In the Classroom 69

Course Goals, Outcomes, and Objectives: Keys to an Exceptional Course

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Speaker: Well, thanks ever so much for taking time to listening to this podcast. It certainly means a lot. I know you could be doing other things, listening to many other podcasts, but you're taking time to listen to this one, and I really appreciate it.

This week, we are going to take a look at course goals, outcomes, and objectives, not necessarily in that order. Why? Well, all good courses start with a plan, and all good plans start with goals and have intended outcome. Yet, a lot of courses only pay lip service to these goals, that they'll get them done because that's what administration wants, but not necessarily making them really work for the court, and a lot more can be done with it.

That's why I want to take a little more time to talk about it because it's the key to backward design. This is the first place you start. I talked about backward design in Episode 41, but this is where it starts. Think of going on a vacation. You can take time off, or you can go on a vacation. The difference is, is one has more of a plan. If you are taking a trip or a vacation, you have a specific destination you're going to with specific activities that you're involved in, you want something specific to happen. The better you plan the trip, the better the experience is going to be.

Well, courses are similar. With the course, the more intentional the plan is, the better the experience, and goals, objectives, and outcomes are the foundation of this plan. The better you craft them, the better the course will be, if you adhere to them. I mean, you can write them down and not use them. Well, that's the same as not writing them down. If you write them down and actually use them, you can develop extremely well-designed courses. They pretty much define what's going to occur in the course, and more importantly, what's not going to be covered.

Why do I say more importantly? Because I've seen a lot of courses where the instructor just keeps globbing on things only because, well, I think they need to know this, had the instructor set a plan together at the beginning, and really identified the goals and the objectives and the outcomes, they wouldn't add all that extra stuff. It's frustrating to the students. It comes across that the course is not designed well, and you certainly don't want that to happen.

Thinking about back to our trip, and this example of being intentional is, if you want to see the Pacific Coast, then you shouldn't be generally learning about the history of Atlanta. I say generally because maybe there's a connection, but I just don't see it right away. In a 2015 survey, Eduventures surveyed 2,800 students. 70% of high

performing students said clear goals and objectives were important to their success. It helped them stay on track, it helped them achieve the goals of the course. They're important.

Let's start with a couple of, not necessarily definitions, but getting us in the right ballpark. What are goals, outcomes, and objectives? Actually, I want to just put that in the right order, goals, objectives, and outcomes, because goals define what you want to happen, and outcomes define what they have learned and how well. Goals are, what you're intending to do, and outcomes are what you did and how well you did it. They're very broad aspects of behavior. You just get them into the right ballpark. A lot of times, these goals that have very overarching definitions, such as appreciate and understand, it's almost impossible to measure understanding, and hard to measure appreciation. This is, overall, what we want folks to do. Overall, we're looking for that great experience and art appreciation, I want them in the end to appreciate art. When we get into objectives, there's specific things we want them to be able to do. The learning goals is, I want them to have an understanding of the biological life cycle. Well, there's a lot to that. At least we know we're talking about biology in a biology course, and we're not weaving computer science into it. I mean, it may be for a biotechnical course that may be appropriate.

For a general intro to biology course, we're probably just sticking to understanding the life cycle and things that are associated with that. At the end of the day, at the end of your course, if students have an increased understanding and appreciation of the topic, then you have met your overall goal. Now, there may be specific outcomes that you want, and those are more measurable, that you want them to be able to draw a lifecycle for a specific plant, or a lifecycle for a specific mammal, that would come into play. Certainly, those are outcomes that you would desire.

Now, take these goals and outcomes, and we go one layer deeper. This is where we're focusing on learning objectives. Objectives are more specific than learning goals and outcome. Basically, these operationalize the learning goals, the course goals, this is what operationalizes. This is what helps you decide what your assessment is going to look like, and what activities that students are going to participate in. This is really the essence of your course, is these learning objectives. They are behavioral nature, and they're written from a student's perspective. A student will list the five elements of networking, I'm making that up. That is very specific list.

There's one way to demonstrate that list. When they list, they can do it verbally, they can list it, they can write it down, they can create a PowerPoint to list it. I mean, they could do a lot of different ways of listing. Really, in order to measure this, you're looking for a list of some sort. Objectives, they're measurable, they, in the end, demonstrate what a student knows or can do. That is their whole purpose in life, is, that's when an objective is, is you want them to be able to demonstrate something, or demonstrate their knowledge. That's why they're great for defining your assessments.

When you write a learning objective, it typically starts with an action verb to outline the behavior, and then it can be made more specific with a standard and conditions. You want it done at a certain percentile, you want it done at a certain speed, you want it done to a certain measurement. The conditions are what you allow or deny for that behavior, that they can do it with open notes or without notes.

A good objective has a behavior, a standard, and a condition, a really well defined. You can play with that a little bit, you can decide not to use elements of that, and that's okay. A really exact learning objective has those three elements. These objectives outline what a student needs to do, what they need to practice, as well as how they will be assessed. That objective should tell them everything, how they need to prepare and how they are going to be assessed. This is where I see a lot of interesting conversations happening on campus, that we're talking about students and cheating.

My mind is, if you wrote your learning objectives correctly, and you built your assessments off the learning objectives, you've already given the test to the students. All you're doing is verifying that they can, in fact, do those things. Yet, we're caught up on something different. I see this because I've been in countless classes, classes that have had exams and wondering where did this come from. It wasn't part of any objective that I've read. I wonder where certain test questions came from. They were not following this idea that objectives lead the test question. Just a little side note there.

If we take like a learning goal, analyze network performance and problems, that's a big broad goal that they are going to analyze network performance and problem. That's a little broad for a learning objective. A learning objective, we can take that broad goal, narrow it down a little further, and we can say something like test the network speed between two Windows servers using the iPerf utility. That becomes very specific. That is the behavior we want to see, that we want a student to test the network speed between two Windows servers using the iPerf utility. That is one way of testing or analyzing network performance and problem. It becomes very specific.

When I was in the Air Force, we explicitly used learning objectives to design our quality control evaluations. It provided the material for the airman to use to practice their evaluations. When they sat down to take their evaluation, we had test generators that would generate from the test that the airman had in their possession, and it would build a test from that. That's what they use to evaluate it. There was no mystery in this. It was, in essence, open book to the time you stepped into the test, and then it was closed book. The students had access to the test well ahead of time because the tests were so comprehensive, they covered everything, and it's just the way that we wrote the objectives, and so the evaluators and the testers use the same material. It was one and the same. That's why I'm a huge fan of these master test banks. Using these evaluations, because if you write the questions and write enough questions that touch on all the objectives that you want to see, this will help students prepare for the content that you have.

Things to consider when developing goals, objectives, and outcomes. When you first start, start at the very highest level, and when I say highest level, what is the lifetime information you want students to know when they complete your course? This is those five years after they left your course. What do you still want them to remember? Write those things down first, and this is tied to this easel lens that I talked about in episode 65. This is that lifetime knowledge and behavior. What do you want them to know five years from now? Now, there's a very humorous YouTube video out there, *Guido Sarducci and the five-minute university*. The idea of the five-minute university is to teach you the things that you would know or remember five years after you've graduated from a major university. A little humor, but there's a lot to it. Are we making sure that they know really the essence of what you want them to know? Start at this very high level. What are those things, those lifetime things that you want them to know?

Then move down to the next level, a little lower. This is where you weave in goals that are independent in nature. When we talk about independence, and this comes from this easel lens, can the learner do it independently without assistance and maintain the skill until the next expected refresh period? Ideally, these are things that are going to be carried throughout a program, and those independent variables or independent objectives will be carried through their entire program. Past a course, but through multiple courses, and sets the foundation for that whole program.

Now, after you get these goals in place, it's time to operationalize them, or write your learning objectives. When you're writing your learning objectives, be as specific as possible. As I said, include a behavior, a standard and a condition, and the revised Bloom's taxonomy will be very helpful when you're doing this. The revised Bloom's taxonomy, these are useful for writing your objectives and your exam questions and preparing your activities, and it has six major groupings.

At the lowest level, remember, these are typically things that you want them to memorize very, very low on Bloom's taxonomy. A lot of this is found in foundational courses. You're going to use this to build upon and to get into the higher levels. Then the other higher levels are to understand, to be able to apply, to analyze, evaluate, and then finally create. What you're aiming for is you're trying to get as high into Bloom's taxonomy as possible without losing that sense of understanding. You don't want to get to the point where students are confused or frustrated. You want to make sure that you're getting them at the right level. Some things sometimes, coming into an introductory course, they have to memorize a lot of things. That foundation knowledge is critical for everything else they do.

When you get into higher-level courses, less memorization but more application, how do they apply it? How do they look at other content and evaluate it, and they're out there creating their own content, doing dissertations and thesis, and so forth. When you're writing your learning objectives, make sure that there's one measurable verb in each objective. Don't have multiple verbs in there. Just one, one thing that you want them to be able to do or demonstrate that they know. If you have too many things going on in there, how do you know that they, in fact, mastered it? Just focus

on the one thing. Like as I said, try to get to the highest level in Bloom's taxonomy as possible without overwhelming them.

Once you have your goals, your objectives and your outcomes into place, this is where you start building your map. For certain goals, if I was traveling across the country, there are certain milestones, places that I want to visit, maybe people that I want to see, and it makes sense if I put them in a logical order so I'm not backtracking and going back and forth. That's one thing that I want to consider. How do I get through my courses efficiently as possible? Ideally, your learning objectives should tap into prior knowledge. They need to scaffold, they need to build upon each other to get to the next levels, and they should be appropriate for student learning, that they should be challenging and interesting, provide motivation, but you don't want to overwhelm students. Having that balance.

Finally, once you have arranged your goals, objectives, and outcomes, it's time to build out your course. For this, I'm going to recommend that you check out episode 41 on backward course design. I'm going to talk again about these learning objectives and goals as part of it, because that's really the first part of this, but then it comes into, next, developing your assessments and then choosing the activities that students will practice in order to meet the objectives, and then finally selecting your course material to help teach students or provide students with the content they need to get that understanding, that basic knowledge to be able to meet the objective. All that comes into play, and check out episode 41.

These goals, objectives, and outcomes are absolutely critical to a course. A large part, a lot of faculty that I've seen either don't understand them or just gloss over them. They know it's like, well, I'm just teaching out of this textbook. I think we can make stronger courses if we got away from that approach and just focused on the goals and objectives to really understand what we want students to know, and then craft the instruction around those particular pieces. The course material would be much stronger. They would walk out very specifically knowing what they needed to know.

There's a book out there called *Teaching Naked Techniques* that I am a huge fan of. In that book, and also *Reach Everyone, Teaches Everyone*, they talk about the importance of constantly referring to the objectives throughout your course to really tie the instruction in the objectives together really tightly for students, letting them know this is what you're going to be able to do at the end of this block of instruction. Absolutely critical. I would encourage you to take a look at your goals and objectives a little closer, see how your instruction is actually tied to it. I think you'll make a better course because of it.

Well, before I let you go, here's a quick plug for my book.