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Limed: Teaching with a Twist

Episode 3 – Place-Based Learning Along the Duwamish

Matt Wittstein: You're listening to Limed, Teaching With a Twist, a podcast that plays with pedagogy.

Place-based learning is about a bit more than just the physical spaces [00:00:30] we learn in. In this month, Dr. Ben Machado shares his plans in collaboration with colleagues from South Seattle College to integrate some high impact practices across disciplines, specifically, in his introductory biology course. From Elon University, Kelsey Bitting, assistant professor of Environmental Sciences, Scott Morrison, Associate Professor of Education, and Dani Toma-Harrold, an aspiring elementary educator whose undergraduate research examines abolitionist teaching and place-based environmental education, share their ideas about the [00:01:00] what's, how's and why's for place-based learning.

Before we get into the episode, in recognition of National American Indian Heritage Month, we want to acknowledge the ancestral people and their lands, air and water upon which our institutions currently reside and benefit today. Elon University is situated on land that was stolen and manipulated from indigenous peoples and was once the land of the Adshusheer, Eno, Shakori, Catawba, Saponi, Sissipahaw and Occoneechi people. Seattle Colleges [00:01:30] occupy the lands of the coast Salish people, the traditional home of all tribes and bands within the Duwamish, Suquamish, Tulalip, and Muckleshoot nations, of people that are still present and continue to honor and bring to light their ancient heritage.

Today, in the present moment, we honor the survival, the adaptations, the forced assimilation, and the resilience and creativity of native people's past, present, and future. Knowing and critically examining our history and how the collective we got to this place is vital [00:02:00] for understanding our current reality, critically interrogating our histories, repairing harm, and to honor, protect and sustain these lands. Enjoy the episode.

Ben, welcome to Limed: Teaching with a Twist. I'd like you to just take a second and introduce yourself to our audience.

Ben Machado: Hey Matt. I'm Ben Machado. [00:02:30] I teach at South Seattle College, Biology classes mostly is what I teach. Yeah, I've been here for about two and a half years, but I've been teaching at the community college level for more than 15 years. It's fun to be on the show. Thanks.

Matt Wittstein: I understand you got a grant with some of your colleagues. That sounds super cool. I would love to just give you a couple minutes to tell us a little bit more about that grant to set the stage for our conversation today.

Ben Machado: Yeah, happy [00:03:00] to. Our college has been very focused on equity and inclusion. One of the in-house grants that faculty can receive is one called Equity and Excellence in Education. You can do it individually. You can also do it is a group effort with other faculty. That's what me and my colleagues decided to do. The group that I'm working with is another fellow biologist, Henry Olson, a history professor, Michael Dean, an art professor. [00:03:30] We also have the librarian who is going to help us build a resource database, hopefully, for it, Charlotte Brune.

We're in the process of developing our own independent modules for hopefully being able to implement these high impact practices into our courses. Then we're, ideally, eventually, we're not sure yet how this is going to happen, but create an interdisciplinary aspect of this [00:04:00] courses together so that my biology students can learn about the history, while the arts students could learn about biology and in what ways that hopefully will help them get the most out of this type of project.

The course I'm teaching is an intro bio course where students in these introductory courses often don't get the chance to do meaningful research, which is [00:04:30] a very important skill if you're going to become a scientist, is being able to understand what you're looking at from a research perspective, what it means. One of the biggest things is I'd like them to be able to find resources that then will help them understand the story that we're learning about for the area that we live in. The high impact practice really that I'd love them for them to [00:05:00] get out of this is doing research and analyzing the stuff that they're reading about, the area we're learning about, and being able to integrate that into some sort of story that they can tell.

Matt Wittstein: Cool. It sounds like for your biology class that you really want to focus on giving students an opportunity to do some research, but there also seems to be this element of place-based learning, which is a really cool pedagogy. Can you tell [00:05:30] us a little bit more about the place and the space that you're going to be working with with your class?

Ben Machado: In Seattle, there is a river that you may not know about unless you're from the northwest. It's called the Duwamish River. It is an incredible river. It was a place where indigenous populations have lived and sustained themselves for nearly 12,000 years. As industry came into Seattle, this [00:06:00] river was built up, basically, and turned into what they call the waterway to essentially help move industrial goods in and out. They put a lot of factories right next to the river. The Duwamish River has changed immensely as Seattle has grown into the big industrial city that it is now.

South Seattle college is only about five miles from this [00:06:30] river. It is a very unique place because it has a huge history for the indigenous populations that live there, the Duwamish tribe, also just the people that live in the neighborhoods near the river. There's a neighborhood of South Park where there's a lot of folks that are really involved in the river. They like to kayak on the river, go bird watching. There's really a large amount of history, artists of biology [00:07:00] that all relate to this river, the Duwamish. That was why we really wanted to focus on this place to help our students understand, learning about a place and learning about the history of it, the art that maybe is associated with it, the biology of it. We felt that it just was a great opportunity to help students really interact with their own personal sphere of community and what they know because obviously, when you're in a classroom, [00:07:30] when you can relate what students are learning in the class to something outside of the class that they maybe see or they interact with, that's when the information sticks.

My goal was to try and integrate this Duwamish ecology that is related to how the Duwamish river flows. That was impacted immensely by companies like Boeing that just built their industries around using this waterway. A lot of that has changed. We're trying to restore [00:08:00] this waterway for the last 20 years. It's just a big site of change. There's a lot of activism going on around this river. We really feel like it's just a prime place for students to learn about so many facets of them living in a society. If they're interested in biology, integrating that into how they work with their community or whatnot.

Matt Wittstein: I imagine at a community college that most of your students are from the [00:08:30] Seattle area, but how much are they interacting with the river and their own lives and experiences? How are there ways that you're thinking about taking advantage of that to make this learning meaningful for them?

Ben Machado: Yeah, it's a great question. It's one that I probably don't have an answer to exactly, how much interaction my students have had with the Duwamish River. I know that most of my students will be from nearby. The students are... [00:09:00] They run the gamut of people that are very prepared for college to people that are not very prepared for college. It might be difficult to actually get my class to go to the river. We don't necessarily have a school bus where we could all fit in and drive down there. It'll be really interesting to see how many of my students actually know about the river. I'm sure they know the name, but I don't know if many of them know how many different fish live in there, what [00:09:30] their sea otters and river otters that live there and birds. It'll be really cool to help them understand some of the biology associated with this river.

Matt Wittstein: Where are you at your stage? What approaches are you planning on using already so we don't completely make you reinvent the wheel as our panel discusses what you're thinking about?

Ben Machado: The hardest part right now is actually figuring out how to get them onto the river and engaging with the river in specifics, not [00:10:00] just with videos and readings, but actually get down there physically. I know that I will have two hour blocks of lab time for this project. There will be some online assignments and research that I'll have them do prior to learning about this.

Like I said, it's very difficult to get my students to actually go to the river with me during those two hour labs. What [00:10:30] I can do is we have a lab space, we have a lot of resources that you would typically have in a biology lab. We also have an area around campus with trails that are walking along the ridge just a few miles above the river. My approach right now is to use one of those class periods to help the students understand how ecological research [00:11:00] is carried out, how maybe you do diversity plots and look for certain types of animals or such, but also to gain an appreciation of the Duwamish River and maybe understand that there's different types of animals and species in different areas depending on how close you are to the river.

The next day that we have the lab, ideally, we would go and we'd do our field trip around the campus. [00:11:30] That would be my in-class component. After this, we'd really love to be able to have the Duwamish tribe explain some of what the river means to them.

Matt Wittstein: That leads into my last question before we take this to the panel. Are there specific things that you'd like our panel to focus on as they're hearing about your class and your aspirations for them to learn about meaningful research and place-based learning? [00:12:00] I have the logistics of how do you actually get them to go when I can't require it, but are there other specific questions that you have?

Ben Machado: It can be difficult if you have such a wide variety and diversity of students to really reach them all effectively, is one of the things I'm grappling with. For such a diverse student group, they're going to potentially even be high school students [00:12:30] with a running start program. We have students who are just trying to get into the healthcare field, students who maybe are intrigued by biology but aren't quite sure how to get into it. How do I effectively engage all of these different types of learners with a project like this?

I'm asking a lot from my students to engage with this river that maybe doesn't [00:13:00] apply very directly to learning biology. This is where I'm having a hard time of how do I help them see that the biology is one aspect of this? There's other aspects of living in a river and human ecology. This is where it's a complex project and why we're trying to do it interdisciplinary is to really help all of us understand [00:13:30] the river better and our place and living near it and working near it. Yeah, it's more just about helping all my different types of students engage with what I'm trying to teach them with this place-based learning.

Matt Wittstein: I am so excited for your grant, the project that you and your group are going to do. I'm excited to take this to our panel.

Ben Machado: Thank you so much. I really look forward to hearing what your panelists have to say.

Matt Wittstein: [00:14:00] We're here with our panel. I'm really excited to talk about Ben Machado's intro to biology class, and to let you all introduce yourselves. I would love to get your perspective on what sets place-based learning apart from other engaged learning techniques. Why Place-based learning?

Scott Morrison: Scott Morrison, associate professor of education at Elon University. There's lots of different kinds of [00:14:30] engaged learning. When I think about how place-based learning is different, it's really about where some of the learning happens. There's lots of ways to use technology, for example, inside classrooms on college, or university campuses, inside classrooms. You can do things like role plays or simulations. There can be lots of interactions with guests that are very engaged and lead to meaningful learning.

Place-based really is [00:15:00] about having nature, or the environment, or a community as a text and a context for learning. That's what sets it apart for me. Especially when you think about the nature based side or the community based side, you're changing your location and that can also have effects on your pedagogy, how you go about teaching and learning. For me, that's one of the biggest distinctions.

Dani Toma-Harrold: I'm Dani, Dani Toma-Harrold. I am an elementary ed major, senior at Elon University, pre-service teacher. [00:15:30] On any kind of educational level, Place-based learning makes learning a lot more authentic. It makes it more real. For students that I'm working with on elementary level, it makes it easier for them to digest the information and also connect it to their lives. Schools, colleges, everything doesn't exist away from reality and away from real life. It should be integrated into that. Place-based education, place-based learning really helps any [00:16:00] kind of student understand that a little bit more.

Kelsey Bitting: I'm Dr. Kelsey Bitting. I am an assistant professor of environmental studies at Elon University and a former associate director of our Center for the Advancement of Teaching and Learning. I think Dani expressed that really beautifully, but I'll just say from the perspective of a science educator and a science education researcher, place-based teaching is an antidote to some of the ways in which, historically speaking, science education has tended to marginalize students and [00:16:30] strip away the context and meaning and larger perspective that students might be able to use to make sense of their learning. As a geo science education researcher, I try to tie what we do about learning about the natural environment to spaces that matter to students and allow them to bring in the meaning that they've attached to different places and

the attachment, the sense of emotional affiliation that they might have with a place as a way of contextualizing [00:17:00] their learning.

Scott Morrison: Yeah, I want to jump in right there, Kelsey, with what you just said. I was reviewing a manuscript for a journal a few months ago. I don't know if it's been published yet, so I can't give you the citation, but their point was what you just said, is that sometimes students and middle high school, college, university, they have experiences in places with their hands, and sometimes agricultural experience, so they can bring to biology, they could bring to ecology any of the geo sciences you mentioned, [00:17:30] but oftentimes in traditional science teaching and learning, they're not allowed to access or utilize the knowledge and experience that they've gained. I really like what you said there about the affordances of place-based education for that reason too.

Dani Toma-Harrold: Absolutely. Place shapes how we experience and interact with the world. Integrating that into any kind of college setting is super needed, especially since we're going on to be citizens of the world. That's super important.

Matt Wittstein: I want [00:18:00] to zoom in on Ben's specific classroom. Ben teaches at South Seattle College, which is a community college. He, along with some of his colleagues from history, art and microbiology, received a grant from their university to implement some high impact practices into their individual courses and start thinking about how to pull those experiences together in a collaborative way. We're really going to focus on Ben's piece [00:18:30] of that, which is an intro to biology course where he wants to get down to the Duwamish River, which was the home of the Duwamish tribe, the indigenous people of the area. But some of the challenges that he faces with that are in the scope of a intro bio course that covers a range of topics. He only has a few weeks to focus on ecology, which is the most appropriate lesson for some field based learning. He has some limitations with his population of [00:19:00] being able to get to the river, but they do have access to other trails and outdoor resources potentially in that area.

Where I want to lead off is what are some of the basic tenets of place-based learning that he should be looking into and thinking about to make sure that he implements?

Kelsey Bitting: One of the things that I think about when I think about a basic tenant for place-based learning is that the place [00:19:30] has to be imbued by meaning by the students themselves. That's something that Ben really has going for him at South Seattle College. Community colleges have this really unique benefit that's built in, which is that the students are really familiar with that location. They go to school there, they may work in that community, they may live in that community, they may have grown up in that community. They come into his classroom already having some attachment to that area. They have a sense of place that's already [00:20:00] constructed. Sense of place is something we've all experienced. If you've lived somewhere and then you've moved away and

you drive past that house, or apartment, or dorm room and you think, "Oh, that was where I," blah blah blah.

You either have this really good experience of it and this sense of nostalgia perhaps, or maybe a little bit of an aversion if something bad happened there. But more often, we associate a positive experience with a place. That tends to stick in us in. Thinking about place-based [00:20:30] education, place-based learning, one thing is that these students have attachment to, maybe it's the Duwamish waterway or the river that's there, maybe it's some of the trails that are central to that area or around the college, maybe it's other places, maybe it's something in their backyard that they could actually associate with these ecology lessons. I would just really encourage Ben to think about as he's designing place-based learning, inside the ecology unit, but beyond it, [00:21:00] to give students the agency to define some of the places that he picks according to what matters to them and places that they already have attachment to.

Scott Morrison: I want to join in that and say place is a context for learning. Students oftentimes can have connections, as Kelsey just pointed out. I want to add a little wrinkle, though, that sometimes it's definitely not all positive, or they might love some parts about where they live or where they work, or where they're from, but they might [00:21:30] not like other parts. That just accounts for some of the complexities of place. I think it's something that we need to keep in mind, that we need to be sensitive to how students might respond to different kinds of places. When Ben is thinking about taking students to a river, or off of the campus, what do the students associate with those places? That's some of the pre-work that might need to go into the planning for an [00:22:00] excursion for doing a place-based unit.

What are your experiences with this river? What are your experiences with this park? Have you been on the Greenway before? How does it tend to make you feel? On a scale of one to 10, how comfortable are you being outside and in nature? If we changed the learning environment, would you be okay with that? Why or why not? And digging into and not assuming too much about how our students feel about some of this.

I know Dani and I have been doing some research together, talking to place-based educators, [00:22:30] environmental educators. Some of them talked to us about those complexities. Dani, I don't know if you want to mention any of those interviews that we've done and some of the points those people made, but I think the complexity is something we need to hold with us when we plan for place-based learning,

Dani Toma-Harrold: Yeah, especially in moving into place-based as a natural space as well. I think some folks tend to assume that natural spaces and environmental spaces are going to be neutral spaces, [00:23:00] like politically neutral, culturally neutral, but that's not necessarily true. Sometimes there can be traumatic experiences

and memories with those places. Other time, it's a very sacred space. That's always something that's really important to take into account, again, with getting to know your students and getting to know the community before going into the community.

Scott Morrison: I want to jump with a personal example. I do some work with garden-based learning and working at local schools. I had a black student one year, this was a few years [00:23:30] ago, who he said basically in class, I'm going to paraphrase, "What is it with you white people who want to get back to the earth and into gardens and growing food? My family and me are trying to still get off the land." He went and talked about how his grandmother had to work land for their family to survive. For him, to get to university, to go on to graduate school, to get off the land was a sign of progress for him. [00:24:00] Going back to it, to him, wasn't liberating in a sense. I didn't have that context. From one of our interviews that Dani and I did, there was a woman, a black woman we talked to who said something similar, who said, "I love nature and I love being outside, but I also have some ancestral trauma associated with that because of my skin color and what my ancestors were forced to do. I think that's something to keep in mind as well. Kelsey, does that resonate?

Kelsey Bitting: Yeah, absolutely. One of the things that we talk about a lot when we think about [00:24:30] field-based learning, and this is different from place-based learning, of course, in the geo sciences, is that going in the field is not necessarily a positive association for students. I went to college and I'm trying to move away from maybe outdoor based professions, farming, things like that. Now my professor wants me to go in the field. Why would I want to do that? I think that really brings up the need to attend to highlighting a diversity of ways to engage with [00:25:00] any given field. As a geo scientist, I'm not just going to highlight the folks who are going out and banging on rocks with their rock cameras and mapping different units, but I'm also going to highlight the folks who are maybe analyzing data in a lab, or who are thinking about natural resource use for local communities, or pollution based issues.

As Ben is thinking about leveraging Place in his biology class, maybe the river is a place that he might ask students to think about, [00:25:30] maybe the parks are a place, but are there also ramifications of the environment that the students spend most of their time in, in their houses, in their businesses, in their local communities? How do they see connections to those places that matter to them and that they spend a lot of time in that might help them make better sense of the content of the class more broadly speaking, not even just in the ecology unit.

Scott Morrison: To me, you just spoke about a pedagogy that's an important [00:26:00] part of this piece. That's asking students a lot of questions. I think sometimes we feel like as the instructors or professors, we have to have all the answers. We have to have connected all the dots, but we can't always do that and we shouldn't always do that. What you just suggested, at least what I heard, is that we invite

students into the process with us. We can say, where are some places that we could go to learn about X, Y, or Z?

Students can become co-creators and co-planners in that process and [00:26:30] say, "Hey, in this bio course, we need to learn about this thing." Based on with me some of the ways we could learn about that in real places. What are places that you know, where we're not just going to learn about it in a textbook here in class, we want to go out and see it in our community. We want to go out and see it and understand it as it's happening. What are some ideas you have about it? Because your students might all talk about the river, some of them might not. Some of them might need to learn about how those things [00:27:00] are supposed to be learning occur near the river, but they might also happen in more urban spaces too. They could even compare and contrast them.

Dani Toma-Harrold: Really, with any age that you're working with, again, my context is more younger students, they just want to be involved. Even as a college student, I just want to be involved, especially since I'm moving towards adulthood. In my profession after college, I'm going to have to be making those decisions. Why not start making these decisions while I'm in college, and in the class? [00:27:30] Especially because that's going to allow me to have that much deeper experience in that class and connecting with the content, because I got a say in how I wanted to learn it and where I wanted to learn it.

Matt Wittstein: What I hear a lot of you saying, or at least what I'm connecting it to, is that a lot of this also relates to how you prepare yourself to be the teacher of that place-based learning experience, as well as how do you prepare the students to be ready to go do it once [00:28:00] you actually are deciding to get out in the field. What are some ways that you guys provide structure and support to this really complex and abstract process of place-based learning?

Scott Morrison: I teach outside of a classroom a lot. In fact, I learned a few years ago, I taught an environmental education course inside. We would venture outside some. We got around on campus. We did some walking classes. We went to [00:28:30] a farm that sits adjacent to campus and had class out there. We did some service learning with some community organizations. We built some Leopold benches that can be used outside so more students could sit outside. I learned that when we were outside, the dynamics were just a whole lot different than when we were inside. I decided, I think six years ago now, to just teach that course entirely outside. We've only not met twice in the last six years because of [00:29:00] severe weather in the area. Rain, cold, snow, we're outside.

But I have to prepare students for that. I have to do a lot of thinking beforehand. What do they need? What concerns might they have? One of the first times I took students outside, I didn't realize one of my students was absolutely terrified of bees and was allergic to them. Of course, there were some bees flying around. I had to deal with that in the moment and I realized I didn't prepare for this at all. That's just one example of the many things you do

need to think about, the protocols and practices when you're outside the classroom, [00:29:30] how you make sure students feel safe. You have communication plans with others so that they know where you are, how long you're going to be gone, where hospitals, urgent care centers are should accidents happen and should you need them. People, knowing where they are beforehand and being comfortable where it is that they are. Having the appropriate clothing, where they're going to be walking, if they might get dirty. If someone wears their super nice clothes to class and you're taking them outside and it's going to be a little dirty, that's not really fair to them. There's some of the examples I think of the preparation you need to do beforehand.

Kelsey Bitting: [00:30:00] I will say for a broader context, I very much appreciate and aspire to Scott's Intrepid outdoor pedagogies, but I think place-based learning doesn't have to happen outside. We teach at a residential liberal arts university in North Carolina. I teach a lot of first year students. Many of my students will come into my intro to environmental science, or intro to geology classes without an attachment to a local place. One of the things that I'm aspiring to do as I ground the lessons [00:30:30] that we are headed toward is to help them begin to develop that sense of place.

For example, I teach a unit on PFAS water contamination in Pittsboro, North Carolina in my intro to environmental science class. I do that in partnership with Dr. Jessica Merricks from the biology department here at Elon, who is also a co-founder of an organization called Clean Haw River.

We have those community partners come into the class to talk with students about what the community is [00:31:00] experiencing, how that's impacting people, and then we dive into the content. Throughout, I'm making this dance back and forth between the abstraction of how does water move from one place to another? Why is it carrying these PFAS contaminants? How do communities, in general, experience that? How does it impact human beings and other wildlife in the area? I'm toggling back and forth then to the context of Pittsboro, North Carolina. [00:31:30] We're looking at maps of Pittsboro. We're looking at plans for development for this enormous community that is going to further impact water quality in the area. I'm asking them to read narratives from local citizens and to watch PowerPoints that have been put together by researchers who are working on the Hall River problem.

One of the considerations, if you happen to be at a college, to really be intentional about helping them build that deeper sense of context [00:32:00] and connection to that place in a way that adds nuance, and depth, and breadth to. Different people experience this area in different ways. If you happen to be a low income family, you can't afford that really expensive filter in Pittsboro to be able to clean your water. The township's failure to act on this issue has a whole lot more meaning than if you were perhaps a more affluent family and you could just go out and buy whatever technologies you might need. Helping [00:32:30] them understand that the area that they live in now, that they have

come to be in, has all of these nuances and varieties of experiences, helps them attach their own meaning and sense of place to that area.

Scott Morrison: You can do place-based learning inside the classroom. My experience is largely outdoors. There's an outdoor pedagogy piece to it, but there's certainly things you can do inside a classroom to contextualize what you're learning in the community in which you're situated, or where you are from too. I really [00:33:00] like your examples there. It makes me think of when I talk about school segregation. We might look at local maps to see how residential segregation has led to school segregation. Then I might ask students to go look at maps where they're from. They might not have the investment in where we are right now because they didn't go to a local school system, but they might be very interested in looking at maps from where they're from. You can do a place-based learning even if you're in that place.

Matt Wittstein: How do you decide then when it's appropriate [00:33:30] to do place-based learning inside of the classroom walls, versus place-based learning, especially in Ben's case, he wants to teach a unit on oncology? To me, not a biology person, going down to the river and learning about the different species there seems like a really great way to meet that learning outcome. How do y'all decide which is the best approach?

Dani Toma-Harrold: I think Scott talked about this a little bit earlier, but I think viewing it as a scaffolding, I think [00:34:00] is really important. Starting with those community experts, those community partners and having them come into the classroom to collectively build some background knowledge of the location that you're in, and the community that you're working with. After that, having those experiences in the field can be really helpful. Then you already have that context before just randomly showing up in a space where context could be really helpful and important.

Kelsey Bitting: [00:34:30] I don't think it's an either/or. I don't think it's necessarily... Sometimes it's logistical. I have 30 students in my intro to environmental science class. I can't take them in the field every day, even though I'd love to. But taking them to Pittsboro once gives them a chance to really have a face to put to a name, in a sense. They get to see this place that they're talking about, or if I can get them out to the Hall River, this thing runs from here to there. These people are going to be impacted by it.

Being physically in [00:35:00] a space can help to deepen that sense of place for a particular location, but in thinking about Ben's context, I think he might be thinking about some place-based lessons that are in the field, and some place-based lessons that are not. Nathan Charlton did a really interesting master's thesis at Western Michigan University a couple years ago in the geology space where students were asked to pick a place that was meaningful to them. Every week of the semester, [00:35:30] they would then take whatever they had learned in class and think about how it connected to that space. They would

create one PowerPoint slide a week. At the end of the semester they would pick and choose from that deck they created and tell the story of this place that mattered to them through the lens of the course content.

That's just one example of a way that place-based learning can happen, that in a sense that students never have to leave the classroom, but then they might also... They've been [00:36:00] in those spaces, so they have that personal experience of it. They have physically been in that three dimensional space before. They have that whole sensory experience that goes along with it. Pairing together an outdoor experience with other non outdoors experiences that are intentionally built around place and the meaning that students ascribe to place can be integrated really nicely.

Scott Morrison: Yeah, Kelsey, I think you pointed out nicely how [00:36:30] not all place-based education is experiential education, that when we think about getting outside the classroom and getting outdoors into nature, into the community, that's an experience that's a part of that. Matt, I'm happy to talk more about how pedagogy can shift because when we're inside classrooms, we tend to be a little more teacher centered. When we get outside, I found in my work that it's a little more advantageous to be more student focused and student led than it is [00:37:00] to be teacher centered because there's just lots of room for them to explore and create and ask questions and be a little freer. But Kelsey, I think when we design our assignments and our objectives that we're trying to meet in a course, that example you gave is really key. What's a place that's accessible to you that you can go to that you care about where you can still meet the points on the rubric, for example, or you can meet the expectations of the assignment? There's [00:37:30] some creativity that the students have and some agency that they have.

I know Matt, when you prompted us with Ben's situation, he wants to take them down to the river. Maybe they can't all go at the same time and experience it together, but maybe some of them can on their own time, maybe some can go in groups. I think having options for them to go to the river and to other places would be a nice way to set up the assignment to say, "Hey, choose this." Also, "What kind of question are you trying to ask? What objective for the course are you trying [00:38:00] to meet? Here's a list of three." Just creating a menu of options for students to piece together what makes sense to them.

Kelsey Bitting: I love how those options for voice and choice for the students really foreground the student agency and center the students and place-based learning, which I really think is just a critical element of it. I want to mention one hybrid option, which is doing things that are on campus. Of course, for better for worse, that can be done well or can be done poorly, but we have, in geology, [00:38:30] a historical lineage of geology on campus field trips. Go look at what this building is made out of. At Elon, it's not that useful because it's all brick, but there are some rocks around. Analyze this rock. How does this connect?

At Elon, in our intro to environmental science lab, students go out to the ponds on campus. They actually monitor the water quality in those ponds. Sometimes what we'll see and what students really value most about that is I love Elon [00:39:00] and I have this personal deep connection to Elon. I had this chance to study Elon and Elon's physical environment.

Leveraging the campus spaces in ways that make sense for your instructional context and help you meet those learning objectives can be another way that gets students outside the classroom but doesn't necessarily come with the logistical hurdles of a trip to a river, or everybody trying to make it to a trail at the same time.

Dani, in [00:39:30] your experience as a student, thinking about the different contexts in which place-based learning can happen, what is your experience like of place-based learning that might happen in a classroom, versus on campus, versus off campus and in the broader community?

Dani Toma-Harrold: Yeah, I think as an elementary ed major and then also I have an environmental education minor, and African and African-American studies minor, actually, I've had a lot of different types of place-based education experiences. [00:40:00] On more of that natural side, I took Scott's class where we were outside a lot. I worked at a garden club. We were working in students' lived experiences and connecting that to nature and how they interacted with the garden. But I also took a course called Health and Social Justice where we connected philosophy, and politics, [00:40:30] and society of health disparities, and public health initiatives and stuff like that. In that class, it was corresponded with Covid actually. We were tasked with making mini zines, so small unpublished little magazines that somehow connected with the community. I chose to do mine about distance learning on an elementary [00:41:00] level.

Really assessing and connecting with the community to see what the needs are, and then connecting that to whatever course requirement I had. In this case, it was making a zine and writing a paper that described that. There's a lot of different types of, "Oh, I'm going outside and this is how I'm doing place-based education," or my whole major is kind of place-based education, in place-based learning, because I'm in the classroom and I'm learning how to [00:41:30] use my students' lived experiences as I'm teaching and connecting that to whatever course content curriculum standards that they're working on right then. Definitely a wide variety.

Matt Wittstein: Sometimes when we think about our higher education curriculum, we don't necessarily consider how things overlap and experiences overlap. It sounds like Dani, from your experiences, you had a lot of singular place-based learning opportunities, but one of the things I'm [00:42:00] curious about for Ben and his group is how do you get that big picture collaboration piece? Are there ways that you might unify the different experiences that students from one class get

that another class don't get? What are ways that they might share those experiences together and build something in the longer term?

Scott Morrison: My go-to response to that question is related to social media because it's a place where people [00:42:30] put out publicly their experiences, who they are, what they've learned. My first thought is a hashtag on Instagram, and maybe there's an account they co-manage and students create Instagram posts that reflect their learning across courses. You could have them all post on that one account, or if they felt comfortable posting on their own personal accounts using a unifying hashtag, someone could follow the hashtag and see all the student contributions. There's an authenticity there. I [00:43:00] think Dani spoke earlier about what place-based education, one of the affordances is that it does provide a real authentic context for learning. What is more a real authentic product from learning than something that's posted for other people to see outside your professor or instructor or your classmates? That's the first thing that comes to mind as a unifying place to share broader learning.

Kelsey Bitting: I'll go with the analog version. I had a colleague who used to say community is [00:43:30] the killer app, so being connected with other people. I don't know whether it's a crossover event when the classes could come together at the end of the semester to talk about... For example, if we take the Duwamish waterway, the river there as the centerpiece, to bring together different courses, and whether it's each class creating some sort of representation of what the river means to them through the lens of the course and through the lens of their lives, and then sharing [00:44:00] that with the other courses, or even small groups. Let's get one art student, and one history student, and one microbiology student, and one intro to biology student in a group and collectively get it all on the table. What does the river mean to you? How would you, as a community, create something that would share that out to the world?

Place-based learning has to center the human meaning ascribed to places. [00:44:30] It cannot be... If whatever you're teaching it in, whether it's art and the students are reading their personal experiences, or history, or microbiology, but there are these larger cultural and sociopolitical and human meanings that we ascribe to something. Bringing in that richness and offering students the opportunity to synthesize that for themselves and give voice to that for [00:45:00] themselves could be in just an incredible opportunity to let them sew up the semester, in a sense, put a bow on it, put a, "Yeah, look at this awesome thing that we created," that represents more than just one course, more than just one disciplinary perspective, more than just one human experience.

Dani Toma-Harrold: This might be a logistical challenge, but I was imagining a whole community event where it invites people from the different courses, but also people around [00:45:30] the river and who you use the river a lot and who may be interested in seeing that art piece, or that historical piece, or that biology piece. I think that would be super interesting and makes it even more place-based and even more community centered by inviting those community experts who might have

come in to the beginning of the class to share with the students their expertise, and just abiding everybody in the community who regularly uses and sees the [00:46:00] river. That can also connect to the greater college community as well, so everybody gets to be involved.

Matt Wittstein: I also want to ask if there are challenges that Ben should be looking out for, just things to be prepared for as he's getting ready for his semester that are common to place-based learning, or I think we've crossed the line a little bit, to field-based learning as well, that y'all just want to get out there to make sure Ben's aware of as he tries [00:46:30] this for the first time?

Scott Morrison: I'm to go on a deeper level first because there are definitely some logistical things to think through. When we think about place, when we think about rivers, we often forget that the people who live there now are not the people who have always lived there, that the people who live by or utilize a river, or a park, or land, might consider themselves owners or citizens of that space, [00:47:00] but historically, that might not always be the case. There's some history that might need to be attended to unless we continue a colonizer mindset around land, around place. I think understanding the history of colonization and oppression, especially as it relates to land and the environment is something to consider. I don't know that it comes out in Ben's unit that he plans just yet, but it's something I would encourage him and others to think about as something I continually struggle [00:47:30] through as to how to attend to the complexities of the history of the land that we're on and how we're living in this space currently.

There's one more consideration that I also still wrestle with. That is, I might want to center my students and their lived experiences. I think Kelsey and Dani have also talked about that. I want them to be participants, co-creators, co-teachers, but what does it mean for nature to be a co-teacher at the same time? Or my community to be a co-teacher? If Ben wants to learn more about [00:48:00] the river, or the river becomes a means to understand biology or biological processes, what voice does the river have? What story does the river tell? How do we attend to the listening that might need to occur on our part to the river, to the land, to nature around it? Again, that's deep and it's complicated, but I think it is a consideration that needs to happen when doing any type of place-based learning.

Dani Toma-Harrold: [00:48:30] I would also add, when working with place-based learning and using community voices and community expertise, make sure you're not overstepping, especially if you do have more of an outside perspective. If you're a community member, that can make that dialogue a lot easier, but if you are someone who is more outside of the community, making sure that you're listening first and then bringing your ideas and your voice, but really seeing [00:49:00] their needs, or their ideas, and bringing that in to whatever you're trying to do with the class, whatever you're trying to do with the river and that

space, but really making sure you are listening to community voices first and then planning around that.

Kelsey Bitting: I'll put my pedagogy hat on for a minute and say a couple of things about teaching in such a potentially radically different way. Place-based teaching, and developing sense of [00:49:30] place, and leveraging place in the way that it centers students and asks them to articulate what places mean to them, requires some soul searching and some reflective writing, and some discussion, and some things that students aren't necessarily used to seeing in a science class. I think, unfortunately, a lot of students come out of the K-12 world, and even in the sciences in colleges, may have the experience of, "Okay, [00:50:00] science is you give me the textbook, I memorize this stuff, you give me a multiple choice exam." That's the contract that students think they have signed up for when they take a biology class, or when they take a geology class, or an intro to environmental science class. Helping them understand why that contract is not in their best interest and make that mental shift to, "Yeah, you matter in this space. Your experience of the world matters in this space."

Helping [00:50:30] them understand how that's going to help them achieve whatever goals it is that they came into the course with, everything from, "I want to get my A," to, "Maybe I want to learn the content for the next class," to, "Maybe I want to have a fun experience." Fun is not to be underestimated. Not taking that as a given, but really being very explicit about why you're doing what you're doing and why that is important to the learning experience.

I think the other quick pedagogical note [00:51:00] that I'll put out there is that it's easy to fall into the pitfall of changing one aspect of the course and not realigning the other aspects of the course that might not fit that new epistemology, or that new way of doing, teaching, and learning. If I'm asking you all to do reflective writing and talk about the meaning that you ascribe to this river and to this set of trails that are by the campus, but then the way that I'm grading you is by giving you that multiple choice test, [00:51:30] there's going to be a misalignment there that is going to undermine students motivation to engage in the parts that are not incentivized with those points, unfortunately.

It may even cause students to question your authenticity and commitment to this pedagogy. Thinking about both that transparency piece, why are we doing what we're doing, and the alignment piece, how am I supporting the value that I'm articulating around this piece, [00:52:00] with the other elements of the class, I think are really important considerations to bring out.

Scott Morrison: I also think that when you go outside the classroom into the community, into place together, as a group, if that's possible, whether it's on campus or to a river, to another locale, it's more than just for academic purposes. There's a lot of community building. There's a lot of connecting that can happen. Students get to see different sides of each other. The faculty member gets to see students [00:52:30] in a different way. You can have other purposes that might

be on the more affective side that are social and emotional rather than purely academic.

Place-based learning, in many ways, is about process, kind of like project-based learning is, kind of phenomenon-based teaching is. You have to help them through the processes that you want them to go through. Have them do some reflective writing. If they do have multiple choice or objective type assessments, maybe also have them do some essay writing or some other [00:53:00] kinds of maybe creative writing that could accompany to show that they've gone through this process and it has enhanced or challenge their learning in some way and honor the work they put into that side of it too.

Dani Toma-Harrold: I want to further that and say finding ways to also extend the activity. Ecology doesn't have to be the only part of the class that is place-based. I think finding ways to make the other aspects of the course place-based [00:53:30] would be really beneficial for Ben to consider and think about.

Matt Wittstein: Well, I have learned a lot about place-based learning today. I'm super excited to take what you all have shared back to Ben. Thank you so much for sharing your wisdom with us today.

Scott Morrison: Yeah, you're welcome Matt. Shout out to Ben and colleagues. This sounds amazing. I'm jealous and it's challenging me to think about not just getting a grant to do some cool [00:54:00] stuff, but who could I partner with across disciplines to give students more engaged experiential learning opportunities in higher education? Yeah, hats off. Kudos.

Dani Toma-Harrold: Yeah, thank you so much for inviting us. It sounds like a super exciting course. I wish I was in it.

Kelsey Bitting: Thanks for having us, Matt.

Matt Wittstein: Welcome back Ben.

Ben Machado: Hey Matt, good to see you again. Thanks for having me back. I'm excited to hear what [00:54:30] the panel had to say about my project.

Matt Wittstein: We had a great conversation with Kelsey Bitting, Scott Morrison, and Dani Toma-Harrold. They're all from Elon University. Kelsey and Scott are faculty members in environmental sciences and education, respectively. Dani is a senior elementary education major that has done significant undergraduate research with Scott, specifically about place-based learning.

To try to summarize our conversation [00:55:00] I think is almost impossible. Bear with me as I try to exchange the ideas as best as possible. I think central to the conversation was how place-based learning can de-marginalize people. It can allow you to honor the history and culture of the indigenous community,

but it can also really center your students in the teaching and learning process, which I thought was a cool way to approach this.

We spent some time distinguishing place-based learning [00:55:30] from outdoor learning, from doing some of the pre-work to understand what the Duwamish means to your students, to understanding their both positive and negative feelings that they might have associated with being outdoors or being on the river, to acknowledging the transitions through history and de-colonizing how we think of place. Our conversations really broadened my own understanding of place-based learning. There are so many things for you to consider as you think about how you are going to implement your version of it.

[00:56:00] When we first talked, we were thinking of place-based learning a little bit more as a different way to describe teaching outdoors. Connecting to your grant, the mindset of place is really going to empower you and your students to consider the complexities of where they are. They're in Seattle. They're on the Duwamish. They're in your particular classroom, that is also a place. They're on your campus and so on. But also, how you each got to those [00:56:30] places and how you want to exist in those places. It really changed the way I framed place-based learning as something different from outside or outdoor learning.

In this way, you might consider slowing down getting onto the river and spending a little bit more time to learn about your students and ask them to aid in co-creating some learning opportunities that connect place to whatever your particular learning goals are. Ask them the question, how might they include the river or the trails near [00:57:00] campus to reach a specific learning goal related to ecology or another topic in your course? Giving the students some of that agency and autonomy will very likely lead to strong connections when you go back and share experiences with your colleagues and their students from the other courses from vastly different disciplines.

That brings me into my second point, and this is the panel was questioning this idea of why stop at ecology. [00:57:30] When we talked about it, it was two weeks ecology unit, done, check. They really wanted to get you to think about, well, how can you stretch yourself? Again, it totally okay to ask students for ideas. How would you stretch yourself on taking other features of your place and talk about some other units in your biology course?

I can imagine that there might be genealogical resources for the region that could relate to a genetics lesson, or maybe even just a metaphor of cellular function relating to how the class [00:58:00] or the college operates. Dani really wanted to stress that doing place-based learning has so many possibilities. Really stretch yourself to integrate it across the whole course, if you can. Maybe not always in that outdoor teaching way, across other lessons and other topics when you see that opportunity arise.

We also touched a little bit on the collaborative piece of your grant, and really, you should just be looking for ways to connect and collaborate across classes. Scott was a big fan of social media [00:58:30] or hashtags as a way to get people in different groups to connect with each other. Kelsey offered the idea of having some sort of big event, and you had talked about the possibility of using the Long House. Dani really built on that idea and said, "Make sure if you're doing a big event that your community partners, that your place-based community members are also invited and a part of that."

Finally, the panel also wanted to express to you and hope that you can appreciate how complex the concept of place is and [00:59:00] how there will almost always be room for growth. You don't have to do it all at once right now, but hopefully hearing some of their ideas will help you as you figure that out.

I'm curious, how do you feel about slowing down in the beginning but then offering maybe one or more place-based learning activities with some of your other units?

Ben Machado: Thanks, Matt, for all of that really amazing information. It gives me a lot to think about. [00:59:30] I fully embrace the idea of slowing down because I have found when I really just try to push and show students what I think is the way they should be learning, it often doesn't work well for most of the students. I think the idea of giving them agency about how they want to engage with the place will work a lot better for the end goal of having them [01:00:00] understand and appreciate the area of the Duwamish, the area where South Seattle colleges, Seattle as a whole, it hopefully will give them the ability to actually engage with it in the way they want to, which doesn't necessarily require you to be at the physical location.

I think it will fit in well with my goal of approaching it from an ecology, human interactions with animals and plants and ecology module for the first beginning [01:00:30] part, but it'll allow me then to give them that ability to think about how they want to engage with it over the quarter. I like the idea of coming back to it. I really do like this idea of using water from the river to look at microorganisms. We could do something like that when we talk about cells. You talked about genealogy. When we talk about genetics, we could discuss [01:01:00] how indigenous families are still around in the area and they've married settlers. There's all this history that really gets into genealogy stuff.

I think there's ways to integrate it more, as you all are suggesting, that will definitely make the place-based learning more impactful. Thank you. I am learning a lot. I really appreciate everything your panelists said and am excited, really excited, to [01:01:30] get this project going.

Matt Wittstein: I think one area I want to ask you about a little bit, because it caught me a little off guard, is how might you prepare for some students feeling uncomfortable being outside, or feeling uncomfortable down by the river? In particular,

working off the land? While that might seem honorable to some folks, it also is a sign of potential struggle that you have to live off of the land. [01:02:00] The idea of having to go down to the river could actually be different for different people. I'm curious how you might fold that into some of your pre-work of getting to know your students and building some of that trust between them and between you.

Ben Machado: I think what I want to do is I want to give them the resources to be able to learn about the space and the place on their own without having to go there. We as a class will do that ecological monitoring around campus. I want to give them the tools [01:02:30] to be able to understand how those can be applied, but then it can all be done in the comfort of their home if they want to learn about the history, or to learn about the whole aspect of indigenous rights. There's so many different aspects they can come at it. I think my approach will just be to allow students to do it the way they feel comfortable. If they don't actually want to get on the river, go [01:03:00] to the river, then it's not going to be something I require.

Matt Wittstein: I think that's something that Scott and Dani from their direct experience with this really brought in there, is that they can do a lot of the activities you're talking about in their own home, wherever their home is, that they can go for a walk around their neighborhood and potentially see some of these things.

I'm really excited to see how this plays out for you. Thank you so much for sharing your class and your idea and your grant and your colleagues with us to [01:03:30] be a part of this show. We're really looking forward to seeing what you're able to do with your place-based learning, with your outdoor teaching, with your biology class, Ben. Thank you so much.

Ben Machado: Matt, I got to say a huge thanks to you for allowing me to come on, and a huge thanks to your panelists, particularly the student, to get the student perspective. I really appreciate all of the information that you've been able to give me.

Matt Wittstein: [01:04:00] Limed: Teaching with a Twist, was created and developed by Matt Wittstein, associate Professor of Exercise Science. Dhvani Toprani is an instructional technologist and serves as a producer for the show. Music for the show was composed and recorded by Kai Mitchell, a class of 2024 music production and recording arts student at Elon University. Limed: Teaching with a Twist is published by and produced in collaboration with the [01:04:30] Center for Engaged Learning at Elon University. For more information, including show notes and additional engaged learning resources, visit www.centerforengagedlearning.org.

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