

# A Primer on Writing Effective Learning-Centered Course Goals

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## A Shift from a Topic-Centered to a Learning-Centered Course Design

*“Teaching and learning may be intimately connected, but, as any student knows, they are not the same. Faculty members at all levels methodically identify what should be taught, but spend less time finding out what students actually learned. With learning as the center, what students learn is of primary importance. Knowledge of how learning occurs is a resource to make it happen.” ~ AAC&U’s (2002, p. 29)*

One common way to design courses is to use what Fink (2003) calls a “list of topics” approach. That is, when putting a course together, faculty members consult the content of their discipline, and then outline a list of topics that they will cover in the course. After spreading those topics over the semester, they complete the course design by fitting in a midterm, written assignments, and a final exam, perhaps based on what has been done in the course in previous semesters. This very common approach to course design is relatively simple, and it is probably familiar to all of us.

Unfortunately, the “list of topics” approach is not really the best way to design an effective course. The primary reason is that, while this approach highlights the organization of course material, it doesn’t focus our attention at all on the nature or quality of student learning. Just because a faculty member “covers” a list of topics in class does not mean that students have learned. And, even if students do learn the list of topics, their learning may not be the kind that we ultimately consider to be most crucial to their development. For instance, it is difficult to see how important institutional outcomes (e.g., critical thinking, teamwork, respect for human dignity, etc.) will emerge from a course that does nothing more than cover a list of disciplinary topics.

As a result, the Academy has made a shift away from the topic-centered model to a *learning*-centered model of course design. In this model, we design courses backwards (Wiggins, 1998), starting with what we want students to learn as a result of being in our course. Course directors may ask themselves, “How will students be different a year from now as a result of taking this course?” The answer to this question serves as the basis for the course learning goals.

## A Metaphor for Course Design

Designing a course is similar to working as an architect – your job is to develop a comprehensive plan for the course, ensuring that it is “built” to appropriate specifications. The task is a challenging one, as it lays out the overall strategy for how a course is built. As a

result, effective course design – starting with effective learning goals – is critical to the creation of a successful course. We've written this primer to help you get off on the right foot by writing effective course goals.

If the course designer is like an architect, then course goals are like the blueprint. They ***articulate the knowledge, skills, or responsibilities that you want your students to have, as a result of taking your course.*** As simple as this idea sounds, it is worth noting that your course goals will serve as the driver for many other things in your course. For example, your choice of classroom activities, assignments, and in-class graded events will ultimately be driven by the learning goals you establish.

The learning in your course is like the building. Buildings are designed to endure. No one would commission a design for a building that would fall down a month or two after being built. Similarly, the learning in our courses is also meant to endure. Therefore, in creating learning goals, we encourage you to consider what learning will endure – how will students think, act, or feel differently months or years after your course is over? Notice that learning goals, as described here, are different than learning objectives. Goals tend to be broad and enduring, while objectives tend to be more specific, often dealing with fundamental knowledge. Objectives are necessary parts of course design, as students need to acquire some fundamental knowledge to meet higher-order goals. However, a long list of specific objectives, by itself, is not enough (Nilson, 1998). Cognitive science research (e.g., National Research Council, 2000) is clear that mere acquisition of knowledge doesn't necessarily lead to successful transfer to new situations – like those situations our students will face after graduation. Therefore, objectives are more like scaffolding – critical to the construction of the building, but not the same thing as the building.

### Characteristics of Effective Course Goals

Effective course goals...

**1. Describe What Students Will Learn and Be Able To Do** – Because the focus is on student learning, course goals are written in terms of what students will have learned and be able to do at the end of the course.

- *Poor example:* "This course will introduce students to fundamental theories in social psychology." – This statement describes what your course will do, but says nothing about what students will learn as a result of taking the course.
- *Poor example:* "Students will learn the basic theories of social psychology." – While this statement focuses on learning, it doesn't say anything about what students will know or be able to do at the end of the course.
- *Better Example:* "Students will be able to apply fundamental theories in social psychology to real-world situations."

Tip for Course Directors: Remember to ask yourself "How will students be different a year from now as a result of taking this course? What will they know

and be able to do a year from now that they don't right now?" Asking these questions focuses your attention on the quality of student learning.

**2. Are Actionable, Visible, & Measurable** – Goals state what students do to demonstrate their learning. Each goal statement should include an action verb. The goal uses an action verb to describe what the learner will be *doing* when demonstrating the achievement of the goal. The action verb clearly signals your expectations to students and allows them to practice.

- *Poor Example:* "Students will be able to discuss whether an anatomical structure is an organ." – What exactly will students need to do? In this example, does "discuss" mean "memorize a list of criteria" or does it mean "use a list of criteria to determine?"
- *Better Example:* "Students will be able to use a list of criteria to determine whether an anatomical structure is an organ."

Tip for Course Directors: Avoid using verbs that are vague and unfocused. Examples include "to know," "to understand," and "to discuss." These verbs may be good starting points, but they don't provide sufficient direction for you or your students. As you consider the appropriate action verbs, think about what you really want students to do in order to demonstrate their learning. This will form the basis of the assessments in your course.

**3. Are Clear & Understandable To Students, As Well As Instructors** – Goals should be phrased in fairly simple terms so that they are clear to both students and instructors. Clear goals make it easier for everyone to stay focused on the desired end points of course activities. They also make it easier for students to monitor their own accomplishment of the goals as they progress through the course.

- *Poor Example:* "Students will develop a deeper, more integrated understanding of biological concepts, with a focus on the human system that will enable them to connect life experiences and activities to their underlying structures and genetic and/or physiological mechanisms."
- *Better Example:* "Students will apply biological concepts to human real life scenarios."

Tip for Course Directors: Share your course goals with colleagues, both inside and outside your department. Statements that make perfect sense to you may not be as crystal clear to people who lack your background knowledge and experience.

**4. Have an Appropriate Level of Generality** – One of the most difficult tasks in writing a course goal is selecting the *appropriate level of generality*. The level of generality is indicated by the verb that starts the statement.

- *Too General:* "Students will be able to communicate effectively in Portuguese" - This statement is too general for a course goal because "communication" involves speaking, listening, writing, and reading. Each of these areas of communication could be a course

goal by itself.

- *Too Specific:* "Students will punctuate sentences properly." – This statement is too specific for a course goal and is better suited for a unit goal or a unit objective. It would support the more general goal of clear and effective writing.
- *A More Appropriate Level:* "Students will write clear, effective Portuguese."

Tip for Course Directors: Write your goals to be specific enough to provide direction for instruction and assessment without listing all of the component behaviors.

**5. Require High Levels of Thinking and Learning** – Good course goals are generally at the higher levels of learning. This does not mean that fundamental knowledge or skills are unimportant. Indeed, your high-level goals are likely to be supported by lower-level course objectives. However, course goals are more than just a collection of low-level objectives.

- *Poor Example:* "Students will list the causes of the American Civil War." This represents a lower-level objective, i.e., "Foundational Knowledge" in Fink's taxonomy of significant learning. This is probably not appropriate as a course-level goal.
- *Better Example:* "Students will analyze the causes of the American Civil War."

Tip for Course Directors: Look for verbs at the higher levels of Fink's Taxonomy. Refer to the diagram below and focus on verbs or phrases that represent more ambitious learning goals. Choose these words carefully, as your choice will ultimately determine the kinds of learning experiences and assessments you will use in your class. "My hope is that, by the end of this course, students will be able to..." (Complete this sentence with one of the following verbs.)

Foundational Knowledge	Application	Integration	Human Dimensions	Caring	Learning How to Learn
Remember	Use	Connect	Come to see themselves as...	Get excited about...	Create a plan for future learning about...
Understand	Critique	Identify the interaction between...	Decide to become...	Be ready to...	Identify important sources of information
Identify	Manage	Identify the similarities between...	Interact with others regarding...	Be more interested in...	Formulate useful questions about...
List	Solve	Relate	Understand others in terms of...	Value...	
	Assess	Compare	Be able to work in teams on...		
	Judge	Integrate			
	Imagine				
	Analyze				
	Calculate				
	Create				
	Coordinate				
	Solve problems				
	Make decisions				

**6. Are Developmentally Appropriate** – Course goals should be challenging, yet achievable, for an undergraduate at USAFA. If goals are too challenging, students will likely become frustrated at their inability to accomplish them. If goals are too easy, they are likely to become bored.

- *Perhaps Too Challenging:* "Students will write a review paper based on the reading of at least 20 papers from political science journals." -- Without a lot of support, this may be a goal that students would have trouble meeting. Are your students ready to tackle the complex synthesis that this goal would require?
- *Perhaps Too Easy:* "Students will identify the different parts of a political science journal article." -- This may be something that we want our students to be able to do, but is it too simple to build a course around?
- *Perhaps More Appropriate:* "Students will interpret concepts from an article in *Foreign Policy Journal*."

Tip for Course Directors: Find out what you can about the abilities of students entering your class so that you have a good idea of what they're capable of doing. One of the best ways to do this is to speak with people who have taught the course before and/or people who have taught the same students in earlier courses.

**7. Lead to Authentic / Motivating Tasks** – Authentic tasks are those in which students face challenges similar to those faced by professionals in the field. Students find authentic tasks highly motivating, as it is easy to see the relevance of completing them. As a result, they are more likely to perform their best work. Obviously, we wouldn't expect the work of beginning students to be as good as the work of professionals; nonetheless, the authentic task will likely elicit the students' very best efforts.

- *Poor Example:* "Students will list the symptoms associated with various diseases." – This is something that a professional would be able to do, but it isn't what they generally do as part of their professional life.
- *Better Example:* "Given a disease scenario, students will be able to identify the source of the disease and prescribe a treatment."

Tip for Course Directors: Ask yourself, "What is it that professionals in my field do?" How could you build elements of those tasks into your course?

## Frequently Asked Questions

***Writing course goals that have all of these characteristics seems like a lot of work. Why should I bother?***

Writing effective course goals is indeed challenging, and some faculty may see this as a new (and different) way to approach course design. However, writing clear course goals is definitely worth the time and effort. The writing of effective course goals is the first step in creating an aligned, integrated course. The goals will drive what you do in class, how you assess your students, and how you define the success of your course. For example, if one of your course goals is for students to evaluate scientific articles that appear in the mass media, then how would you spend class time? Probably giving students practice in evaluating scientific articles and giving them feedback on their performance. What would your tests look like? They would probably include a scientific article for students to evaluate. How would you know if your course was successful? Probably based on whether or not students met the learning goal – that is, whether they could successfully evaluate scientific articles that appear in the mass media.

***Should I plan on assessing my course goals?***

Yes, all goals should be assessed in your course. If something is important enough for you to consider it a course goal, then it is important enough to assess. (Said another way, if you are unwilling to assess the accomplishment of your course goal as part of your class, maybe it isn't really important enough to you to rise to the level of a course goal.)

***Approximately how many course goals do I write?***

It depends on the nature of the discipline and the course you design. Remember that course-level goals generally cut across most, if not the entire course content. Too few goals and you risk being too general and uninformative; too many goals and you risk being too focused on specific content. As a general rule of thumb, we have seen the number vary from three solid all encompassing goals all the way up to seven or eight.

***Do I share the goals with students?***

Definitely! One of the key characteristics of a goal is that students clearly understand what their learning looks like. Share your goals, model high levels of performance, and then assess student performance and give feedback.

***If I share goals with my students, am I "giving away the store?"***

No. If you have appropriate goals and assessments in your course, then this isn't a problem. In fact, if you've written appropriate goals and assessments, teaching *to the test* is exactly what you would want to do; it means that you've aligned your instruction to the other components of the course. If, on the other hand, the course goals or assessments are written at too low of a level, look for instructors to get into trouble by teaching *the test* through a wink, a nod, or a foot stomp. In those cases, you may have effectively turned the course into a game of pattern recognition, where students need to do nothing more than memorize low-level knowledge.

***Should I show students what it looks like to accomplish the goal?***

Definitely! Students are more likely to rise to the level of your standards if they know what those standards are and how they are supposed to meet them. We encourage you to model the kind of thinking you want your students to engage in. Then, have students practice the

same kind of thinking, demonstrate what they can do, and receive feedback on what they've done. That is the essence of the learning focus.

***Can I change my course goals?***

Yes. Course goals are likely to evolve over time. Three main factors are likely to drive revision of course goals.

- How well the goal functions in the course – how well does it work? Do students understand it? If the goal centers too much on content or is too restrictive, then it may change more frequently. On the other hand, if the goal is too general, it fails to inform and will need to be tightened up.
- Feedback from assessments – how well are students meeting the goal? For example, if the performance of students indicates that the goal is too challenging, then it will likely need to be revised.
- The thinking of the course designer – as the course designer reflects on what kinds of learning matters most, the goals may be revised, deleted, or new ones added.

***By writing course goals, am I being too restrictive, inhibiting my creativity and the creativity of my instructors?***

No. Goals provide a shared vision of what you and your instructors want students to learn in your course. However, goals don't say anything about the best way to accomplish them. You and your instructors still have enormous flexibility in selecting course materials (e.g., articles, books, scenarios, and problems) and designing classroom experiences (e.g., lectures, discussions, labs, etc.). In fact, by clearly identifying the goals of the course, you will be well-positioned to explore how changes in course materials or classroom experiences impact student accomplishment of the goals. This will allow you to take a more scholarly approach to your teaching.

## References / Resources

- Association of American Colleges and Universities. (2002). Greater expectations: A new vision for learning as a nation goes to college. Washington, DC: AAC&U.
- Dick, W., Carey, L., & Carey, J. (2005). The systematic design of instruction (6<sup>th</sup> ed.). Boston, MA: Pearson.
- Fink, L.D. (2003). Creating significant learning experiences: An integrated approach to designing college courses. San Francisco, CA: Jossey-Bass.
- National Research Council. (2000). How people learn: Brain, mind, experience, and school. Washington, DC: National Academy Press.
- Nilson, L.B. (1998). Teaching at its best: A research-based resource for college instructors. Boston, MA: Anker Publishing.
- Walvoord, B.E., & Anderson, V.J. (1998). Effective grading: A tool for learning and assessment. San Francisco, CA: Jossey-Bass.
- Wiggins, G. (1998). Educative assessment: Designing assessments to inform and improve student performance. San Francisco, CA: Jossey-Bass.