



HARVARD

THE DEREK BOK CENTER FOR
TEACHING AND LEARNING

HIGHER EDUCATION TEACHING CERTIFICATE

ONLINE SHORT COURSE

MODULE 6 UNIT 1

Video 1 Transcript

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ROB LUE: Hello, again. So, I'm back to actually share with you something that I find is an indispensable tool, for when I design any course. It's what we refer to as backward design. So, once again, I have to reveal from my dark past things which I did. The very first time I taught an introductory biology course, I was obsessed with the book. So, I started with the book, and I started with the syllabus and, believe it or not, the last thing that I did was develop the activities and assignments for my students.

Now, I have to admit, I was very young. I was frantic. I was setting up my lab. There were a lot of things going on. So, this, however, is not an atypical kind of situation. It's incredibly stressful. And what you will often see from that is what I shared with you earlier in the course – that experience of being very clear in what you're delivering, testing your students. And they do really badly because, in fact, they were completely out of alignment in terms of what I thought they were learning and what I provided them as the means for learning.

So, backward design begins with the fundamental question, "What do you want your students to learn?" You can think about this very generally in terms of overarching goals for your course. You can also think about it very specifically in terms of objectives for a given lecture, classroom session, kind of activity, or even a question on an individual assignment. And I would really recommend that you think about these goals or these objectives at every level of your course.

So, let me give you another example. For me one of my priorities with all of my courses in biology is that students should leave my courses with a fundamental understanding of the scientific process: how to recognize appropriate scientific process from a weak or misguided sort of process, and how to design experiments that are really rigorously based on quality scientific process.

What I realized the first time I applied backward design to one of my courses is that when I looked at all of my assignments, when I looked at what I shared with students, I realized that I barely touched on scientific process – much less gave them the opportunity to practice their own creation and design of a particular scientific process.

So, at the very large level, the meta level, the goals for your course, I would really recommend that you think about two, three, or four very broad goals – those really critical things that you want students to do.

I was speaking with a colleague that's an art historian. She wants students to be able to look at a work of art deeply, slowly, and to connect it with every possible resource or every possible idea that they might have encountered before. So, she now builds assignments that allows them to practice that. That's a very big goal of her course, and so that threads and comes back again and again in her course.

So, really to begin with, I would lay out what are those big goals that, if you have a student that leaves your course having met those goals, you'll feel good about it. And then, from those broad goals, you can start to unpack smaller objectives.

So, I just mentioned one of my big goals is that deep engagement with the scientific process. Smaller objectives might be things that focus on how do you design an experiment. How do you build a hypothesis? How do you create a cycle where, based on experimental data, you revise your hypothesis?

You can think about applying sort of a Bloom's Taxonomy approach where there might be cases in which you test for students' understanding the ideas of the scientific process, but then, as you go up the taxonomy, you allow them to in fact apply their understanding to designing or even evaluating what someone else has done.

So, once again, you can have very specific objectives, specific action verbs, tied to a taxonomy of cognitive gain, as we talked about earlier in the course, but also connected with your very broad goals and your more-specific objectives for a lecture, for an assignment, for an individual question. And what this does, really, is give you a framework that allows you to look at your course and see everything is properly aligned. Now, this sounds great, but how do you achieve this from a design perspective? That's where backward design comes into play.

So, you begin with your goals and with your objectives, and you use Bloom's Taxonomy to start to surface those particular verbs, those actions, those activities that are associated with a particular goal or objective that you might have. So, what you would do is begin with your goals and objectives, arrange them in a sequence that makes sense for you. So, once you have established a sequence, then you start to build your assignments.

So, you have a particular goal, you have particular smaller objectives. What kind of assignment aligns with that? Is it a set of questions on a problem set? Is it a prompt for a paper? Is it a kind of activity, for example, in a lab or in a museum or in an art gallery? Where do those things align really well? And, once you have that, what you have created is, in fact, a very different framework in time from the traditional framework that I fell victim to the first time I taught. So, that, ultimately, your syllabus comes at the end of the process, as opposed to at the beginning of the process.

What is the sequence of things that students will be encountering? What is the intention in terms of the learning goals, the learning objectives, that those students will achieve? And what is the particular sequence that they will experience these things in the context of the course itself?

ADAM BEAVER: If you would like to revisit any of the content covered in this video, please select the appropriate topic on the screen.