the course target being the final project. Students research and create a number of gaming structures and mock-ups as they progress in their collective development of a working prototype of a game that is then played by the class at the end of the semester. Notions of higher-order learning influence course structure and mirror what the professor hopes students can do at the end of the course.

Rubrics

Gina Riggio, Delaware Technical Community College

Best practices in rubric implementation abound across higher education, and one such practice is to provide students with the rubric you will be using to grade assignments. Gina does just that. She provides an empty rubric and then shows the students how she fills it in, section by section, so that they know how she calculates grades. Grading becomes far less subjective, and transparency in grading enables students to know how they can earn an A.

Students Using Rubrics

Tawnya Means, University of Florida

In her Business Telecommunications course, Tawnya has her students complete grading rubrics for their projects prior to turning them in as a required component of assignment submission. This provides students with an opportunity to be reflective regarding their work and to make revisions based on true project expectations prior to submission. This also reduces surprises that might result when students receive their graded work.

Common Language

Todd Pourciau, Baton Rouge Community College

Repetition is an excellent strategy for incorporating terminology and establishing a common language in a course, and a challenge is often how to incorporate notions of repetition in meaningful ways. Todd ties core concepts and language from his learning outcomes to the topics of career searches and future job advancement. Video projects are a component of his College Success courses, and students must write scripts and record projects that incorporate key vocabulary while also improving their critical thinking and communication skills. Through this approach, students not only come to understand key vocabulary; they also are able to apply it in appropriate situations and contexts. This ensures that true assimilation of this language has occurred in his courses.

Key Concepts

- Make learning goals transparent to students. This improves their learning and benefits first-generation and underrepresented students in significant ways. Openly share the “why” of everything you do with your students.
- Incorporate Bloom’s and Fink’s approaches to ensure that your course has progressive or integrative learning outcomes.
- Use Bloom and Fink to clarify your cognitive and noncognitive goals. This explanation will provide greater clarity to students regarding where to focus their energies and time.
- Create rubrics as you develop assignments to help articulate your expectations. Specify both criteria and standards.
- Give grading rubrics to your students in advance as you provide and discuss assignments.
- Try a checklist that details your suggested process for completing an assignment as a complement to your rubric (which focuses on the outcome).
- Use consistent language, and be clear about how these terms relate to learning outcomes. This form of transparency will foster student assimilation of foundational language within a course.

Further Resources

Association of American Colleges and Universities. (2009). *VALUE rubrics*. Retrieved from <https://www.aacu.org/value>

VALUE (Valid Assessment of Learning in Undergraduate Education) is a campus-based assessment initiative sponsored by the Association of American Colleges and Universities as part of its Liberal Education and America's Promise initiative. These rubrics are freely available to help campuses guide and assess student work in a variety of areas.



Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers* (2nd ed.). San Francisco, CA: Jossey-Bass.

This book provides a range of practical resources for those looking for new ideas regarding classroom assessment. It also provides a number of detailed case studies that make explicit how classroom assessment should work in a range of classroom settings.



Center for Excellence in Learning and Teaching. (2011). *A model of learning objectives*. Iowa State University. Retrieved from <http://www.celt.iastate.edu/teaching/effective-teaching-practices/revised-blooms-taxonomy>

Even if you are already very familiar with Bloom's taxonomy, you will find this interactive, three-dimensional tool and associated extra materials enlightening. The overlay of the "knowledge dimension" will be a new way to consider Bloom's for many.



Eberly Center for Teaching Excellence and Educational Innovation. (2016). *Grading and performance rubrics*. Retrieved from <https://www.cmu.edu/teaching/designteach/teach/rubrics.html>

This Carnegie Mellon site provides a number of robust sample rubrics for a range of assignment types. They are downloadable in the .doc format, which means that you can edit and adjust them to fit the scoring needs of your assignments.



Gustafson, K. L., & Branch, R. M. (2002). *Survey of instructional design models* (4th ed.). Syracuse, NY: ERIC Clearinghouse on Information and Technology. Retrieved from <http://files.eric.ed.gov/fulltext/ED477517.pdf>

There are more ways to approach instructional design than just the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model, and this book, freely available online as a PDF, provides a number of ways to approach the design process.



Kheiry, M., & Tarr, T. (2014). *Writing student learning outcomes*. Indianapolis, IN: IUPUI Center for Teaching and Learning. Retrieved from <http://ctl.iupui.edu/Resources/Planning-the-Learning-Experience/Writing-Student-Learning-Outcomes>

This brief site walks you through the process of writing student learning outcomes and shares a number of examples of these from a range of disciplines. It also provides a list of action verbs that will help guide you in writing outcomes that are both observable and measurable.

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