Using Backward Design in Teaching

Transcript of Podcast

Conversation between Doug Ward and Meagan Patterson

Doug Ward 0:12
Welcome, everyone. This is another in a series of podcasts from the Center for Teaching Excellence at the University of Kansas. I'm Doug ward.

Meagan Patterson 0:19
And I'm Meagan Patterson.

Doug Ward 0:22
And today we're going to talk about backward design. And I think before we get into that, I think it's good maybe to set this up and to explain how many of us maybe most of us started teaching, and that someone gave me materials and said, Here's what I've done. Just follow this and you'll be fine. And I said, Okay, and so I followed along and I've even been told don't spend a lot of time redoing it. Somebody else has it figured out. Or in another case, I've been told here's textbook, just follow the textbook. I mean, that's how often that's often how it's done. That's often how we learn to teach or that's often our first experience with teaching. What's wrong with that?

Meagan Patterson 1:15
Well, absolutely. That's a lot of people's first experience with teaching so I had a very similar experience when I first started at KU. You know, I was brand new out of graduate school, the summer poor, I was supposed to start teaching. They sent me in the mail a copy of the textbook and a copy of previous instructor syllabus, and I've sort of built my class around those starting points. But the problem with that is one I wasn't making my own choices. I wasn't making the class my own. I was working off of someone else's ideas of what was important, and maybe those were good ideas, and maybe they weren't, but I wasn't as invested in those choices as I could have been if I were making my own decisions about what was really central for that

Doug Ward 1:59
you really hadn't had a chance to think about what was important, and I hadn't either and somebody else said this is this is what's important. And this is how you This is how you do it. It was really the steps. It wasn't really thinking about where is it going? It was here are the steps. And I think that's one of the hardest things when you start teaching is just how can I how do I fill that time?

Meagan Patterson 2:21
Right? Absolutely. And I definitely had that feeling when I started out of like, oh my gosh, and I was teaching a class that met once a week for two and a half hours. So that feeling of oh my gosh, I have a lot of time to fill. It was really strong. And so what I didn't have the chance to do is really think about what's important for student learning. And so I think that's one of the challenges too when we start with a textbook or we start with a previous instructor, syllabus or notes, we tend to start with the idea of what's the content I'm going to teach. What am I going to do without thinking about what are the students going to learn? Which is what ultimately as instructors we really care about? And that's the idea of backward design, right?

Doug Ward 3:03
I mean, we're starting in… So describe that and what does that mean?

Meagan Patterson 3:07
Sure. So backward design is called backward design for a couple of reasons. One is that it's backward from how most instructors tend to do course design. So again, most instructors tend to start with a walker, start with content, and then go forward into what students are actually going to learn. Backward Design argues instead we should start off with what is the student going to know or be able to do at the end of a course. And then we should work. The next step is what that how are we going to assess what the student is going to know or be able to do? So how are we going to know if the student has learned what we want them to learn? And then we build our instructional process to make sure students have the knowledge and skills to be successful on those tasks that are going to let them demonstrate that they know and can do what we want them to know and do at the end of the class.

Doug Ward 4:01
And that's one that's really hard thing to start at that end because we're not used to that. I mean, we're it becomes very difficult. I know it is for me in any class you start a new class and I helped develop a whole new program to come up with exactly what is it you want students to take away from them, what is it you want them to learn? And in some cases, actually many cases have a classes. Set or the learning goals are set by a committee. I mean this is you often have those goals. And yeah. Often when we have a class in just about every curriculum, that curriculum is set by a committee are voted on by the faculty and there are generally some kind of learning goals involved in a class that are set already. So then what does that mean for me in terms of backward design, if I follow that,

Meagan Patterson 5:06
right, so in almost every class, as you said, the instructor isn't the only person who has goals for that course. There may be other stakeholders that are related to external accreditation or to making sure students are prepared for courses down the line, things like that. So one of the things that this process of backward design can do is help to have a broader conversation about what are our goals for student learning at the program level or at the department level, and that can be really fruitful and helpful. Making sure that different instructors in a program are on the same page about what do we really want students to be getting out of our program overall and how to specific courses or experiences within the program.

Doug Ward 5:49
Yeah, that's really critical. And that's often we don't have those discussions enough. I mean, we have them every so often when suddenly it feels like a curriculum. is out of date. But we often don't have the mechanism to do that. And I think that's where backward design can help not only with a class curriculum as well, because you have to define what's important.

Meagan Patterson 6:12
Absolutely. Yeah. And I think you know, one of the things for me when I first learned about backward design was it gave me a language and a framework for some of the things that I had been doing, but I'd been doing them more implicitly. And so it was really helpful to me and it helped me to see why the classes that I had that were working or working and why the classes that I had that weren't working, working, because again, even though I hadn't really explicitly done this process of backward design, the classes that I had were that were working. I done more thinking or reflection more planning around what my goals for student learning for in those courses were as the classes that I had that weren't

working, were the ones where I'm more often just kind of had, okay, this is the set of content I need to cover. And I hadn't gone through that process of what do I really want students to be getting out of this course. And so recognizing that that was something I needed to do for every course and that it would really help the courses to be better and more effective, was really helpful. And backward design doesn't mean that we just throw out everything start start over with everything. Yeah, absolutely. So for example, like I said, when I came to CTE for the first time, and learned about backward design, and I decided to redesign one of the courses that I taught a number of times using the principles of backward design. I kept a lot of the stuff that was already in the course we covered most of the same topics I kept most of the same assignments. I was just thinking about the process differently. And I structured some different some things differently. And I also was able to be more thoughtful about how was how can I restructure what I was doing in the course to make sure I was giving students what they needed to be successful on the assignments that I was giving them. I think one of the problems I realized that I had with some of my courses and I think this was true for a lot of instructors is there was a disconnect between what we were doing in class and what I was asking students to do. On assignments. And going through this process of backward design really helps me to see that and recognize, oh, I could make some pretty small changes to what we're doing in class to help students develop the skills that they need to be successful on these bigger assignments. In a more supportive way. Rather than just kind of saying, Okay, here's the assignment, you're on your own to do it.

Doug Ward 8:47
So this can be a real confidence building because you're approaching things not just I need to get through something but you're gonna you're looking at it in a more methodical way so I feel like I know more about what I'm doing day to day or week to week that would otherwise

Meagan Patterson 9:02
Yeah, absolutely. I think it can really help to promote that feeling of ownership over a course. Especially if you're like me and are teaching courses that aren't necessarily really in your area. That was one of the challenges for me, especially when I started out I was teaching courses that weren't necessarily related to my research. They weren't courses in which I had a whole lot of background. And so going through this process of backward design really helped me to be more confident to have more of a feeling of ownership of the course. And that was really helpful. For me absolutely. Also related to that one of the sources of resistance we can sometimes see from students, that backward design can help to address is that sense of why am I being asked to do this. So what is the purpose of this assignment? How am I going to use this? How is this going to help me you know in my future life, my future career so on? And if you as an instructor have gone through this backward design process, you have an answer to that question. You know why? You're asking the students to do everything you're asking them to do versus just oh, well, I'm assigning this paper because the people who've taught this class in the past, I've always assign this kind of paper, so I'm doing it too.

Doug Ward 10:14
That's great. Yeah, that's a wonderful point. I even use this not only for a course, but week by week, and I started doing this while I'm teaching online, and when you teach online, you really have to be upfront about everything. You have to be clear with students. You don't have the luxury of being kind of vague and going into class and having a lot of questions and trying to click it that way. So the way I set up my online courses is I have goals every week. And then from those goals I explain. Well, here's what we're here's the goal for learning. And then here's how we're going to do that. And then here are the Here are the materials that we need to follow for doing that. So that helps the students get a clearer sense of what they're doing on their own. I found that to be so helpful in all my classes. Now I don't always do

that in my in person classes, but it does help me think much more clearly and succinctly about what is it that I'm trying to accomplish in a given day? And how does that fit from week to week? Because I know that it's easy to get kind of lazy when you're teaching when you're teaching in person or when you're teaching a class. You've taught a class for a long time because well I know what I know what this is. I know what's going to happen. Whereas if we can step back and even in your mind, start thinking through what is it I want to accomplish in this class today, and how am I going to get there?

Meagan Patterson 11:54
Yeah, absolutely. I haven't done as much of that as you have with laying out goals. For each particular week. Although I have started doing including for each assignment, what are the learning objectives for each, each assignment and communicating those to the students? So when I give out the handout that says these are the guidelines for this assignment, and here's the rubric and those kinds of things. It also includes what are the learning objectives for this assignment? So again, kind of communicating, this is what you're trying to get out of this assignment in a broader sense. Yeah, no,

Doug Ward 12:24
that's great. And that's where backward design doesn't have to be only that full class. It can be assignments, it can be class by class, it can be week by week, you can start breaking that class down in different ways in to help clarify even to yourself but especially to students what you're doing and why it's important. And one of the things that Wiggins and McTighe and I guess we need to talk about Wiggins and McTighe wrote one of the seminal books in backward design, it's called Understanding by Design. And in that they have a chart that helps. In there they have a chart intended to help instructors think about what students need to learn because often we're content driven. And we think here's what we have are just going to throw all of this stuff. And they've brought it together and if you'll imagine concentric circles and at the center is they call it essential understanding this is what you absolutely have to come away from with this class. And then the next part out is what's important to know and then outside of that is a circle for nice to know. Talk a little bit about that, and how does that help narrow down the approach that we take from teaching?

Meagan Patterson 13:53
Well, you know, I think one of the things that can often be challenging and frightening for instructors is this feeling that students really struggle to figure out or to see what's important, right? So we have students who, you know, fail an exam, and they come in and they say, Oh, I studied so hard and you and I still did badly on the exam and I don't understand why. And you look at their notes or you look at their flashcards. And they focused on totally the wrong things, right? They've really focused on memorizing exact definitions, for example, when that's not what your exam is about. This is an exam that's about, you know, the ability to apply concepts, right. And you know, some of that is you know, maybe the student not following instructions or that kind of thing, but some of it may have been a lack of clarity about, again, what are the key learning goals of this course? What do you really want students to be getting out of the instruction and the course materials? And so again, going through this process in backward design of really identifying what are the elements that you want students to be getting out of a course a unit a day of instruction? And we're going to make time to talk about the idea of these concepts or ideas that are in that essential understanding level are the things that if you ran into a student on the street, five years in the future, what would you want them to remember from your course? Right? And so you wouldn't expect five years in the future that students going to remember exact definitions they probably aren't going to remember specific names and dates except for really key figures. But there are probably some key concepts and key ideas that you really would hope that a student would retain five years later. And so thinking about what are those key concepts for my course

or again, a smaller unit of instruction? And then how can I really focus my instruction on making sure students understand and retain those key ideas and making sure the instruction and the assessments are focused around those key ideas and really get a deep understanding of those ideas, rather than focusing on a lot of assessment on those more peripheral concepts. Now, sometimes we need to measure those as well. Because they're important for later courses and things like that. But making sure that those big ideas don't get lost in the sea of minutiae and details that are easy to measure on a multiple choice quiz, but maybe aren't really as important for that broader audience.

Doug Ward 16:47
And I take this even a step further than what Wiggins and McTighe do in the what's important to know or what's essential, Stan, what's important to know, and what's nice to know, change all the time. So I've created my own chart where I put in the middle of adaptability. And that gets across the idea that not only does the content change in that what's what was once important not be important, five years from now, or what was peripheral now may at some point May next year be crucial to what's understanding. You're making these decisions all the time as an instructor and as a student. You have to be learning and relearning all the information is at acknowledges and static, it's changing. And what you need to do is changing all the time just as what we're doing as an instructor is is important all the time. And I think that's where backward design can help us even semester by semester meaning 14 saying it, it helps us focus and look at the material again and say are these course materials really helping me get to where I want to go? Am I taking the kinds of steps that I had students need Am I giving the kinds of assignments that will help you reach those goals? So backward design, really has a lot of ability and the way that you can apply?

Meagan Patterson 18:22
And I think a lot of instructors, when you start doing this process of backward design and thinking about those elements of essential understanding this was true for me. I think it's true for a lot of other classes. You find that what's in that essential understanding is often not so much content and skills. So it's not so much that students need to know these specific ideas. So there's some of that, but more often, it's the need to be able to act in these particular ways or think in these particular ways that are critical to the discipline. So what does it mean to think like a journalist, what does it mean to think like a psychologist or a historian or a biologist, and so that's really cool. Things change over time. It means to work as a journalist now is really different than what it looked like to work as a journalist 30 years ago. But some of those key skills about talking to people and communicating and translating from experts to novices and things like that. Those still matter, right? So we want to make sure we're developing those key skills of how to read how to write how to communicate, how to talk to different audiences think that skills are going to continue to be important, even if we make new discoveries and the important theories in the field chain.

Meagan Patterson 19:50
Mark, Mark Moore, who's a faculty fellow with CTE tells a jaw dropping story where a few years ago with a 100 level core biology course he realized it was the students weren't getting what they needed. And so he went and he said, I need to redo it. So he went to the instructors who taught courses after this and and up the line up to the capstone course and said, What do you expect students to take away from this class? What do you expect them to know? And they said, One? Absolutely. He said, I've been concentrating on all this content and you're telling me Don't go back to any of that. They said we'll know what it would be nice if if those if they had a better understanding of scientific method, because the scientific method is what will allow them to continue to thrive in future courses. And he said, that gave me lots of leeway. It was it was frustrating on one level, but he said it was also liberating and that now I

can start rethinking what I need. To actually help students learn rather than trying to cover everything. Now that was the first part of what ended up being called a conversation about within the within the curriculum, that they hadn't had a conversation about what would be really important within and within within individual classes. And they're, they're really going through that now. But that is one of those. That's a good example of how that those bigger skills are really important, and how we want students to take those kinds of bigger skills away because they will have to adapt, they will have to continue to learn as they go along in the whatever content we're teaching now. Maybe obsolete next year, right, five years from now 10 years from now. So what is it that you want students to retain what is it want them to really remember about this class? Let's say that I'm brand new. I'm a I'm a TA. I'm teaching this class for the first time. I'm a new instructor and teaching this class for the first time. Somebody does what they did. For you and me. Here's the materials. So where do I start? What would I What would I do with that were designed How would I go about doing this?

Meagan Patterson 22:20
Well, I think, you know, this might vary a little bit depending on on how much background you have in the area. So you know, I think one thing is to just start off kind of blank slate blank piece of paper, like computer screen, how you like to work and think about when you think about this course maybe you can think about when you took this course as a student or what you've seen from your experience in the program so far the thing what do you think is really important, and don't be constrained by the book by how it was taught. You can think about what would you have liked to have learned when you took this course that you didn't learn? That can actually be I think, really informative and useful. So start off just kind of thinking about what do I feel like is important? And start to generate some ideas and meet and maybe talk to some other people who teach the same course talk to them about what do they think is important? Of course. And then once you've done that, maybe then start to look at the materials and again, don't worry about going through in detail. But looking at the textbook or the readings or previous syllabi or that kind of thing. What really seems important for students to be getting out of this course this might be a good place to to talk with some people who teach courses down the line, if that's available to you, and get that sense of what would you really like students to know when they get to your course after they've taken?

Doug Ward 23:48
I think it's I think it's helpful to to look up and to see what's listed in the course catalog to see what students are seeing and what they're being told about what this class is about. And then see while others have taught it, does that really reflect what was in that syllabus?

Meagan Patterson 24:04
Yes. And those can be very different they can and that can be a real challenge. And sometimes the problem is, you know, that course descriptions have been around for a long time they're dated, you know, and that's more of a program level issue to address something that may not be something you can address right off the bat as an instructor, a new instructor or a new TA. But it's something to think about. I think that's a great point of thinking about what are the students learning that this is about as they're coming into the course.

Doug Ward 24:36
And this doesn't mean that when you start off by looking at what you think is important that you just go rogue. It's not that I'm going to throw everything else in, I think is important. So this is what I'm going to keep.

Meagan Patterson 24:50
Right, right. I mean, you definitely still want to be within the realm of what the course is supposed to be about. I think some of us have seen instructors who have really gone kind of off the rails of this is supposed to be a course in X, but I really care about y so I'm going to teach about why even though this course of X and that's not good. But thinking about within the framework of the course that you're teaching. What do you really think are those those key elements of understanding and again, I think going back to that idea of what would you want a student to retain from that class five years in the future.

Doug Ward 25:34
And I like your idea there too, that this is a really good way for you to feel like you have some investment in course because if you just take what somebody else has done, one I always find it very difficult. To figure out what Okay, the assignment seems clear, but I don't even know what they were trying to deal with. What were they what are they after? How did they go about doing this? Whereas if you think through this, it helps you then adapt what's there, get to reach the same kind of goal.

Meagan Patterson 26:05
Absolutely. And so then I think thinking about the process of backward design, once you've got some idea of okay, these are some key ideas, key skills I want students to develop. Then you can start thinking about okay, how am I going to document that? How am I going to assess that? How am I get to know if students have acquired that skill or that knowledge that I want them to acquire? And so then you can start thinking about, okay, how am I going to have students demonstrate their learning? Are they going to write paper to give good presentations are they going to do group projects? Are they going to take the chance? What am I going to have them do to demonstrate their learning? And how does that tie into my broader learning goals? And really, I think it can be really helpful to kind of map that out and say, Okay, this assignment is tying into these three course level learning goals.

Doug Ward 27:02
Right? And that's, that's really important too, is to create kind of that your own course map, really, because if you're just going week by week, it's hard to keep up and you're going to be you're going to get lost, you're going to lose track of what have we done or what have I done, what do I need to do? So if you can map that out? It really helps you as an instructor. And, again, we're starting from the back but then once we're done, we're mapping week by week to try to understand how we're going to get to work

Meagan Patterson 27:35
right? And you may not be referencing every course level learning goal every week. But making sure that you've got you're addressing each course level learning goal somewhere, right, and that you've got that that kind of consistency. Between the course level learning goals, the assessments, and then the day to day.

Doug Ward 27:57
I mean, that's one of the things that can be a challenge is that sometimes you go in and think, oh my gosh, this assignment doesn't have every learning goal in it. And you can't I mean, nothing can do right. So you want to you want to be tactical and how you're approaching it. Because here you're gaining some of the skills in this assignment, and then you may gain some other skills and another assignment and then you may start putting them start putting them together later on. So it's not like you have to do everything all at once all the time.

Meagan Patterson 28:24
Absolutely. But if you have that map, you can reassure yourself oh, I don't need to be addressing this learning goal this week, because I have a plan for how it's going to be addressed in this next unit.

Doug Ward 28:39
So we've been talking today about backup design and how to get started what it is how it helps how you as an instructor can use it even if you have course materials that you've been using for a while or that someone else has recommended that you use or if they've said just take the book and use it and why that's important because it really is important because it's it's helps you focus on student learning, rather than just on filling class time. So if I want to learn more about this, where would I go?

Meagan Patterson 29:13
Certainly the Wiggins and McTighe book, Understanding that design is a great resource. We also have some materials about backward design on the CTE website, which is always a great place. To go for resources about teaching at Canadian or elsewhere.

Doug Ward 29:28
Excellent. Well, thank you very much. So until next time, this is Doug ward.

Meagan Patterson 29:32
And this is Meagan Patterson.

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