NEXTcast Season 1 Episode 13: Leila Kelleher on Flipped Workshops and Labs

In this episode, we talk to Leila Kelleher, who teaches Fitness and Health promotion at Humber College and Kinesiology at the University of Guelph-Humber, about flipping workshops and labs.

Nathan Whitlock: Welcome to NEXTcast. My name is Nathan Whitlock, an editor at Humber Press. NEXTcast is a podcast about teaching and learning at Humber College. Every episode we talk to some of the faculty and staff who are leading innovation both inside and outside the classroom. This episode we take to Leila Kelleher, who teaches fitness and health promotion in Humber's School of Hospitality, Recreation and Tourism, as well as Kinesiology at the University of Guelph-Humber. We'll be talking to Leila about flipping classrooms; how to do it, why to do it, and when to do it.

Nathan Whitlock: Welcome to NEXTcast Leila.

Leila Kelleher: Thanks Nathan.

Nathan Whitlock: I'd like to start off having you just tell us a little bit about what you do here at Humber, and at Guelph-Humber.

Leila Kelleher: Okay. So I work in the Fitness and Health Promotion program, so I teach mainly biomechanics. So biomechanics is my main course that I teach, and that's what I was hired to do really. We have some pretty cool equipment down at the biomechanics lab. So yeah, so all students in the fitness and health promotion diploma have to do a biomechanics course, so I teach that. And then I teach over on the Guelph-Humber side as well in kinesiology. So I've taught health and wellness over there, and I'm just finishing up teaching a field placement course over there as well. So pretty broad, yeah.

Nathan Whitlock: We did a story last year in NEXT magazine, which is the magazine for this podcast, about that biomechanics lab, and there was a piece about the bod pod. I'd that part of what you work with, where people get inside this big egg shaped thing and they measure your body mass, do you work with that?

Leila Kelleher: I don't actually work directly with that very often. Bod pod is a very cool piece of equipment, and I especially love that it's called the bod pod and that it does look like a spaceship. It looks like something that you would go into, like if you were traveling a long distance and needed to be put to sleep for the journey or something.

Nathan Whitlock: It's the hyper sleep pod.

Leila Kelleher: Yeah, exactly, exactly. So, it's pretty great. So in the biomechanics lab we have a motion capture system, so three dimensional motion capture, kind of similar to what you'd see for computer generated imaging and animation, that kind of thing.

Nathan Whitlock: Right.

Leila Kelleher: But we also have an integrated treadmill. It's not your average treadmill, it's a pretty fancy one. It has a force plate built in, so we can look at the forces, ground reaction forces generated through running and walking, that kind of thing. So we're really interested in how people move, how people perform in sports, we're interested in injuries, all that kind of thing. So, yeah.

Nathan Whitlock: Very cool stuff. Well, we're not going to talk about the bod pod today, or the high tech treadmill, unfortunately. But we're going to talk about something else that's actually kind of cool, which is a workshop you ran recently about flipping classrooms, and I wanted to start a little bit with the basics. I'm sure a lot of people listening know what a flipped classroom is, but for those who don't, if you could explain the concept. What actually is a flipped classroom?

Leila Kelleher: Okay. So a flipped classroom, it's pretty cool right now, flipping your classroom. So what it means is students are responsible for learning the material that traditionally would have been taught during lecture time. So, if you can imagine a big lecture theater, you'd have some professor lecturing to you about some theories in background information on a topic, you might have done a little bit of reading beforehand, but basically you're getting all of that information in the lecture. In a flipped classroom model, the student is responsible for essentially learning those theoretical basics outside of the classroom, so that when they come to the class they're able to engage at a deeper level with the material, and the professor can really use their expertise at that higher level to engage with the students and that material, rather than just teaching basic 101 level theory on whatever subject it is.

Nathan Whitlock: So they're prepared, they've gotten the hard content they need, the information they need, but now they're prepared to start applying it in class and go a little further with that, in other words?

Leila Kelleher: Absolutely, yeah. So oftentimes when the flipped classroom model is used, it's usually using a little bit more technology and media to do it. So

oftentimes there might be videos that students need to watch, they might need to do modules on their classroom management system, so a Blackboard for example, they might need to watch videos, maybe answer a little quiz to test their mastery. As opposed to just reading through some readings, which as we know, some people do and some people don't. So it's supposed to be a little bit more engaging, and then the students can actually gain a higher level of mastery of that material, because they're actually using that classroom time to really push those ideas, and get a fuller understanding.

Nathan Whitlock: And what's, in terms of actually going through that process of flipping a classroom, of taking a pre-existing course and flipping it, what do you actually have to do? Who do you talk to? That's the first steps?

Leila Kelleher: So, there's a lot of support here at The Centre for Teaching and Learning for flipping classrooms, and I certainly did watch some video content that was on the website here. What I realized was that for my lecture component, if you want to call it that, for my classroom component, it wasn't really a great fit for how I teach biomechanics. We really focus a lot on the applied part of biomechanics, and I think that requires a lot of discussion and interaction with the students. So I knew that it wasn't really right for that part of the course, but I really wanted to find a way to make it work for the lab part, and when I looked I couldn't find anything, I couldn't really find a way that people had been doing it for practical applications.

Nathan Whitlock: And what are some of the advantages you've found, compared to the more traditional way that you were teaching when you first started?

Leila Kelleher: Yeah. So, the traditional way of running a lab really is students would come into the lab, maybe having read through a handout that you may have posted about what you're going to do, but most likely not. They might know what topic they're going to do, they come in, and usually the professor, or maybe a teaching assistant, would run through the procedures for the day. So they might hand out basic instructions, and they would demonstrate, "Okay, this is what we're doing today." Explain the theory behind it, and describe and maybe demonstrate the procedures, and then the students would break off into groups and go do it. So I my experience, what tended to happen was, you know sometimes it's easy to get a little bit distracted, or you're at the back of the classroom and you don't hear what's being said, and so I would spend the rest of the lab running around, essentially repeating my instructions to different groups.

Nathan Whitlock: Doing damage control.

Leila Kelleher: Yeah, putting out fires.

Nathan Whitlock: Exactly.

Leila Kelleher: Or somebody might come late to the class and not really know what's going on, and so then they'd have to have that explained at the beginning. So I just found that I was just saying the same thing over and over again, which wasn't great for anybody, because then if students had really great questions, which oftentimes my students have fantastic questions about how this lab, how this technique could be applied to a different sport, for example, or a different movement, and I would find I didn't have time to really answer those questions, because I'd be running over to another group to tell them how to do the lab.

Nathan Whitlock: So what are some of the challenges you've been faced with? What are some of the pitfalls that pop up when you've flipped a classroom?

Leila Kelleher: So, the first challenge was that you have to create content. So my model of flipped classroom for labs that I developed was to record a video of exactly what I would do at the beginning of a lab normally. So, introducing a lab, explaining what it's about, and showing and explaining the procedures for the lab, and then what my students do is they have to actually take notes on that and submit that for grades. So, I called it method section, so normally in science you would write a method section after you do an experiment, but in this model you do it beforehand.

Leila Kelleher: So it's, essentially they're creating their recipe for the lab, like their instruction, so when they come into their lab they're ready to go, and the advantage of that is that students can, they come in, if they're well prepared they can form a group right away, they know what equipment to get, they grab it, and they do the lab. And they can be in and out very quickly if they choose, or sometimes they want to stick around for a bit longer, have deeper discussions. I find that, obviously there's still a little bit of tweaking, if some equipment isn't working for example, I might be helping them fix the equipment. But there should be at least one or two people in every group who really knows what they're doing for the lab and can help guide the rest of the group, if people haven't been as prepared. So it really frees up my time in the classroom for answering higher level questions and troubleshooting as needed.

Nathan Whitlock: I just wanted to finish up by asking, I mean I asked you about the student response to it, but I wanted to ask you about your own response to it.

You mentioned in the earlier way, in the traditional way you'd been lecturing in classes, you would spend a lot of time running around putting out fires and repeating yourself. How has the flipped approach been for you, just in terms of your enjoyment or teaching, or your engagement with it?

Leila Kelleher: I've really enjoyed it. So I've been doing it for a couple of years now, and I wouldn't change it. So when I first thought of doing it this way, I was a little bit hung up on production values. So, The CTL produces amazing videos, and I would see these videos, and they were so professional, and even some of my colleagues would produce light board videos, or the Camtasia videos, or the screen capture, and I was always blown away by how great they were. So, I did inquire about making the videos here in the studio, and it just wasn't going to work, because just the amount of set up and time that everything was going to take. I like to be a little bit more nimble with my labs, so I do it very basic.

Leila Kelleher: So I have a video camera that only works if it's plugged in, the battery doesn't hold a charge anymore, and set that up on a tripod, and I just do my demonstration exactly like I was in front of the class, and I sometimes stumble over my words, and sometimes there are a few too many 'um's, and if I have an assistant, which I often do, sometimes there's a bit of laughing when someone falls over or does something funny, but it's all in there, and it keeps it a little bit real. But it also means that if I need to produce new content, it takes no time at all.

Leila Kelleher: So, for example, this week my students are working on their final projects and they needed to do some data processing, they didn't have a video on that type of data processing, so I just fired up my computer and my camera and shot a little video of how I process the data in Excel, and it took me probably 15 minutes. So I just did the video, which was about an eight minute video, I loaded it into Adobe Premiere, and I didn't really edit it, I just chopped out the bits that I didn't want. So, the most basic editing. I don't think I even put any title or anything, and then I threw it up on YouTube for my students to be able to access, and so that was maybe an hour out of my day. So that was time that, now, if there's four groups who need to do that I don't have to explain it to them every time, and they can also do it in the comfort of their own home with their computer, at any time of day and night.

Leila Kelleher: So I really like that it has that nimble approach. I can switch up labs. If something didn't work well last semester, I'm not throwing out a perfectly produced video. I can just make another one, and I have the raw files, so if I change the ending, how we're going to end the lab, I can

just cut that bit off. Or if I forgot to say something, I can throw some words on the screen, and say, "Forgot to say you need to plug in your USB key first." Or something like that. So it's really nice, I really enjoy doing it. I wouldn't do it any other now, I don't think. It's also a lot more relaxing for me as a teacher in the classroom, because I'm not putting out fires and running around. I really, I mean I always get to know my students anyway, but I really get to know them because we end up having a lot more chats and conversations in the lab than we might do if I was always running off to put out a fire.

Nathan Whitlock: Well, that's excellent. Thanks so much Leila.

Leila Kelleher: Okay, thank you so much.

Nathan Whitlock: NEXTcast is produced by Humber Press and the creative productions team at The Centre for Teaching and Learning at Humber College. Special thanks to Puneet Wagh, Santino Pannozzo, Allison LaSorda, Darren Richards, and Eileen DeCourcy. To suggest stories for future episodes of NEXTcast or to let us know what you think, email humberpress, all one word, @humber.ca. That's humberpress@humber.ca. To learn more about the workshops, teaching certificates and other support offered through The Centre for Teaching and Learning, and to read issues of NEXT magazine, go to humber.ca/centreforteachingandlearning. Thanks for listening, see you next time. That's not a pun.