

# Design thinking in education

## Episode 2

### **Daniek Bosch - Host**

In this episode, I continue the conversation with Min Cho and Nadia Teunissen around the role of the teacher in design thinking in education.

Min, how would you describe your teaching style when you first started out as a teacher?

### **Min Cho**

*Oh gosh. So I remember when I first started out, I was over-prepared. And I tried to give as much information and knowledge as possible to the students. It failed epic, of course, because I realized that too much of information does not necessarily mean that all the students will understand and digest what you've tried to teach them. So, I had this notion of trying to know everything and be as perfect as possible even as a teacher myself. And then I realized that that approach also doesn't work in the end.*

So I had to change a lot over the years. But that was that was my first approach. I still remember the first day where I was very afraid of all the eyes looking at me and trying to ask me questions that I didn't expect. Because I also prepared all the potential questions that could come up with from the materials, but they always ask the most random questions that you can not imagine. I think that's when I realized I was very honest with the students in the end up saying,

*You know what, I actually don't know the answer to that question, but I promise I will look into it. And of course, if you can also find the answers to that question, that will be good for me to learn as well. So that was the breaking the ice moment for me, because I also just have to be honest in terms of telling them that I didn't have all the information.*

### **Daniek Bosch - Host**

Yeah, it sounds like that already in the beginning of your teaching, you were forced to let go of the hierarchy of teacher and student.

### **Min Cho**

And yes, I realize it didn't work that well. I could already sense from the room that it was very rigid and that was not the teaching style that I wanted to pursue. So later on it became easier once I was more open about some of the aspects that I yeah. I mean, I had been prepared for or some of the aspects that I may not know as well.

*So encouraging students also that my role as a teacher, even if I try my best, I may not know all the aspects of the field and that we can learn it together. I think that was nice, nice break and change of pace of the teaching. So it actually became much more fun later because then they were also encouraged to explore on their own of the aspects of sustainability. And in that sense, and it became a cool learning journey. So that was, that was more fun than later.*

**Daniek Bosch - Host**

Nadia, Can you describe the role of the teacher in design thinking course or a course that uses design thinking.

**Nadia Teunissen**

*Yeah, I think the role of the teacher is more about being a coach or a trainer. Really about guiding the students, the students through these design thinking steps. So we've already discussed it a little bit. But I think it's about providing them with enough input in the form of scientific knowledge and activities to make it their own. Whilst at the same time letting them explore and reflect by themselves also what Min mentioned. So it's really about balancing content with competence, I would say. So it's less of a knowledge transfer role and more a process facilitator role.*

**Daniek Bosch - Host**

And Min, how has the design thinking course change your way of teaching?

**Min Cho**

*It definitely encouraged me to have more confidence in the students that they, they will be able to understand the concept and also that they will be able to create something on their own. So it, it gives a more proactive role for the students and more of a student-led learning journey. And I think that type of approach I could actually apply in my other courses as well.*

Where it, where the course, and in my other courses they're more of a traditional role where students are the passive role where they take in the knowledge and they, they do try to explore, but not as active as design thinking. So I think I would definitely adopt the design thinking approach in my other courses as well as much as possible so that I give, I give the room to the students for them to explore and also be confident that they can actually be as creative as possible and also take a more proactive journey in their learning.

**Daniek Bosch - Host**

Do you have an idea what that would look like if you would take this type of teaching style to another course?

**Min Cho**

Well, so one of the courses that I teach is on ethics. And it's about the emerging responsibilities and health. The traditional approach that I took was for students to hand in an essay, for example, about the dilemmas, ethical dilemmas in health care. But I would actually now try to change that a bit and give them the context of the dilemma and for them to actually have a more tangible solution of how they would approach this ethical dilemma. So they could try to advocate for a certain campaign or tried to raise awareness through other type of social media or whatever approach that they would like to take their own creative ways. So that, that could be a, that could be a more proactive role of how they could learn the ethical dilemma. But also taken more of a proactive role as a student in terms of that finding a solution to that dilemma.

**Daniek Bosch - Host**

Yes, so what I hear is that you are now ready to try to find ways to connect the scientific theory to something practical, something that's happening in the real world.

**Min Cho**

Of course, in the field of public health. That is more of a knowledge to apply in the real world rather than a theoretical sense. So I think having that design think aspect in the public health field would also be helpful for the students as well. So they can actually have a more applied, applied knowledge and in terms of their learning.

**Daniek Bosch - Host**

Yeah, so it's also really fits with the subject that you're teaching. What is the effect of this way of teaching on the students? Do you see the difference in how they engage with the class?

**Min Cho**

*I do think that it takes, it shows more ownership from the students. That they say that it's, it's our project. We were thinking about this for a while, or are we putting so much energy and effort? You do see more ownership and in terms of how they engage with their project and also how they came up with their ideas.*

So that was, that was good to see. Because if it's a traditional way, then they kind of lose touch. So after they submitted their essay, then, that's it. So they don't really engage with the context or the knowledge anymore. But with the design thinking project that we did, I can really see that students were very active and they were really taking ownership of what they have built so far. So that was really good to see. I think it also helped that. Well again, convergent divergent thinking. So we started out with a big issue, medical waste, and we pose the design brief. But then they were also able to really make it their own in the way of creating a persona. So it became, in a sense, a person that was their persona. They all had a different persona. We're solving this problem for this person. I think that also helps when it comes to engagement. Also that the teamwork was quite longer than they were used to. Which also made that they really had to work together. You could not slack or if you did you discussed it with your teammates and then everybody could take turns. But they really supported each other in that team. And so they also wanted to do good for your teammates. And I think that it also really helped in the levels of engagement next to all these interactive activities, of course. But I think that's also an important part.

#### **Daniek Bosch - Host**

And before you mentioned that some students even created some artwork. And I can imagine that as the students you will also showed this artwork to other students who are not even in this class. And that's the, you might not do that with the essay that you've written for a, for a class. So I think that's also interesting difference that they are really proud of something that they created in this class.

#### **Min Cho**

Yeah, and it also shows that the work that they do in class also connects to the outside world. So in this sense, with the art pieces they created that workshop and they really connected with their fellow students. But other groups reached out to pharmacists, to doctors, to general practitioners. So that also makes sure that it's, it comes to life in a sense. So it's not only fictional and paper, but it's, it's real and that really helps in connecting to the issue, I guess.

#### **Nadia Teunissen**

Yeah, Definitely the first and the third group, the art group. They, they really made an effort to engage with the pharmacists and all the experts that are in the fields that have this dilemma and stay even connected to the patients. And they really tried to find a tangible solution on their own. They had amazing logos and they had posters and all these raising awareness campaigns that they provided as a potential prototyping solutions. I think that

type of tangible end product, you don't really see from a traditional course setting per se. So that, that really also encourages students to engage in something different. I think that was also one of the reactions from the students of that. It really made them think about how to apply what they have learned from the context and how to actually make it in real in terms of what happens in actual setting here. And also we created an actual setting in the final pitch, they were not pitching to us as teachers and instructors, but they pitch to a panel. All stakeholders of the challenges who were actually working in the field. So that also brings to the level of seriousness that sort of frightened in one way but also motivated them like we really want to bring about a good pitch. That it's not only for our grade, it's about our work and we want to bring this across in the best possible way so that they see the value. And actually you want to take it a step further.

**Daniek Bosch - Host**

*And what advice would you have for teachers who are not looking to redesign their course, but they are, they do want, sort of this kind of engagement in the class. What's one small thing that they can do to get there?*

**Min Cho**

Well, I would say applying design thinking for the entire process and changing the entire course, of course, would be a challenge. I do acknowledge that. I think one way to apply it, if I mean, this also goes for just in my field because I cannot imagine how this could be applied in natural science, for example, if it was physics. So let's say, for example, if it was on sustainability and public health, I think one of the ways that teachers could apply.

*One element of design thinking would be to encourage students to develop empathy of the problem that they want to solve.*

So in public health, for example, of the topics such as infectious disease or epidemiology. If you want to actually try to approach it in a problem-solving way, I would encourage teachers to actually encourage students to think about the perspectives of those are the patients or the people that are facing the dilemma. And then they, they tried to emphasize and try to think of, okay, how did this problem come about will be the potential solutions. So that could also be a way to encourage this type of thinking. Because normally in a traditional course setting, it would just be okay, here's the problem. Here's how many people that are facing the problem. And that is just on the surface. But students are encouraged to think about how do these people experienced these problems and how do we actually approach solving these problems? I think that could be one way to encourage students without changing the entire course. For example, just to, just to encourage students to think about it in empathizing way.

And I also would say, don't be afraid to redesign your course because it will bring you a lot. And, but if you have to, like pick some starting points, then indeed,

*I will also recommend the empathize seeing activities, but also put in some ideation. Really give those students room too. Well, come up with whatever they are able to come up with to actually solve something. Because that's something we saw that is really valued by the students that they felt enabled to do something. So I think that's important to include more in our teaching that students themselves not only understand issues and problems, but they feel unable to act on it. I think ideation can help with that.*

### **Nadia Teunissen**

*Yeah, and having an elements that's not graded, I think that would also be helpful in the ideation phase or even empathizing face. Just letting the students have some time for brainstorming ideas or how they, how they interviewed the patient for example or how they approached trying to advertise with the people that are experiencing those problems.*

That would also be an encouraging aspect for the students, because students always tend to think that there is a perfect answer or there is a certain solution for all the problems and there isn't. So letting the students know that it's okay to not know everything. It's also a practical tip and it's okay to be human. Actually.

### **Daniek Bosch - Host**

A lot of teaching, it can sometimes feel like guess what's in the teacher's head. And that's the only correct answer. And the, yeah, in this kind of teaching that's not applicable. And what advice would you have for teachers who are looking to adopt design thinking into their core?

### **Nadia Teunissen**

*Just do it. I think that is it, right? That's also design thinking. We're just going to start and see what happens. And then you experience yourself, what fits you and what doesn't.*

Yeah, and think of your role. So think about the transfer, knowledge transfer role. And the process facilitation role also let the students know you're there with them as well, it's okay to be lost, it's okay to make mistakes, is okay and that they're doing well. Support them in that sense.

Yeah. I don't think it has to be that complicated. Just do it. I mean, from a practical advice, I would first, I encourage the teachers to think about the time slot that they have with there courses. So whether it's an eight-week course or a semester course, because I think giving students time to grow is a huge element for them to make mistakes and also restarted and explore. So there will be one aspect to consider. The other would be to think about to what

extent are you going to apply design thinking elements. So if your course has limited time and also there's, there's a lot of students involved making those students into groups and going through all the design thinking of all the elements may not be as practical. So then try to think about what do I really want to get out from the design thinking and what do I want the students to learn? So even at the stage of just going through until the ideation phase, or we just start till the prototype phase. So that students actually are encouraged to think and have that learner centric journey. But they don't have to come up with until testing for sample. So we also had to adapt the design thinking aspect to our, to our course to see what fits with our own schedule and also the resources that we have.

So yeah, definitely just do it and also, it doesn't have to be the perfect design thinking, education implemented journey. You also have to kinda prioritize, okay, what do I want the students to get out of this? And what element of design thinking Do I want to encourage the most and do I want to emphasise the most? So that's also something just to think about the priorities.

*If you are thinking about applying it. I think it's good as educators that you think about, where do you want to prepare your students? Or it also relates back to what was said in the beginning about that mindset, that growth mindset, I think that's super important. And if you're doing it with little design-thinking steps or you're doing a full on course. I think both helps in that move towards training our students to become more resilient in a sense.*

Well, and I think we need that these times because, well now we have a crisis, but the climate crisis is just around the corner. We have social inequalities. There will always be a crisis being than small or big. But I think this really helps to prepare students for yeah, a future-proof, future editions. Yeah, I think, yeah.

### **Daniek Bosch - Host**

Great advice to just starts doing it. That is also how most innovations start. No by people who to set up a plan, but by people who just start doing. Also good to have a clear focus and let yourself also grow in using design thinking in your course and not expecting it to be the perfect design thinking process when you first start out.

### **Nadia Teunissen**

Exactly right.

**Daniek Bosch - Host**

Thank You. Min and Nadia for this, the interesting conversation around design thinking in education. And I hope that we've inspired some teachers to take their first step in this process.

**Nadia Teunissen**

Yeah, thanks for inviting us.

**Min Cho**

Yeah, I'm happy to be here.

**Daniek Bosch - Host**

In the next episode, I will talk with Bram Hoonhout on his class tackling inequalities in the 21st century. If you're looking for inspiration in the meantime, visit our website, Center for Innovation.org. That is center number for innovation.org.