



Podcast transcript – How are students driving cultural change towards sustainability in design education?

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Robert Hopkins

Hello and welcome to the AHR podcast where we engage in captivating conversations about the built environment and its influence on shaping a more positive future. I'm Robert Hopkins, director at AHR, and previously I held a Visiting Professorship in biophilic design and sustainability at the Cardiff Metropolitan University. Today we're exploring the role of design education in preparing graduates to lead on sustainability responsible practice through the Engineering Future Generations program at Cardiff School of Arts and Design, students, staff and industry partners have collaborated to create a curriculum rooted in carbon literacy, biophilic design, and interdisciplinary problem solving.

Joining me today is Martyn Woodward, Deputy Dean at Cardiff School of Arts and Design. Hi, Martyn do you want to give us a little introduction to yourself and, uh, your background at the school.

Martyn Woodward

Rob, I would I'm Martyn Woodward. I am, as you say, Deputy Dean currently for Cardiff School of Art and Design.

I have a background in broadly design areas, but I also have a background in anthropology, media and ecological philosophy. I've tended to navigate around developing interdisciplinary and futures facing education for about 10 years and got really, really interested in the topic of sustainable living through the idea that how can we model and understand a world where we coexist alongside non-human persons ecosystems? What might that look like and how might that work? And that's really driven a lot of the work that I do in the school, but also across other spaces I work.

Robert Hopkins

Great. And, I guess the kind of the timing, of our work on the project we're involved with was perfect.

Really, going back to 2021 when you first reached out, sue me, we'd just come out of COVID. We were allowed to use our telephones but weren't quite allowed to talk in person. And, our initial conversation, I've got to say I was, I was a little bit sceptical in the first instance about what, um, what might happen on this program. And I was completely proved wrong. You know, my interest in sustainability is pretty deep rooted. And, I think what I didn't want to happen was that I was just seen as someone that was kind of rolled out did the annual sustainability lecture and then got put away again. I really wanted to embrace the subjects area. I think one of the surprises to me was, again, my kind of natural prejudice. I think as a, an architect, I thought I'd be talking to architecture students.

But this wasn't an architecture project. It was a school-wide project. Do you just tell us a bit about the goals of, of the project? When we set out and then we, pivoted very quickly, didn't we? Within the first couple of months

Martyn Woodward

We did. Yeah, I think it been the first couple of weeks actually, we pivoted. We have as most art and design schools that might have an architectural or built environment department within their establishment would understand, we have a handful of programs that are very good at sustainable energy, stable thinking, energy use, mapping carbon literacy and other kinds of things cause it's built into what it means to be an architect or an architectural design technologist and that those skill sets whilst being at the centre of those programs, especially post COVID where we're dealing with understanding the complexity of what it means to work with an environment, not just impose your will upon an environment.

And the implications of what that means really made us think very differently about how that skill set we already had built in that space. With quite successful research trajectory built behind. It could be shared across the rest of the school and challenge everybody else to think in a similar way.

But in, on their own terms and based upon their own ways of thinking and that the initial germ of the idea was that where the whole university and the school in particular was looking at the Wales Future Generations Act and sustainable development goals. Mapping that it might be a way into beginning to understand how we might live.

Myself and a colleague of mine found a call from the Royal Academy of Engineering for projects visiting professorship projects around sustainability as a kind of general theme. And we thought, initially we thought, perfect, this is a way for us to go in, look at the SDGs that we're currently trying to follow, look at the frameworks and find a way of deploying them locally.

And that was the starting point. And I think what a couple of conversations with you, and then the first week of you arriving really allowed us to do was realise that was the wrong way of starting because sustainable development goals and tick boxes are just that. They're tick boxes that just get rolled out and you make sure they work.

You don't change mindsets or behaviour. And I think that when the first week you arrived and we had an open conversation with the teams involved and as well as the dean and

others, we quickly realised that this was about. Cultural change, behavioural change, and making that cultural change and behavioural change stick regardless of who comes into the building.

And I think you said a wonderful thing during that conversation of what would happen if the building itself challenged everybody to think differently.

Robert Hopkins

Yeah. And I think again we established really early on in, that process that there was, some subject areas that we thought would be you know, would be really on board with the conversations, others that we thought might push back and be, quite, distant from the program. And again, we were approved wrong quite quickly on, that level as well, weren't we? And again, some of the projects that will come onto to discuss came from subject areas. I, genuinely, there were, the ones that I got most excited about, but in the subject areas that I really thought would struggle around this sort of conceptual framework of what carbon literacy might mean to, their subjects.

Martyn Woodward

I think the, the mistake we made was twofold, right? One, one was to assume that the scientific framing of carbon literacy and energy efficiency and that kind of stuff would be something which is alien to the creative people. Yeah.

That's the first mistake we made. But the second mistake we made was that we, we underestimated what the students wanted. And it was, I think it was for me, the real eyeopener was when we first kickstarted the project and the idea, we pitched it to the whole school. If you remember, we asked them to, to buy into the vision and tell us how they wanted to work with us and what they could contribute. And we suddenly found all sorts of pockets of practice, which aligned perfectly well, but nobody would describe them as carbon literacy. Yeah. So we realised there was another way of thinking about the problem. The real insight was when the, when we asked the students what they wanted and we did some surveys with them and the amount of students that of that generation at the time, because we have a completely different generation of student three years later.

But, uh, the generation of student at that time was so invested in climate adaption from the perspective of understanding it and understanding how they can engage with it, but also being given the freedom to be able to explore it as a part of their practice. And I think when you bring those two together, the student appetite.

For the value of the bigger picture, but also allowing disciplines that wouldn't normally see themselves attached to this kind of project could be attached to this kind of project. You're working with a very, very, very different community of practice than we thought we had.

Robert Hopkins

No, I think, I mean, for, for me, I think the pandemic actually does us a little bit of a favour, didn't it?

Because, we had a cohort of students who's, who'd literally spent, a period of time. Studying in a completely different way, in a lot more isolation and a lot of the issues that would've previously been quite conceptual issues to, to other students. They were actually real issues.

People had experienced those issues firsthand. And so taking that on board then in their practice and their studies just felt like a natural evolution to them, I think because they knew what where we might be heading if they chose to put it on the back shelf and ignore it.

Martyn Woodward

It was a real moment of clarity that we tapped into something which the entire population of the school had an interest in. You're right, the type, the timing of it was absolutely perfect and it, and continues to be so I think.

Robert Hopkins

And you talked about, that early conversation about, the building and using the building as the narrative to talk about carbon literacy.

It wasn't the building, it was the whole environment around around the school, wasn't it? Because, some of the, those early projects there was still social distancing in inside the building, but outside the building, we suddenly had this flurry of activity led by Kieran and all of the gardens and the growing of. Do you want to just say a little bit about some of those projects that, kick started?

Martyn Woodward

Sure. Yeah. I think what this project really did for the school was provide a platform to allow those that had not been able to find traction with work related to it. Something to buy into and be a part of.

And Dr Kieran Caravan, who's one of our principal lecturers in the school whose background was in natural dying and weaving had been working on a natural dye garden for a number of years and trying to get it off the ground as a way of finding space on the university campus for us to grow from seed to cultivate and help students understand what that means, but to then use the materials that we grow in the textiles and fashion design programs as a part of the curriculum.

So they would be able to see it if we say from seed to table and to work that through, not just as a process to experience. But as a part of the design process itself, because it shapes the practice in, especially in textiles, from being about ordering materials in order to create something that's being ordered or designed for somebody else to being a mindset which is locally sourced, locally responsive, and will create designs and utilise materials, which.

Are naturally grown, locally sourced rather than being shipped in. And it we managed to join this project. We managed to not only, convince the university to allow us to have some estate on the campus to have that garden and to build it and to grow it. And it still maintains and it's still there doing its job.

But we also managed to build research communities around it, across the entire university and invest in technology and robot arms and all sorts of things.

Robert Hopkins

Yeah.

To sustain it beyond the initial three years of the project.

Robert Hopkins

I mean, that, that was absolutely fab, wasn't it? That, it wasn't just the subjects areas within the School of Art and Design.

There was suddenly other schools, other faculties, it was, a common thread. Who'd have imagined that we've had computer scientists joining a program about carbon literacy when we kicked off the process

Martyn Woodward

And the fine artists not forget. Because, um, the Paul Grand John's work, um, in that was exceptional.

Robert Hopkins

Yeah.

Martyn Woodward

And it, just goes to show that you can mobilise different mindsets to contribute to a collective question when you provide the culture to allow them to.

Robert Hopkins: And again, I know I feel like I'm jumping around a little bit, but, fine Art was one of the subjects areas I was genuinely quite concerned about from my own position to, to think how am I going to engage with them around the subjects of carbon literacy?

And they actually produced what was my favourite project. When they developed the Pigment library and, on a number of levels, it was, the ability for fine artists to take a step backwards look at both the heritage of fine art on where colours came from, but then that, as you said, that idea of localism .

A kind of an ochre colour developed in South Wales will be different to an ochre developed in the Midlands. That'll be different to an ochre in the Northwest. And so you develop this sort of nature's palette actually has its own geography as well?

Martyn Woodward

No, I think the, um. The fine artists are always quite, I say misrepresented in these kind of conversations.

Yeah. Because there's the biases towards what they do and what they don't do. They are the ones that are the most materially savvy and will understand all of those wider cultural things because it's a part of what they do and I think it's a testament to.

How we set up the project to be able to allow anybody to engage with no prejudice that allowed them to engage. And , the Pigment Library is something with that. Laura Lily technician and the rest of the team have been working around for a while, um, with the students engaging in it. But it was the formalization of it and the recognition and the platforming of it that gave them the confidence to be able to really push with it.

Robert Hopkins

Yeah. Again, I genuinely felt out of my comfort zone for the whole three years actually, which was brilliant. That's something that I, thrive on not repeating things and going on, but, so effectively I felt as though I was on the same journey as everybody, whether they were kind of staff, whether it was students, whether it was researchers , that were, coming in and again, I think you, you had some really great advice to me. I think it was when I was going to do, a session a day with the fashion students and, I had a little quiet word with the said, look at me. I don't know anything about fashion whatsoever.

And you, pointed at the at the lecturing team and said, they're the people that understand fashion. You are the person that understands. Carbon literacy and sustainability. You stay on your topic, they'll stay on theirs, and you'll get a really nice mix coming together.

Martyn Woodward

Yeah, I think that's absolutely right.

The danger is when you try to own and control the thing that you're unfamiliar with. And I think the built environment space, I understand I've taught architecture in Yeah, in bits, but not not in the way you would or the built environment team ever would.

And I think when you go into a space where you are not presenting fact. You're not giving them methods to follow where they have to follow it, and they're assessed on that. You're going in for a conversation about how they can think differently. There's no threat. And I think a lot of the conversations that we had together, but also with the wider team that were involved in this we had no expectations around what we'd achieve at the end.

We, we had no preconceptions other than. We've got to somehow find a way of making this culturally embedded. And, I think the fact that we didn't have an idea of what the end result would be and we allowed everyone to shape it for us

Robert Hopkins

Yeah.

Martyn Woodward

Was a master stroke of, change management for the project.

Robert Hopkins

And again, I don't think we anticipated that the project inception. An influence it would have on shaping the evolution of the curriculum. Within the skills you answer, just pick up on that a little bit.

Martyn Woodward

Sure. It was a nice coming together of different timeframe.

So we had the post pandemic, which allowed us to have the appetite for sustainability and, nature-based work. But the project also fell two years. Before the school had its periodic review of its entire curriculum. So the last year of this project was the year we would be revalidating our entire curriculum.

And I took advantage of that as a way of seeding a three year project that would allow us to identify. The appetite for the kind of work staff and students wanted to do. and then for you and I to spend the last year looking at where we could mobilise some of our modules or our spaces in the curriculum to do this explicitly.

And, we've always had quite an innovative curriculum in our school with every single program engages in, an interdisciplinary project at least once per year with the three years and. In order to ensure that every single program in the school would be able to take advantage of this way of thinking around different kinds of projects, different kinds of questions especially around the carbon literacy and the kind of future generations work.

made a lot of sense for us to rethink those interdisciplinary coming together spaces and reframe them around the kind of skill sets that we were starting to develop as a part of this project and allow the projects we developed with the staff to be delivered live with students as a part of the curriculum from that point on.

And I think the natural dye garden's a very good example of that in that, it continues to still be used in the secondary of study in this module for exactly the reasons we designed it for. But it now has twice the number of students attached to it from every single discipline in the school.

Robert Hopkins

And again, for me it was an essential part of the curriculum was this blurring of boundaries of where one subject. And another one begins. And the realization does it actually matter what label you're Exactly you're on?

You're studying to be a designer and that's about a mindset. It's about developing a process. It's about developing core values, and why should that be just limited to ceramics or just limited to interiors or just limited to fashion?

There's a consistency in, design process. There's a consistency and ethos is a consistency in values. So, for me it was fantastic. They were the most enjoyable projects when, I literally had no idea when I was sat with a group of students who came from which background because it absolutely didn't matter.

They were the purpose and, was a single purpose. And it was, , about thinking in a, different way and thinking about carbon literacy. It wasn't about, attaching a label to specific people within a group.

Martyn Woodward

No, not at all. And, but now we've had a couple of years since the project finished of seeing these projects develop a little bit and coaching around how we can get the maximum output of those kind of things. We have, I believe, what is it this year? 12. 12 projects at level five that are all aligned to real world, 21st century kind of sustainably focused challenges, all of which. Are not linked to a single disciplinary concern because the disciplines bring their own knowledge to the space, and the outcomes are genuinely collaborative.

We exhibit them every year. What's been really nice this year is we've seen the first output of some of

Robert Hopkins

Yeah.

Martyn Woodward

Which is just a beautiful problem they had where they identified not only. Is the water usage and the chemical the chemical usage of, the normal process.

Quite destructive. But it's also energy consuming in terms of just being able to run the space. And the program team are experts in thinking about alternative materials to use for development processes and creating their own processes. And we now have the first year where students have gone through that and developed, a set of photographs from very different kinds of materials with 50% of the, water usage and energy usage as a part of it. So the students are engaged in the redesign of the process, of the very discipline they're a part of.

Robert Hopkins

I've got to say, the darkroom project, that was a mind officially blown moment for me when again, you have this idea of, specific chemicals and a specific process that is what you have to do to produce an image.

And then that was all. Thrown on, its, on its head completely. And the scavenging of local materials, and forgive me if I'm wrong, was it seaweeds or a, it was a kind of a byproduct of seaweed that they've used as, the chemical alternative. And Cardiff is not short of that as a, a raw material.

Martyn Woodward

No. And it was as you say, seaweed is one of them. Turmeric was another one.

Robert Hopkins

That's right.

Martyn Woodward

Yeah. And a couple of others. The one, so it is on show right now, in, in our building is one that's built from local nettles.

Okay. That were forage and used to create a base. And, what's beautiful about it is they look like 18th, 19th century prints. Yeah. Because that's the aesthetic of them. What the students are starting to understand is the aesthetic we expect of photography has been constructed based upon the chemical processes that we expect to use.

And old photographs never used to use those same photos, those same kind of chemicals. When you create. A new process that utilises different processes, different materials and creates a different aesthetic. it's not that it's wrong, it doesn't look like a photograph. It's that's the new aesthetic of sustainable photography.

And there's a very interesting conversation going on with the students. Around what good photography looks like and what a good print looks like, because they're changing their expectations.

Robert Hopkins

For me, it wasn't, just about, pretending that everything has to stay the same. There's a new aesthetic, there's a new approach, and actually embracing that rather than, trying to just mimic what, some pretty, pretty nasty chemicals we're doing to say, thanks, that was really useful.

But, we've moved on now.

Martyn Woodward

I think it's the power of being able to put that in the hands of the students who are going to lead the next generation of practice. Yeah. So, the program team are very open and very good at not holding onto a legacy for the sake of holding onto a legacy.

Yeah. Because it's what they do. They're all very open and very progressive in their mindsets. When you bring that all together and you ask the students to engage in an education, which isn't just about learning the craft. It's learning about the craft that should exist and giving them the agency to be able to challenge that and develop new approaches as a part of their degree. It's transformative.

Robert Hopkins

And again, that leads I think, quite nicely into, there was a process of looking inwards into the school and design process, but then also a process of looking outwards. And, I've long championed this the future generations acting in Wales I think it's a fantastic piece of legislation.

How did you. Managed to, reach out and talk externally to, the Zenith and to government about connecting into the Future Generations Act and what the school were doing.

Martyn Woodward

Sure. So during our projects, but also just afterwards, as we were validating things we had a couple of contacts there who knew what we were doing and were very supportive of it.

They were actually a part of our validation events as external, experts. Uh, helping us shape some of it. It's more recently that we've had some real traction with this. We had a visit this week from the new, commissioner for the future generations to. To come and look at what we do and to get a sense of the kind of culture we've created, and the the student work, but also the mindsets that our students and staff have adopted.

And, for us, it was really an opportunity to showcase what we'd set in place and how we developed it, but also to revisit. A conversation from a few years back where we had them visit us originally and to see the difference. And, it was really nice to get the feedback that all the students and staff work in the way they talk about what they do aligns wonderfully to the ambitions of the Future Generations Act because it doesn't deal with, in the way we've said already, it doesn't deal with sustainability as something you bolt on.

It deals with the problem of thinking differently about what should exist, why it should exist, and asking how you can make genuine societal change. And at every single project we saw this week, every single student who talked about their work were able to articulate very, very clearly why they did it, what the intention was, what they want to do next and how what we'd seeded as a part of our project had really allowed them to feel like they had the ownership to, to be able to do so.

So it was quite. It's quite emotional actually, to listen to the students and staff talk. Yeah. And for the new commissioner to be able to hear it and also endorse what we do and want to continue working with us on an, on a number of initiatives going forward.

Robert Hopkins

And, do you think that Welsh government now will want to essentially export this to, the wider world as being part of the USP of Wealth government?

Martyn Woodward

I'd hope so. Yeah. I would hope that, um, that what we've managed to develop with that team is a partnership that will allow us to help them do that as well. Yeah. Because I think the government themselves will have their own, agendas and workloads to fulfil.

I think it's more about. Those interested reaching out to help them. We are an education institute, which is a modern university who prides themselves on being civically minded and working with communities. We don't just work in the game of education.

We have a purpose to serve the wider community around us, local community. And by working with the future Generations Commission in the office in a partnership way, where we concede the ideas. Alongside them. We're part of the bigger picture piece. I think they're very, very up for that kind of collaborative opportunity.

Yeah. But it's our agency. We can wait for others to find us, but we've got to go and tell them we're doing it and and really kick down the door. Yeah.

Robert Hopkins

Great. And obviously, the official piece of work came to an end a year or so back now, and there was some new courses that were in the off just as we were bringing up to a conclusion of those courses. Are they now live?

Martyn Woodward

Yeah. So, uh, at the time we were developing interior architecture, which was a kind of a sister program to our interior design program, which is now coming into a second year. This year coming, yeah. So yes, we had a relatively good intake for that in the first year, and because the, we designed the curriculum for that to feed into what the interior design students were doing in the first year.

They've already been brought into that space quite nicely. We also, have now developed a January intake.

Robert Hopkins

Okay.

Martyn Woodward

For international cohorts in interior architecture and our ADT program for the same reasons to bring other access routes into to allow different students to come in.

And that kicked off this year too. What's really nice about that is they've come into the thing we set up and where older students would've seen the transition. These guys would come in for the first time and seen it and they're thriving in it. Absolutely thriving in it.

Robert Hopkins

Great. We're recording this just at the back end of April.

It's always the most exciting time of year in any design school. The run to from Easter into end of year shows. How much do you think the influence of the Carbon literacy program, how much do you think that'll be in evidence at the degree show?

Martyn Woodward

It will be everywhere. Since the project started, and the year since the degree show contains work. In every single discipline that touches upon these themes in a very interesting way. It's not signposted overtly as being the carbon literacy work because it's so embedded in the process of creating the work and the thinking around creating the work.

You've only got to scratch the surface and the students will be able to talk through how the work achieves those goals. We have a number of projects every year, which explicitly work in this area and try to be innovative and progressive and you can see them and more showcase them. But what's been really nice to see with the student work is.

And in a way, counter to how. I had initially seen the project as being successful at the start, which was, oh, we're going to have some wonderful work we're going to be able to point to and say, look, that's progressive. Isn't that wonderful? The opposite has happened in that all the work has been elevated because this thinking is implicit in the thinking that creates all the work in the first place.

And it is showcased every year we have. A series of podcasts we do every year as well as a part of our degree show where the students talk about the research side and the conceptual side of their practice and their written components. They do at level six. And over the last two and a half years, we've managed to create a repository of a roundabout 25 podcasts around the theme of carbon literacy just from those students that came forward.

Robert Hopkins

Right. Great. So they're holding the torch for the next cohort of students to, to come in then.

Martyn Woodward

Yeah, absolutely they are. And um, it's amazing also when we have our open days and our applicant days for, yeah, for new students arriving the last couple of years, the amount of them that cite our podcasts around carbon literacy and sustainability as one of the reasons why they wanted to come and speak to us is being astounding. Be absolutely astounding.

Robert Hopkins

I think that takes us to my final question really, and that's now looking to the future and, how you think this might evolve now over the next few years. In terms of what influence it's going to have on the school and how the outcomes might look for that as well.

Martyn Woodward

Well, I think the research projects that we've seeded, so the natural die garden and the material library and the sustain dark room in the photography space have all continued to receive research funding and continue to grow. And they will continue to grow from strength to strength, we hope.

And the ambition there is to create, genuine research communities, that will be sustainable beyond just the disciplines they come from. So it will be university wide. Effort is the intention there in terms of our own curriculum. We managed to create such a platform for people to buy into and to find a way of working on that's enabled us to really think about what the next iteration of the school identity is going to be.

And we've just started to look at the the green skills for planet, which has come out of the design council and find real resonance with what they're aiming to do in terms of changing behavioural patterns and mindsets. So we're going to now start using the platform we've built to align to some of those principles and potentially start looking at, what I'd like to really invest in is different kinds of degree program.

So we have our traditional art and design degree programs you'd expect to have. But if we were to think outside the box, what would a, an urban futures orientated, genuine post and non-human degree look like. And what would it do? Who would it service and how could we develop one?

Robert Hopkins

Well, I'll put my hand up. I'll sign up. But that sounds like a degree I'm already interested in I might not have many years left on the planet, but I'd love to get involved in a degree project like that.

Thanks so much, Martyn for your time and for your insights that, that brings us to the end of today's episode of the AHR podcast.

We hope our listeners have enjoyed this episode. You can find all podcast episodes on our website, or you can subscribe via your preferred. Podcast platform. Thanks again so much for listening, and we look forward to you joining us again next time.